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## FROM THE PRESIDENT

If you like our newsletter and would like to help us, please consider making a financial donation (any amount is appreciated) by clicking [here](#). We do not receive any government funding and are thus rely completely on our supporters for our continued existence! We will send you a tax receipt, along with our heartfelt thanks.

Your feedback helps us improve the *Forum*. Please e-mail me [here](#).

Best regards, Malkin

## YOUR VOTE IS IMPORTANT TO US

Last month, we polled you to find out what you think about your local school board. The results are as follows: 10% thought their school board was functioning extremely well; 19% thought it was functioning pretty well; 19% thought it was functioning poorly; 43% thought it was functioning extremely poorly; and 10% didn't know. Some of your comments appear below in the mail bag section.

This month, we want to know whether you sent/would send your children to independent (private) schools. Please help us by clicking on [vote](#). After voting, you can tell us how your children fared at their schools, independent or public, by clicking on [comments](#). We will print your comments in the mail bag section of the next newsletter.

## EVERYONE CAN LEARN GEOGRAPHY

*Here are some great web-sites that nurture a love of geography in kids of all ages. Thanks to Franlie Allen for checking out these resources.* <http://www.pbs.org/wnet/africa/explore/index.html> complete with teacher resources and an Africa for Kids link and an opportunity to explore 43 African countries, virtually. It was created to support a PBS film series. <http://www.peacecorps.gov/wws/educators/> includes lesson plans and stories, multimedia and enrichment to "translate firsthand experiences of Peace Corps Volunteers into cultural, geographical, and language arts lessons for your students."

<http://www.nationalgeographic.com/xpeditions/> offers lesson plans, activities, maps, homework help, recommended links and a free monthly newsletter.

<http://www.un.org/Pubs/CyberSchoolBus/> found as a recommended link on the previous site, "offers accurate official and up-to-date information and statistics regarding the countries of the world, and the Model UN Discussion Area allows students to gather and discuss international issues."

<http://www.horus.ics.org.eg/en/default.aspx> is both "educational and fun" taking children on a "whirlwind tour of Egypt learning history and geography in either English or Arabic.

[http://www.elbalero.gob.mx/index\\_esp.html](http://www.elbalero.gob.mx/index_esp.html) truly Mexico for Children, "and in addition to Spanish, the site includes English, French and Italian translations. Students can explore the states of Mexico as well as their government and history. Diversity not only covers plants and wildlife, but the indigenous peoples of Mexico. Cultural information on Mexican myths, foods, games and music can be found throughout the site."

<http://www.mountainvoices.org/> "This website presents interviews with over 300 people who live in mountain and highland regions round the world. Their testimonies offer a personal perspective on change and development."

<http://www.kn.pacbell.com/wired/China/ChinaQuest.html> "This simulation activity helps learners grasp the complexities of China. Learners join a team and take on a role (foreign investor, human rights worker, museum curator, California state senator, or religious leader). Learners work together to create a special report that makes sense of the complex country that is China. Includes a teacher's guide."

<http://www.questconnect.org/> "This site takes students and teachers on real and virtual expeditions around the world. Through a collection of original pictures and journal excerpts, visitors can accompany travelers exploring the natural environment, culture, and peoples of different continents. Past expeditions include Alaska and Yukon, Baja California, American Southwest, and Southern Africa. Each expedition is accompanied by a mixture of information, links, and classroom activities."

<http://www.culture.ca/> the "links collection and cultural content connects you to a multitude of online resources on Canadian arts, heritage, nature, society, recreation and cultural tourism"

<http://www.yourchildlearns.com/owlmouse.htm> free "interactive maps to learn continents, countries, states, capitals, borders, physical features and cultural monuments"

## **MAIL BAG**

### **Good School Board**

We are in the Peel Board and, honestly, I think we are extremely lucky and could be even better if we got rid of the huge administration costs at headquarters. At the secondary level, we have multiple choices – high schools for the gifted, international business and technology, the International Baccalaureate, and a school for the arts. This school, Cawthra Park Secondary School for the Arts, was created in a school building which had declining enrolment. It's on the small side by Peel standards, with less than 1300 kids, of whom only approximately 200 are locals. Some kids travel 90 minutes by bus to go to this school. In my opinion, it's the best school in Peel, usually ranked in the top first or second spot by its teachers (who all think they have the best job in the world). Both my sons go to Cawthra, and my older son recently graduated and gained admission to the University of Waterloo Engineering. My other son is in grade 11 and plans to become a doctor. Admission is very competitive: the students have to be recommended by their grade 8 teachers and pass a demanding interview/audition. Most students are high achievers who can multi-multi-task. I think Peel is unique in Ontario, as I have friends in Etobicoke and St. Catharines who send their kids to private school based on their options there.

*Mississauga, ON*

### **Promising School Board**

I answered "I don't know" to the question about how good my school board is, because there is a relatively new director and a number of relatively new trustees. This director has such a fresh (and refreshing) approach to his job that we should be anxious for an opportunity to rate this board in another year. If I'd been asked a year ago, I'd have said, "Very poorly".

*Burlington, ON*

### **Sneaky School Board**

To the general public, the feeling would be that our local school board is functioning very well. Why? Because it seldom makes the headlines by doing something controversial. Everything is done with an eye to public relations, continually smoothing the waters with rosy pictures of all their accomplishments.

For example, this year when the provincial results were released, the percentage of successful students rose from 45% to 50%, still far below the provincial average and an indication that fully half of our students are not being properly prepared for the next grade. Yet my school board raved about the 10% improvement over last year. Furthermore, they refuse to acknowledge the teachers and schools that are getting superior results, because that would show up the schools that continually get inferior results. And no one appears to notice.

Ever since our school board lost the right to raise taxes, it has been flying below the public's radar. The only time anyone seems to pay attention to their actions is when they attempt to do something controversial, such as close a neighbourhood school. The week after the fall municipal elections, which saw most of the incumbents returned for another four years, the trustees released a ten-year plan which would close more than half of the neighbourhood schools and create a few "mega-schools". So far, there has been only one letter to the editor!

*Sault Ste Marie, ON*

### **Consultant-Heavy School Board**

More and more I hear of excellent teachers who have been promoted out of teaching into an administrative position to launch some new initiative that is the flavour of the day. The latest one has to do with education in the early years (defined as the years before junior kindergarten). I don't know whether this is funded separately by the province or if it comes out of the funding that was put in place to educate the children in the system. Is this even part of the school board's mandate? Pretty soon, there will be more teachers in administrative positions than in the classroom teaching.

*Crysler, ON*

### **Impersonal School Board**

My school board is way too huge and impersonal. It seems to have forgotten that the purpose of education is to teach children. It feels as if the students are items in a production line. Get them in – throw the information at them – pass them through no matter what they achieve – and then when they reach high school say, "So sorry, but you don't have the necessary skills to succeed in our programs." Great system! *Carleton Place, ON*

### **Extremely Poor School Board**

I voted "extremely poorly" for my school board. It ranked sixth in the suspension of Special Needs students and seventh in the expulsion of special needs students in last year's ministry survey. My board persistently ranks in the bottom half of performance in EQAO assessments. It laid off 30+ educational assistants and child and youth workers because of budget woes, only to recently report that they ended up with a \$1.5 million surplus. This surplus was placed "in reserve" to accommodate their anticipated "budget crisis" for the next fiscal year. It's painful! *Belleville, ON*

### **Too Many Eggs in One Basket?**

There is something wrong and we know it. During a recent meet-the-teacher night, a parent showed concern that he had not seen any homework during the term, nor had he seen a single test result. In addition, during the same time, an administrator complained that his teachers were not subscribing to the board-mandated pedagogy which when analyzed is called constructivism. And not to be outdone teachers are reporting high levels of stress because they are no longer certain how they should teach, whom they

should teach, or what they should teach. Education in Ontario is evolved into a stress factory of competing interests and conflicting expectations.

When I began my teaching career many years ago, expectations were clear and transparent. I knew that my students needed to master a number of fundamental concepts, I knew that these concepts were explained in well-organized textbooks, and I knew how to measure what they had learned and what they needed to learn. Parents could help their child acquire any of these skills. They understood that a test mark of 72% implied that 28% of the material was not mastered. Remediation was as simple as making corrections on daily work or any other form of evaluation. But things soon changed.

On one occasion, a visitor from the ministry found his way into my classroom. He was not impressed. Apparently, I was using direct teaching far too often for his liking. He told me that I was robbing the children of an opportunity to figure things out on their own, and that I should intercede only when they truly were stymied. In defence of my efforts, I showed him a display board in which every child had written a well-organized, highly-unified, and error-free descriptive paragraph. The official scoffed at this project. He told me that the kids were writing for me and not for themselves. I think my feelings of professional competence would have been shattered, had it not been for the previous night, which was open house. The parents had loved the work which their children had done

Direct teaching works, and direct teaching is the preferred teaching methodology of our society. For instance, coaches use a direct teaching approach. In the case of basketball, fundamental skills, such as dribbling, shooting and passing, are worked on daily. In time, these skills become incorporated into more difficult concepts, such as team tactics. And problem solving always occurs during a game or a scrimmage because the player needs to immediately construct an understanding of the moment in order to execute the necessary skill. One coach told me that the higher-order challenges of the athlete can be met only if the fundamental skills are so well mastered that their execution doesn't require thinking. And that the best way to achieve this result is a thing called specificity: if you want to get good at something, you need to practise it.

Over the years, affirmation for basic skills has been minimized, and in many cases completely amputated from any professional development. Teachers are workshopped to incorporate higher-order thinking skills into their program, such as analysis and synthesis. Never are they told how to generate practice sheets or other devices, which will establish a sound foundation. They are told to diversify their program and differentiate their instruction in order to meet a growing host of needs. Perhaps the growing host of needs is resulting from more and more children who have not learned numerous fundamental skills. When we fail to identify foundational

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skills, which should be learned at a specific grade, we remove one of our greatest resources from the system- the parent.

Parents can help their kids acquire basics skills because the learning expectation is clear. However with the constructivist approach, in which learning expectations can be excessively general, the parent is sidelined and is not a real part of the team. If it takes a whole village to make a child, then we must ask what type of village we have when the parent is dealt out of the game.

Education should be about learning as well as thinking and learning is a relatively permanent change in behavior, which results from experience. If the education system is simply promoting thinking skills at the expense of learning the basics, we must ask if our children are getting a complete education. *Sarnia, Ontario*

### **School Fees**

We were at our school's Christmas band concert last night, where we were asked for \$685 per student to "further enhance our kids' music education". I'm not sure what's wrong with the education our tax dollars are buying. I think fundraising is a huge issue for parents – and it makes me crazy as a student of education policy! *Winnipeg, MB*

### **Ownership of Textbooks**

I can personally vouch for the waste of money – even way back in the 60's when I worked for one of the school boards in Toronto, which shall remain anonymous for the purpose of this post, because I expect this wasn't an isolated incident and probably would have applied to all of the boards of the day.

In the summer of '66 I commenced working at the same high school as I had graduated from five years before. One of my tasks was to make sure that all students had textbooks for all of their classes. This was a large school with 1500+ students and, because this was a huge task, I began the process of putting together textbook packages for each student in mid-August in order to be ready for school opening right after Labour Day.

While I was putting together packages of textbooks, I discovered that there were a tremendous number of books still in their packing cases – so opening them all to find out where they fit into my lists of approved books was the task I tackled first. To my surprise, when I opened the very first box, I discovered that those books weren't even on the lists of approved texts for that year – nor the previous year either – they had never been on any list. I kept opening the cases with the same result each time – the books were not on the list.

When I had finished opening all of the boxes, and there were probably at minimum 100 boxes of mostly math books, I took the packing slips to the principal and asked whether we should return them to the publisher for credit. That's what we would have done in any of the places I had been

working during the five years since I had graduated from high school. It just shows you how naïve I was at that time!

I was told (and couldn't prove otherwise) that those books were all a part of a larger contract and couldn't be returned because they had been purchased at a bulk rate. I told the principal that, so far as I could tell without further investigation, these books were not approved for use and had probably been sent in error. All that I was told was, "Don't worry, I'll take care of it myself". I suppose I had already said too much, because the next thing I saw were several custodians using dollies to move the cartons from where they had been stored to the school incinerator where they were burned.

I was still pretty naïve in those days and didn't act on my gut feeling which was to tell the taxpayers in the neighbourhood what was causing all that smoke – boy, did I miss an opportunity for a great photo op. I have always regretted not acting on my immediate impulse which was to call the *Toronto Star* and the *Telegram* to come take some newsworthy pictures. What a great headline it would have made: "School burns books"!

In retrospect, I believe one of the major causes of the decline in education standards and the dumbing down of our text books and curricula began when the government started to provide the books and subsequently to control the content thereof. Now parents were no longer involved in that late summer ritual that went on when I was a student – going out to Coles to buy the books needed for their children in the fall. In those days, the books belonged to the parents (or student by extension), and in the case of many, many families they were around the house for as long as it took them to 1) wear out from yearly use by one or another student in the family or 2) be superseded by a new text – which was fairly rare in those days because parents would have "squawked" about having to fork out money to buy a different math book every year and would have wanted to know "what's wrong with the one we have?"

Years later, in the mid-80's, I made a discovery here in Manitoba that the content of textbooks is determined by and provided by the client. By that time, I had children in school and I was no longer naïve about the deterioration of education. I discovered that one of our approved social studies textbooks had been written to coordinate with our provincial social studies guide. What I did was take all of my research and information down to a journalist at the *Winnipeg Free Press*, Fred Cleverley, who did his own research just to be sure of what he was going to be getting himself into if he took this to the public. I no longer have a copy of the article he wrote and which was published in the *Free Press*, but it certainly whipped up a storm at the time.

I expect that nothing has changed – nor will it, so long as our children (in my case, grandchildren) are using textbooks authored and supplied

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by "the state". I think it is time for parents to start paying for their children's text books again so at least they can't say "I didn't know how bad it was" when they finally discover, perhaps by accident, what their children are being taught. It's time for parents to get back in charge of educating their children. To quote the UN Declaration of 1948 (of which Canada is a signatory), "Parents have the prior right to choose the kind of education that will be given to their children." I always find it distasteful to resort to a quote of any kind from the UN and this is probably the only article with which I am in agreement. *Winnipeg, MB*

## OUR MISTAKE

In our last issue, our report card on Dalton McGuinty's promise-keeping mistakenly said that the Ontario Government had retreated from its legislation to legislate an extension of the age of compulsory attendance to 18. In fact, the Government did pass this law. On our web-site the amended report card reads as follows: "A new law requires students to stay in school until age 18. We awarded a B instead of an A for this promise because there are no consequences for students who leave school before age 18 – except for the tiny percentage of students who end up in truancy court."

## WEB-SITE OF THE MONTH

This month, we feature Professor Plum's EducationNation web-site because it is so funny and irreverent. The "Rant Archives", for example, are based on "the empirical generalization that the education establishment is among the most pernicious enemies of our nation". Faculties of education (Professor Plum teaches at one) are dubbed "The Primordial Soup of Fads, Fraud, and Folly". Click [here](#) for more Professor Plum.

## FEATURE ARTICLES

### ***The Weak Case against Homework***

**By Jay Mathews**

Two provocative books criticizing homework came out recently. Both are by reputable, well-informed authors, so I was surprised to find these good people trying to get away with hyperbole and incomplete data unworthy of them.

One book is *The Homework Myth: Why Our Kids Get Too Much of a Bad Thing* by Alfie Kohn, one of the nation's most knowledgeable critics of traditional education, of which homework is a big part. The other book is "The Case against Homework: How Homework Is Hurting Our Children and What We Can Do about It," by Sara Bennett, an attorney and activist parent, and Nancy Kalish, a journalist who specializes in parenting issues.

Bennett and Kalish annoyed me by going on the "Today" show and saying that the average homework load, according to the latest studies, has

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"skyrocketed," a word they also use in their book. Kohn did much the same by asserting in the first chapter of his book that the weekly time spent studying at home by six- to eight-year-old children "more than doubled for youngsters of these ages" between 1981 and 1997.

That sounds bad, very bad, until you look at the actual data. Kohn's books are always richly footnoted, which is one of the reasons I like his work even if I don't always agree with it. But this time he used a stunt favored by less honest writers. He took important data that should have been part of his text on page 7 and buried it in a footnote on page 199. Only when I read the footnote did I learn that scholars Sandra L. Hofferth and John F. Sandberg, apparently using University of Michigan data, said homework for that age group increased from 52 minutes a week in 1981 to 118 minutes a week in 1997.

Homework is usually a daily, not a weekly chore. Seen in that light, Kohn's "doubled" load and Bennett's and Kalish's "skyrocketed" numbers actually mean the average six- to eight-year-old spent about eight minutes a day on homework in 1981 and 17 minutes a day in 1997. According to a 2003 study, that homework load has since increased to 22 minutes a day. That is less time than it takes to watch one episode of "SpongeBob SquarePants," but maybe I am missing something.

Could it be that teachers are saving the really burdensome homework for high schoolers? I checked the latest report by the University of Michigan Institute for Social Research and found that not to be true either. The report says the weekday average for 15- to 17-year-olds went from 33 minutes in 1981 to 50 minutes in 2003. Those teens, crushed by such punishing assignments, were recovering their sense of self and their need for play by spending on average two-and-a-half hours a weekday watching television or doing non-study-related computer activities.

Bennett and Kalish try to cover up this inconvenient fact by citing another study that suggests a much heavier homework load. They say that, according to a 2006 Associated Press-AOL Learning Services poll of 1,085 parents, "elementary school students are averaging seventy-eight minutes per night while middle school students put in an average of ninety-nine minutes."

Notice that they still do not disclose that their "skyrocketed" increase in the Michigan data is based on much lower homework time figures. And there are more problems with the AP-AOL study, which is probably one reason why Kohn, more careful with his numbers, doesn't mention it. University of Michigan economics professor Frank Stafford, one of the nation's leading experts on time use, explained to me that parents -- the source of the AP-AOL numbers -- tend to be inaccurate about what their children do with their time, particularly if they are asked the question in that general way. The University of Michigan research, the gold standard in this field,

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uses diaries kept by children, the younger ones getting help from their parents, for just 24 hours of activity. The Michigan researchers call or visit them within a day or two and go over each entry carefully to get the amount of time correct.

The Michigan data exposes another problem in the anti-homework argument. When students are not doing homework, their principal pastimes are not play or reading for pleasure or any of the other meaningful activities homework protesters say *are* being cut back because of too much homework. Instead, they are watching a lot of television: one hour and 51 minutes a day for the average six- to eight-year-old and two hours and eight minutes a day for the average 15- to 17-year-old.

Kohn does not deal with this much in his book, but Bennett and Kalish do, in a breathtaking way:

"Sometimes all we want is to cuddle on the couch and enjoy some TV together. One college professor told us, 'It's very pleasant to relax with your kid watching something stupid like "Wheel of Fortune." But I feel like the school is prepared to scold me for that.' [Child psychologist Dan] Kindlon agrees: 'Schools shouldn't make the assumption that they are the only ones who can make a decent person and decent society, that parents are clueless. When you watch TV with your kids, you form a bond over that. You can talk about the characters on "Lost." It gives you a common language that can bring you closer, make the kids feel like you really understand and connect with them.' "

I remember the trashy pleasure of watching "Dawson's Creek" with my daughter, but I don't think either of us would consider that a useful substitute for practicing Spanish or reading about the rise of organized labor in 19th century America. Bennett and Kalish ought to explore the possibility of starting a new movement to embrace the tube, and get all the major networks to promote their book. Maybe that is why they got on the "Today" show, and Kohn didn't.

Both books are right to note that the research shows little need for any homework in elementary school. But faced with data indicating that middle school and high school homework correlate with higher achievement, they dodge and weave and look for ways to discount those studies. That is where I think they go wrong.

Their biggest problem, which neither book addresses, is the common sense reaction of parents like me to their anti-homework interpretation of the experimental data. The formal research interests me, but it does not influence my thinking as much as my own personal experiments, conducted frequently over the 15 years or so of my own schooling. I remember what class was like on days when I had not done my homework. I remember what it was like on days when I had. The latter was a much more engaging

and useful educational experience than the former. Neither book explains why that practical and personal research should be ignored.

My other objection to the anti-homework argument grows out of my life as an education reporter. Long ago I tired of educational theory and decided instead to visit schools that significantly raised achievement of students, particularly disadvantaged students, and base my views on what those schools did, rather than on what the theorists said they ought to do.

Both books throw in a few examples of schools with high achievement despite severe limits or bans on homework. But they appear to be elementary schools, where we already know homework is not important, or private schools and public schools that draw affluent children whose parents are likely to make up for any deficiencies in the academic demands of school.

For two decades I have been writing about inner city middle and high schools that have significantly increased student achievement. I have yet to encounter any of those programs that did not insist that school work extend significantly beyond the normal school day.

I asked one of my favorite educators, Deborah Meier, about this. She is on most issues allied with Kohn. They both embrace a progressive approach to education. They shun standardized testing and emphasize projects and oral examinations and student choice in learning. Meier started Central Park East High School, which applied progressive methods to inner city students in New York and had great results.

This is what she said when I asked about her homework policy at that school: "We told kids at our secondary school (grades 7 to 12) that the school's explicit work probably required a 40 hour week -- maybe more, maybe less.

"The school's official day was about six of that -- or 30 a week. We assumed that everyone had more to read than could be done while at school -- surely five-plus hours a week. And probably another five for exploring and preparing and revising work done during school hours. We said we'd keep the school doors open another 10 hours a week for those who found it most useful to do that extra work in school. We'd open an hour earlier at least, stay open an hour later, and be open Saturday mornings. 'Open' meant the library, which had books, computers and always at least one adult who could be helpful.

"The assignments were not explicitly 'homework,' Homework I insisted was the stuff you did at home for home -- the work your family and you needed to get done; and then there was reading and exploring on matters of your own personal agenda. And then there was the school work that couldn't be crammed into classroom time both because there wasn't enough time to do it all, and or because we each had our own agenda, ways of working and times and places to get things done."

That strikes me as a sensible approach to the whole subject. School work is one thing, and might have to be done after normal school hours. Homework is something else. Meier explained to me that what students learned at home, such as how to cook and repair furniture and care for children, might enrich their lives as much as history and math.

The two anti-homework books argue, reasonably, that some of the homework assigned children does not make sense. Bennett and Kalish provide good advice on what parents should do about that. But improving homework quality is not the same thing as abolishing it. It is better to fix a broken clock than give up trying to tell time.

Meier did not see any sense in abandoning the academic work that needed to be done after hours to keep the students' conversations with their teachers going and to make sure time in class was not wasted. I don't care if you call that homework or not, but it is important, and we ought to give students all the time they need to do it.

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## ***A Better Deal for Teachers*** **By Malkin Dare**

My great aunt Victoria was a teacher, and she loved her job – so much so that in 1962 she managed to convince the powers-that-be to let her continue to teach after she turned 65.

Fast forward to 2007 when one would be hard-pressed to find a teacher who is willing to stay on after the earliest possible retirement date, usually around age 55. These days, teachers often leave in the middle of the school year, sometimes even in the middle of the week. They just can't wait to get out!

For the sake of the teachers themselves, as well as for the children who spend so much time in their company, it would be nice if modern teachers could somehow enjoy their jobs more. In fact, there is a way, and it is called school choice.

By school choice, I mean a system whereby teachers, parents, and students can choose from a wide array of different, very distinctive schools, including private schools and home schools. (The latter options are brought within the financial reach of most families by means of government subsidization.)

Edmonton is a good example of a system with extensive school choice. In Edmonton, teachers, parents, and students can choose from dozens of different programs – for example, Hebrew Bilingual, hockey training, traditional schools, a dance school, Christian schools, correspondence schools, and many, many more.

In jurisdictions with extensive school choice, individual schools tend to have more freedom – such as the ability to have a unique mission, offer

special courses and activities, decide how to spend their budgets, hire and fire their teachers, apportion class sizes and teaching loads, determine pay scales, and choose their teaching methods and materials. At present, schools are constrained by countless directives from headquarters. When schools must be chosen, their main constraint is the necessity of providing an excellent service that attracts sufficient parents and students.

Unfortunately, most teachers have a bad feeling about school choice, and this is largely the result of their unions' unending barrage of negative propaganda. The teachers' unions hate the idea of school choice, because it would mean the loss of some of the unions' power and money.

It is the teachers' unions – not the teachers – who would be harmed by more school choice. Most teachers would actually be better off. Here's why.

In jurisdictions with extensive school choice, each school is strongly focused on its mission. The teachers are there because they have chosen the school and agree with the school's mission. Consequently, the teachers in these schools enjoy a strong team spirit.

And it's not just the teachers who buy into the school's vision. Parents and students, too, have chosen the school, and so they tend to be very supportive and involved. When staff, parents, and students work together towards common goals, the participants find the experience exhilarating and meaningful.

Because schools of choice are relatively free of red tape, they are able to spend their money much more efficiently. Furthermore, a smaller percentage of schools' funds are siphoned off as they pass through the local school board. This means that more money reaches the classroom, and teachers are not starved of the funds and resources they need to do a good job.

In schools of choice, good teachers are highly prized. The need to compete forces school administrators to listen to their front line workers so that the administrators can make good decisions about curriculum, teaching methods, allocation of resources, and so on.

And if none of the preceding arguments makes school choice attractive to teachers, they might be convinced by the fact that teacher pay is typically higher in jurisdictions with extensive school choice. This is the result of the competition among schools to attract and retain the best teachers.

Children come in all shapes and sizes and with a variety of interests and needs. No one school could possibly be best for every child. That is why school choice is good for students – it increases the chances that every student will be able to choose a school that best matches his particular interests and needs.

So too with teachers, who also come in all shapes and sizes. School choice is just as good for teachers as it is for students – it increases the chances that every teacher will be able to choose a school where he or she can deploy his or her unique talents and gifts most effectively and find professional fulfillment.

The present situation of disgruntled teachers who can't wait to retire does no one any favours – neither students, nor parents, nor the teachers themselves. Instead, let's introduce more school choice so that teachers enjoy their jobs so much they can't wait to get to work in the morning.

### ***Brain-Based Learning: More Fiction than Fact***

**By Daniel T. Willingham**

*Question: It seems that great progress has been made in neuroscience over the past couple of decades—and especially over the past couple of years. Are there any findings that teachers could apply to the classroom?*

Neuroscience has been moving forward in leaps and bounds, creating excitement among scientists, educators, and average citizens alike. No doubt much of the excitement is due to the images of the brain produced by fMRIs, and PET scans. Everyone seems fascinated with images that show which areas of the brain are activated by talking, reading, calculating, etc. But what do these images really tell us? For neuroscientists, they help in piecing together the puzzle of how the brain works. For the rest of us, though, the payoff is likely to come only in the distant future, not in the next five or 10 years. Consider, for example, an 8-year-old boy who can't read. A neuroscientist could give his teacher an image of his brain and explain that the wrong areas of his brain are active when he tries to read. A literacy coach or school psychologist could give the student a 45-minute assessment and then explain to his teacher that he doesn't have a good grasp of the sounds that the letters make. As a teacher, which test results would you rather have? The brain image might be interesting, but it does not provide any information about how to help the boy read. In a nutshell, that's about where neuroscience is today on most matters related to the classroom: Very exciting research is being conducted, but it is exciting to researchers trying to figure out how the brain works. Some of it is of interest to cognitive researchers who are trying to figure out how the mind works. And virtually all of it is far from being able to guide teachers.

Readers who follow the news on neuroscience may be surprised by my pessimism. It seems that some knowledge gleaned from neuroscience has already made its way to the classroom. Isn't it true that students who are left-brain thinkers (who are logical and analytical) do better in school than right-brain thinkers (who are creative and intuitive)? That schools are designed in ways that suit girls' brains? That young children's brains need

lots of sensory stimulation, and that classical music is especially important? Actually, none of these ideas is quite true—they are just popular myths. In this column, I will outline the real scientific findings that led to these mistaken conclusions. I will also comment more generally on the relationship between neuroscience and education, describing why I think it's right to be skeptical of claims that neuroscientific knowledge will improve teaching in the near term, and exactly what I believe neuroscience might contribute in the long term.

### **Popular Myth 1: School Is Designed for Left-Brained Students**

The myth that school is designed for left-brained students was born about three decades ago, when one of the hot questions in neuroscience was whether or not the left and right hemispheres of the brain process information differently. Scientists were trying to find broad categories to characterize what they then believed to be the strengths and weaknesses of each hemisphere—it wasn't long before their ideas were picked up in the popular media. Some of the left-brain versus right-brain distinctions that the scientists proposed became well known, such as analysis versus synthesis, logic versus intuition, linear processing versus parallel processing, and order versus creativity.

The scientists approached these distinctions as mere speculation—not fact—but that got lost as the research moved from the lab to the living room. The left- and right-brain distinctions held popular appeal because they seemed to capture commonly observed differences among people: Some of us are more logically minded and like math and science (left-brained types), whereas others are more artistic and creative (right-brained types). From the living room, it was a small step to the classroom. Some educators observed that when one compared the specialties of each hemisphere to what is emphasized in schooling, the right brain seemed to be getting short-changed. Reading, writing, and arithmetic seemed geared towards the logical and linear processing that was supposed to be the province of the left brain, whereas the spatial, artistic, and creative right brain had little to do during the school day. It seemed that educators were only teaching half of children's brains—and that left-brained students had a big advantage!

Today, despite efforts by neuroscientists to defuse the hype (e.g., Mike Gazzaniga's [1985] "Left brain, right brain mania: A debunking"), left brain, right brain characterizations still appear in articles and books for educators (e.g., Connell, 2002; Sousa, 2006) and there are still individualized instructional programs based on left- and right-brained learners (McCarthy, 1987; 1996), as well as numerous Web sites for teachers purporting to describe hemispheric differences. For example, under the "Best Practices" category of *Instructor* magazine's Features Library, there's an article titled "Left Brain/Right Brain: Pathways To Reach Every Learner"

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that offers teaching techniques for left- and right-brained students by discussing how to approach teaching the solar system (Connell, 2002). For left-brained students, the tips include, “Discuss the big concepts involved in the creation of the universe, how the solar system was formed, and so on. Left-brain students love to think about and discuss abstract concepts” and “Keep the room relatively quiet and orderly. Many students with left-brain strengths prefer not to hear other conversations when working on a stimulating project.” In contrast, for right-brained students, suggestions include, “Have some time for group activities during the week of the solar system study. Right-brain students enjoy the company of others” and “Play music, such as the theme from *2001: A Space Odyssey*. Discuss how space might feel to an astronaut. Students with right-brain strengths are intuitive and like to get in touch with their feelings during the day.” Regarding how students are supposed to demonstrate their learning, left-brained students are to “write a research paper on the solar system that includes both detail and conceptual analysis” while right-brained students are to “create a project (such as a poster, a mobile, a diorama, or papier-mâché planets of the solar system) in lieu of writing a paper.” It’s clearly time to put this myth to rest. Let’s take a closer look at the research behind it and see how the scientists’ thinking changed over time.

Scientists have used many techniques to investigate the similarities and differences between the left and right hemispheres, but the best known and most dramatic technique is the investigation of split-brain patients. A split brain occurs when the two largest of the bundles of neurons that connect the left and right hemispheres (the corpus callosum and the anterior commissure) are severed. This surgery was developed in the 1940s and was conducted as a last resort for patients debilitated by severe epilepsy. The idea is that if an epileptic seizure begins in one hemisphere, it cannot spread to the other hemisphere. The surgery did reduce the frequency and intensity of seizures, and there seemed to be few negative effects. (Improvements in medications and the development of other surgical procedures mean that this radical surgery is rarely done today.)

It was not until the 1960s that careful testing revealed unexpected consequences of the surgery. Roger Sperry and his colleagues noted that, because of the way that the visual system is wired, in split-brain patients it is possible to present visual information selectively to one brain hemisphere. Sperry conducted a series of experiments in which visual stimuli were presented to either the left or the right hemisphere for identification (e.g., Sperry, 1974; see also Gazzaniga, 1970). Subjects responded to the stimuli in different ways: by speaking, by pointing to a picture, or by selecting from among several objects that they could feel, but not see. Sperry found that the left hemisphere did all of the speaking and could understand complex grammar, but the right hemisphere seemed unable to speak, and

could understand only simple grammar. He also observed that the right hemisphere seemed to excel in appreciating locations in space. These observations lead neuroscientists to begin speculating about whether or not there really are broad differences between how the left and right hemispheres process information, and, if so, how to characterize them.

After about a decade of trying to find a categorization scheme, scientists concluded that the left and right hemispheres could not be simply characterized. By the mid-1980s, more and better data indicated that there were not left-hemisphere tasks and right-hemisphere tasks. Rather, it seemed that both hemispheres contributed to nearly all tasks in a normal brain, and when one hemisphere was better than the other in a particular type of processing, the advantage was usually modest. (The only exception seems to be language, which does appear to be mostly localized in the left hemisphere for most people.) The broad participation of both hemispheres in most cognitive tasks became especially apparent in the 1990s when brain imaging data (e.g., from fMRIs and PET scans) of normal subjects became widely available—both hemispheres participate in virtually every task.

Why haven't these more recent findings made their way from the lab to the living room or to the classroom? I can't say, but I can reassure educators that they need not be concerned with left- versus right-brain distinctions. Barring severe brain damage or radical surgery, all of us are whole-brain thinkers. Efforts to tailor instruction should be based on a careful consideration of what the educational content calls for and on students' individual needs—not on faulty schemes for characterizing two kinds of thinkers.

### **Popular Myth 2: Schools Are Designed to Suit Girls' Brains**

The myth that schools are a better fit for girls' brains than for boys' brains is the latest version of what seems to be a perennial debate about whether the educational system is biased toward girls or boys. In the early 1990s, educators, researchers, and policymakers directed their concern toward girls after the American Association of University Women published *How Schools Shortchange Girls*. Among other findings, the report stated that, "Research reveals a tendency, beginning at the preschool level, for educators to choose classroom activities that appeal to boys' interests and to select presentation formats in which boys excel." But recently the pendulum has swung in the other direction, and critics are drawing on neuroscience to make their case that boys are at a disadvantage in school.

A number of popular writers have pointed out that boys show substantially worse patterns of achievement over the long term than girls (e.g., boys are more likely than girls to be diagnosed with a learning disability, to be held back in elementary school, and to drop out of college) and argued that these differences can be traced to anatomic and physiological differences that are ignored by the educational system. In short, boys are in "cri-

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sis” and the cause of the crisis is an educational system attuned to girls’ brains. Just in the past few years, these sorts of claims have appeared in popular magazines (Chiarella, 2006; Tyre, 2006; Whitmire, 2006), books (Gurian and Stevens, 2005; Saxe, 2005), and articles directed toward educators (Connell and Gunzelmann, 2004; Laster, 2004).

Teachers have been encouraged to address this crisis by making their classrooms more friendly to boys’ brains. For example, one suggestion is to use more manipulative materials, which are supposed to tap into boys’ greater spatial abilities (Connell and Gunzelmann, 2004). Although this might seem like a good idea, trying to use a cognitive strength like spatial ability to bolster an altogether different cognitive process, like reading comprehension, does not work (Willingham, 2004). Another suggestion is to allow breaks during the day, so that overactive boys have a chance to move around (Connell and Gunzelmann, 2004). That’s not a bad idea, but it won’t help schools become better attuned to boys’ brains—research shows that girls and boys benefit equally from breaks (e.g., Pellegrini, Huberty and Jones, 1995), even though they use them differently.

All told, it seems that neuroscience has brought more confusion than clarity to the debate about educating boys and girls. Why? When proponents of the boys’ crisis marshal neuroscientific findings to support their claim, they think that the neuroscience “proves” that a meaningful difference between boys and girls has been found—and then they build on that “proof” to make teaching suggestions. For example, girls have, on average, a larger hippocampus than boys do. The hippocampus is a small structure towards the middle and bottom of the brain that is known to support learning and memory (e.g., Squire, 1992). Gurian and Stevens (2004) cite the brain difference and, based on that, believe that that is the reason why girls have a better memory than boys, on average (e.g., Kramer, Delis, Kaplan, O’Donnell, and Prifetera, 1997). But this assumption that the bigger hippocampus *causes* the better memory is mistaken. It’s a common error: People often think that if the brains are different, that must be the cause of the cognitive difference. In other words, if boys have smaller hippocampi, their memory is worse because “that’s just how boys are,” and not because they are less interested in memorizing than girls are, or because society subtly encourages girls to memorize more than boys. It’s nature, not nurture. That conclusion seems to add considerable weight to the argument that our schools are biased against boys. The idea is summed up well in a quotation from a neurologist that appeared in a *Newsweek* cover story on the boy crises: “Very well-meaning people have created a biologically disrespectful model of education.”

The assumption that the bigger hippocampus causes the better memory is an oversimplification, however, because your behavior can change your brain. For example, researchers know that if you memorize a lot of

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material, your hippocampus will get bigger (Maguire et al., 2000). So when brain differences between boys and girls are found, we can't conclude that the brain differences *caused* the associated behavior differences. It could be that behavior differences caused the brain differences. In fact, most researchers of gender differences believe that they are due to a complex mix of biological and social forces (see Kimura, 2002, for a readable overview).

Ultimately, the neuroscience behind gender differences adds a great deal to our knowledge of how the brain works—but it doesn't add any practical knowledge that can be applied in the classroom. If we're interested in cognitive differences—such as differences in memory—then the findings from cognitive studies are decisive. After all, neuroscience is the study of the nervous system and cognitive science is the study of mental tasks and processes.

So, what have cognitive studies found? In the last 100 years, many, many researchers have studied boys' and girls' performance in controlled testing situations (e.g., performance on the Scholastic Aptitude Test or in a psychology experiment) and have, in fact, found cognitive differences between males and females—but many of these are so small (even though they are statistically “real”) that they are not worth bothering about. The larger differences include a slight edge for males in certain spatial tasks like mental rotation and mathematical reasoning, and an advantage for females in certain memory tasks and in mathematical calculation. Researchers who do this work debate whether these differences are very modest or moderate—but no researcher claims that they are large (for reviews, see Hyde and Linn, 1988; Voyer, Voyer, and Bryden, 1995; Willingham and Cole, 1997).

What's an educator to make of all this? In short, it may very well be that boys, on average, are having some difficulties in school that girls, on average, are not, and that the reverse is also true. But the surest way to pursue that issue is to investigate data that emerge from the school setting—not by looking to neuroscience. As the hippocampus example explained, neuroscientific data do not identify for us the interesting behavioral differences between boys and girls. The key finding for teachers to keep in mind is that the modest cognitive differences between boys and girls are average differences. Both boys and girls should be expected to excel in all academic subjects and helped to do so. How individuals should be helped can't be determined by their gender.

### **Popular Myth 3: Young Children's Brains Must Have Lots of Sensory Stimulation—and Classical Music Is Especially Important**

We have all heard of parents who diligently painted large black geometric shapes on the walls of the baby's room, used patchwork quilts with different textured fabrics “for tactile experience,” and played Mozart every day at naptime. On the one hand we may surreptitiously roll our eyes

at this subtle competitiveness. On the other hand, when confronted with an array of mobiles at the store, we may figure “Why *not* get the one that claims to provide the ‘right type’ of visual stimulation?” Well, a neuroscientist might reply, “Why not just get the mobile you like the best?” After all, the two neuroscientific findings underlying this trend in parenting—and similar trends in daycare and early childhood education—have been stretched far out of shape.

The first part of this myth, that young children’s brains need lots of sensory stimulation, is based on studies of the effects of sensory deprivation in animals. Classic work by the Nobel-prize winning physiologists Torsten Wiesel and David Hubel showed that kittens’ visual systems did not develop normally if deprived of certain types of visual stimulation. For example, in one experiment (Wiesel and Hubel, 1963), they deprived a week-old kitten of visual stimulation in one eye, but let it use the other eye. Just a few weeks of deprivation resulted in the kitten’s visual cortex not developing normally, and not recovering even after the kitten was allowed to use both eyes. The same experiment had no effect on an adult cat. Wiesel and Hubel concluded that there is a *critical period* for the development of vision. A critical period is a time in development when the organism (be it a kitten or a baby) must have some type of experience in order to develop normally; it has been a commonly accepted principle in visual development since Wiesel and Hubel’s work, and has been confirmed in studies of humans who suffered vision deprivation early in life due to a problem in their eye that was later corrected through surgery (e.g., Fine, Wade, and Brewer, 2003).

Unfortunately, those outside the research world seem to have misunderstood this research. The key to understanding—and thus properly applying—it is to keep in mind that Wiesel and Hubel compared normal development to what happens when the brain is totally deprived of a certain type of sensory stimulation. It seems that the general public took away the message that more stimulation is better. But that’s just not the case. The fact that deprivation results in a poorly developed sensory system does not mean that extra stimulation beyond what’s normal would make the sensory system any better. A baby with two mobiles will not have better vision or better processing of visual information than a baby with one mobile. So long as a baby is not being raised in an inhumane way—deprived of interaction with others and with the world around him—his sensory system will function just as well as that of the baby with all the latest sensory-stimulating gadgets.

The second part of this myth, that classical music is an especially important form of sensory stimulation, rests on an even weaker neurological foundation. Readers who recall the hype about the “Mozart Effect” will likely be surprised to learn that it began when a scientific paper reported

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that college students showed a short-lived increase in spatial reasoning (e.g., ability to mentally rotate objects) after listening to a Mozart piano sonata, compared to other students who experienced silence or instructions to relax (Rauscher, Shaw, and Ky, 1993). There were many subsequent efforts to reproduce the effect. Some were successful, most were not (see Chabris, 1999, for a review), and it appears most likely that when the effect is observed, it's not due to hearing Mozart or classical music per se, but rather to a boost in mood and arousal (Thompson, Schellenberg, and Husain, 2001).

At their best, the data on listening to Mozart supported a very short-lived boost in spatial ability for college students. Somehow, that transmogrified into the idea that playing classical music for babies would make them smarter for life. Here's how Norman Weinberger (1998), a leading neuroscientist studying how music affects the brain, described what happened:

Although increased public interest ... [in music is] good, there is also the not-so-good in all of the public press. For example, the "Mozart Effect" has gotten so bent out of shape, one can hardly recognize it. The symptoms are clear and follow a well-trod path. A scientific paper is published. It is novel, potentially important with broad implications. Naturally, it receives attention by the media; it should. But then come the oversimplifications. Not necessarily exclusively from a careless media, but also from the fact that we all receive too much information and perhaps unconsciously boil down the complexities of reality into an easily remembered "cognitive bite".... These findings have been encapsulated popularly as "Mozart makes you smarter"....

Once "music makes you smarter" became the popular mantra, it seemed natural to start babies and young children on a steady diet of classical music. The idea was so widely accepted that in 1998 then-Governor Zell Miller recommended that every Georgia newborn receive a CD of classical music at the state's expense. Similarly, the Florida legislature passed a law requiring that all state-funded childcare and educational programs play classical music every day for children under the age of six.

Even folks who weren't convinced that music makes you smarter didn't object to these initiatives because they didn't appear to have a downside. Music may not make those kids in Georgia and Florida smarter, but it won't hurt them, will it? Of course, music won't do any direct damage—but there is a cost to supplying all that music and so it is appropriate to ask whether that money could have been better spent. For example, should infants be sent home with a book instead of a CD? Probably. The research indicating that being read to makes a young child smarter is much, much stronger than the "Mozart Effect" research.

Since this article is about ways that brain research has been misunderstood, I must add one word of caution with regard to this myth: The **Society for Quality Education, February 2006, Page 21**

sensory development research reviewed here does not speak to overall brain development. The sensory systems do not benefit from extra stimulation—but other parts of the brain often do. For example, a baby who is spoken to a great deal will not have better hearing than a baby who is spoken to less often—but the baby who is spoken to frequently will end up with a bigger vocabulary (Hart and Risley, 1995).

So what are parents and early-childhood educators to conclude? When we think about the years zero to three, we should draw a fundamental distinction between sensory stimulation and learning. The sensory systems can and will develop normally under average home and daycare conditions—and without specially designed mobiles or Mozart. The baby's apparent enjoyment is a perfectly adequate guide to what music to play and what artwork to display. When it comes to learning, the conclusion is different in an important way. Learning at home, or in a daycare or early-childhood education setting, will bring helpful consequences. Unlike sensory development, which plateaus in early childhood, learning effects are cumulative—the more you know, the easier it is to learn more—so learning things in a rich home environment makes it easier for children to learn still more when they get to school. (For more on the cumulative effect of learning, see “How Knowledge Helps” *American Educator*, Spring 2006, [www.aft.org/pubs-reports/american\\_educator/issues/spring06/willingham.htm](http://www.aft.org/pubs-reports/american_educator/issues/spring06/willingham.htm).)

*Will Neuroscience Inform Educational Practice in the Future?*

Based on these three “well known” findings from neuroscience that turn out to be inaccurate, it might seem that the problem in applying neuroscientific data to education lies in how the data are used. Isn't the challenge to make better use of the data? To a certain extent, yes. But applying neuroscientific findings is not at all straightforward.

For neuroscience to mean something to teachers, it must provide information beyond what is available without neuroscientific methods. It's not enough to describe what's happening in the brain, and pretend that you've learned something useful. For example, some brain-based teaching books explain what's happening in the nervous system—and thus why it is hard to learn—when the room is uncomfortably hot or cold (Jensen, 2005). But teachers are well aware that an uncomfortable room makes it hard to learn. And knowing what is happening within the nervous system does not give teachers any new solutions to the problem.

The challenge for those trying to apply neuroscientific findings to the classroom is the dramatically different levels of analysis that must be bridged as we transition from looking at a brain to looking at a child in a classroom. To understand that problem, let's set neuroscience aside for a moment, and just consider cognition. Findings from cognitive psychology can only be applied to classrooms with care and forethought because of the complexity of the mind. For example, cognitive psychologists know that

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practice is important to memory, but you can't conclude that students should, therefore, practice the same lesson continuously until they have mastered it; many students will get bored and attention will wander. More generally, we can say that cognitive systems interact. Laboratory experiments are carefully designed to examine one cognitive system at a time; but in the classroom, all of the systems operate simultaneously, and they affect one another. Continuous practice is good for memory, but it's bad for attention. When you apply a cognitive principle to the classroom, you have to think of the effect throughout the whole mind, not just in the system that you're targeting.

This example of interactions among cognitive processes illustrates what's meant by "a different level of analysis." Because processes of the mind interact in complicated ways, it's difficult to examine all the parts (attention, memory, motivation, and so on) and confidently predict what will happen in the system as a whole. For example, if you have a new reading program in mind, it doesn't make sense to evaluate the effect of the program on memory, attention, and so forth. It makes sense to evaluate the effect of the program on the whole system at once—that is, on the student's ability to read.

Once we start trying to use neuroscience to tell us about student learning, we have still another layer of complexity because neuroscience uses a different, more fine-grained level of analysis than cognitive psychology does. For example, "attention" is not supported by a single brain structure—it's supported by several brain structures that act together as one system. And those brain structures have their own set of complex interactions. Thus, when we examine a brain structure and try to tie it to classroom behavior (e.g., noting that girls have bigger hippocampi, and thus expecting them to remember more facts in class), we are jumping across two levels of analysis: We are looking at one structure in a larger brain system and guessing at its effect on the memory system as a whole; and then we're guessing that this effect on the memory system will have a predictable effect on student learning in the classroom.

In general, if you are interested in describing effects at a given level of analysis, you are most likely to make progress by sticking to that level of analysis. If you're interested in describing ways that students learn best, it makes sense to study classroom situations. To the extent that neuroscience will inform good teaching practice, it seems most likely that this influence will be funneled through the cognitive level of analysis: For example, neuroscience will help us better understand memory, and this improved understanding of memory might be used to improve classroom practice. It's unlikely that leapfrogging the cognitive level analysis and going straight from the brain to the classroom will work out very often.

In a trivial sense we could say that a better understanding of the brain is bound to lead to improved classroom practice some time in the future. A deep understanding of the brain will come, hand-in-hand, with a deep understanding of the mind, and that is bound to help education. There is not, however, any prospect of a brain-based learning program of any substance in the near future. Neuroscience may, however, contribute to the diagnosis of some learning disorders in the near future (see box, pg. 33). In summary, I hope educators will approach claims that instructional techniques and strategies are “proven” because they are based on neuroscience with a healthy dose of skepticism. Cognitive and educational studies are the best sources for educators looking to improve their students’ cognitive and educational outcomes.

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## **Standardized Testing for Dummies**

by Mark Holmes

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### **What is a standardized test?**

A strict definition would exclude many provincial tests. The general everyday usage in Canada is adopted here, i.e., an external test administered to individuals, groups or populations in such a manner that scores of those tested are statistically calculated to be directly comparable within defined limits of reliability and validity. Reliability is a measure of the extent to which the same results are found if equivalent test items are given to the same individuals under the same conditions. Validity is the extent to which test items reflect the factors the test is supposed to measure; reliability is thus an important component of validity: a test can be reliable without being valid (one administered to the blind that depends on sight), but not satisfactorily valid without being reliable.

Familiar standardized tests include: IQ tests designed to fit the normal curve, e.g., with a mean of 100 and a standard deviation of 15; American college entrance boards, graduate admission and analogy tests; professional tests (e.g., for entry into law school); the CTBS and CAT tests of academic achievement; and provincial tests of achievement.

Typically, the standardized test is composed mainly or entirely of multiple choice items. The reasons for this are: generally speaking, multi-

ple choice is the most valid, reliable and economical procedure. The common accusation that multiple choice measures only knowledge is totally false. In fact, high school essay examinations are more likely to be scored mainly on the basis of knowledge, even though the questions may be written in a form that appears to demand higher level skills. Standardized tests are generally the most effective way to test: knowledge, understanding, inference, interpretation, some skills, and analysis. They can, with difficulty and severe limitations, be used to measure synthesis, evaluation, and aspects of written expression. They are not useful measures of oral, artistic, moral, physical or creative achievement – some of which goals are challenging for any objective form of assessment. Standardized tests should not normally be used alone to make important educational decisions about an individual's future.

### **What is their purpose?**

The use of standardized tests overlaps with that of other (notably teachers') tests. The purposes include: the measurement and diagnosis of students' achievement, aptitude, skills and measured intelligence; assessment of the passing of a specific academic hurdle; the certification of students, e.g., as high school graduates; the evaluation of schools and teachers; moderating movement from high-school to post-secondary education and accession of entry to professions and other employment; and, perhaps most important, as incentives to teachers and students for improvement and excellence.

Teachers who prepare and mark their own exams have less incentive than those whose students are subject to external assessment – which explains the continuous grade inflation in Ontario secondary schools. The choices among standardized tests and other assessment measures (e.g., teachers' marks of homework and projects, school examinations, and teachers' subjective assessments) depend on: validity and reliability of the measure; the kind of attributes being assessed; and the values and beliefs of those making the choice. In general, more than one means of assessment is important when decisions are being made about people's future lives.

### **Is there a good standardized test that parents can use at home to test their own children?**

Essentially, the answer is no – a standardized test would not really be a standardized test if it were publicly available. Its reliability depends on its being used in secure circumstances. There is obviously no assurance that a parent would not teach to the test beforehand, give hints during the test, or do other things that would render the result meaningless. Although a parent might simply want to administer the test in good faith for his own knowledge, there would be nothing to stop that parent from subsequently claiming that his child had performed at x level on the test – or even lending the test to a friend whose child was going to take the test at school in a few weeks time. No test-maker will make his test available to the general pub-

lic. The only solution is to pay to have one's child tested in various ways by a professional.

### **What kinds of standardized tests are there and how are they used?**

A distinction is usually made between external criterion-referenced and norm-referenced tests. The former are based on the attainment of specified objectives, the latter on normal achievement levels. Unfortunately, 'criteria' have become synonymous with 'good tests' (or less bad), norms with 'bad'.

Educators sometimes say, "I like tests that measure students in terms of themselves, not those that compare them with others". That is absurd. Virtually all tests have both criteria and norms – and they all necessitate explicit or implicit comparison with others. The Canadian Achievement Tests are norm-referenced. That is to say, scores are provided by (national) percentile rank, grade level and stanine. In all three cases, the scores are arranged around a mean (the 50th. percentile, the grade level corresponding with that of the students taking the test, or stanine 5), along a normal curve. (The stanine represents the curve most clearly – with many more students being a 5 than a 1 or a 9). However, the test items are still constructed on the basis of criteria; the criteria being the learning objectives of the various provinces. Test revisions ensure that the mean always represents the national average - irrespective of whether achievement is gradually increasing or (more likely over the last 40 years) declining. (Sometimes, there have been common items held over from one edition to the next so that one can show that the mean level of achievement has changed, a feature not beloved by school systems and provincial governments). Such tests, with their clearly defined interpretation, are unpopular with most educators, who also oppose high- stakes tests. High stakes have less to do with the qualities of the test than the use to which they are put. If achievement tests are used to evaluate teachers or to determine admission to universities they are high-stakes; if they are closely guarded in a drawer and never mentioned, they are low-stakes.

#### ***Criterion-referenced tests***

Ontario's achievement tests at grades 3 and 6 are nominally criterion referenced. They were set up to be closely associated with the Ontario curricula, taking account not only of the often obscure learning objectives, but also the required teaching methodologies being used (anything except direct instruction). Hence the achievement of those criteria would be the central point, regardless of the average level of achievement. By criterion-referenced theory, one could have 100% of students at levels 3 or 4 (whereas with norm-referenced tests, the median student is always at the 50th percentile). However, in developing test items for use in schools, consideration is inevitably influenced by what the test-makers believe third-

and sixth-grade students are able to do, in other words norms.

Back in 1965, I was made principal of a large junior high school. My predecessor was a progressive who did not believe in tests or examinations. I introduced examinations, which were developed by the teachers of the subjects at the three grade levels. The exams were in effect criterion-referenced (but not standardized) – based on what the teachers had taught during the term. The results were disastrous - teachers, parents and students were equally appalled. The simple fact is that students do not always learn what teachers have taught. That is arguably much more the case where there is no direct instruction, compounded by a lack of clear, measurable objectives and the absence of frequent formative testing, an integral part of direct instruction.

So it was not surprising that the first results of the Ontario tests were equally appalling, so much so that an informal zero had to be added to the four levels, and a revised claim was hastily made that 2 was really equivalent to a pass mark (a claim that later had to be abandoned in the face of parental derision). Quite apart from the severe deficiencies of the tests (more in terms of their design than in their construction, e.g., a 4 was for those who had gone beyond the curriculum, the test thereby becoming a criterion test with invisible criteria), the fact is clear that there was an intended implicit norm; the professional educators believed that would be the score for a plurality of students. Like the teachers in junior high school, an entire province's educators (with noble exceptions) believed that because something had been "taught" (or more precisely, because students had been given the opportunity to learn that something), the students must mostly have learned it. Efforts have since been made to turn 3 into but an all but written norm, partly by changing the tests.

There are more difficulties in the design of criterion-referenced tests than in norm-referenced, whose idea and design is very straightforward. Ontario learned nothing from its first experience, and suffered the same disasters with its high school literacy and basic math tests – with criteria related to the sometimes-bizarre curricula rather than to the basic literacy and numeracy intended if they were to be associated with a reasonable standard for graduation.

At one time, I was involved in the writing of items for standardized provincial high school tests (not in Ontario). The tests were supposed to be criterion-referenced (but obviously the province did not want too many failing to meet the criteria). The province decided that the language test should be more "authentic", a buzz word at the time, close to the "real" lives of students. I first tried passages from local newspapers, one an article containing interviews with adolescent girls about why they smoked, another based on the proposed establishment of provincial casinos. The first was rejected for sexism (boys smoke too), the second because it was a po-

litical issue and the government wanted casinos. I quit at that point. The province accepted instead a nineteenth-century letter from a British soldier stationed in Canada, with questions based on the improbable assumption that his opinions at the time were based on fact. There are numerous testing problems here. The crucial objective of inference in reading was undermined during the search for “authenticity”, as the difficulty of items comes to be sidelined by external factors unrelated to the educational objectives ostensibly being tested.

In another case, I was asked by an independent school to develop entrance tests for the school – there were two entry levels. The school, I was told, wanted to accept only the most able applicants, and they needed a way to discriminate accurately. I developed criterion-referenced tests, standardized by trials in public schools with gifted students. The initial response to the testing of applicants was very positive – they were engaged by the challenging tests and the tests discriminated well. I was later told there was a problem. The school had applications from children of school graduates and benefactors who had not met the test criteria (i.e., who had performed less well than numerous others without those connections). Where could the school draw a line between those who could survive in the school, but without flourishing, and those who would not survive at all? I could not help – there were very few items at that lower level, insufficient to make a fair judgment.

This is not to say that criterion-referenced tests are bad tests, only that their development and use raise complicated issues and the apparent precision and singularity of their purpose mask their drawbacks. Alberta uses criterion-referenced tests (called “performance” tests) to measure mastery, with criteria related to the mastery of the essential objectives of the curriculum. The advantage is that it focuses students and teachers on the essentials. I am not familiar with Alberta’s schools and do not know to what extent that emphasis on mastery has been either helpful or modified over time, but there are possible problems. Should everyone who lacks “mastery” repeat the course? Are there incentives (in the form of higher-level objectives) to challenge those who easily achieve mastery and require a higher bar, or does the bar become a ceiling?

At one time, a colleague and I developed standardized criterion-referenced tests for the Ontario universities. Some of them wanted to have a test for first-year students to identify those needing remedial help in language (which tells us something about the absence of standardized tests when students move from school to post-secondary education). We developed four tests – language usage, reading, essay writing, and the structure of essays and reports. An interesting finding was the high correlation among the four tests, sufficient to permit the exclusion of any one of the four with little loss of explanatory power. One is reminded of the important

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function of incentives in testing; the temptation would be to exclude the essay-writing test on the grounds of expense and inconvenience. (The others were all multiple choice). Essay writing is after all a major goal. The research finding did confirm the fact that, with rigorous oversight and procedures, essay tests can be almost as reliable as other test formats. However, the much more complex question of validity remains open. Some research has suggested, for example, that the length of the essay turns out to be a strong correlate of other language measures. Is that what scorers sometimes subconsciously measure?

### ***Norm-Referenced tests***

Ontario parents and educators have little knowledge or experience of norm-referenced tests, although that does not prevent some educators from making ignorant and thoughtless comments: “Norm-referenced tests compare students with other students, criterion-referenced tests compare them with themselves”; “Norm-referenced tests measure things that have not been taught”; “Norm-referenced tests are used to rank individual students, classes, teachers and schools”.

Almost every test, including medical tests, compares individuals or groups with an assumed norm. The issue should be: Is the comparison informative and useful? For example, as mentioned, the separation of levels 3 and 4, particularly in the original Ontario tests, was farcical. On some items students were expected to go beyond the “expectations”, while on others students were penalized for giving irrelevant information.

The idea that one should be compared only with oneself is absurd. Is it professional for an oncologist to tell a patient simply that her cancer is improving, when the rate of cell growth means death in two weeks instead of one, or for a teacher simply to tell a seventh-grade student only that his reading (over a grade below level) is steadily improving when he has advanced less than half a grade level in the year? Is it professional for teachers to substitute a vague and comforting parental and student interview, chaired by the student, for any testing at all? If one wishes to take computer science at the University of Waterloo, one needs to know how one is doing compared with others with that ambition, not whether one is doing vaguely better than last year. That point is so obvious that it is hard to believe so many “experts” remain in denial.

One great value of standardized norm-referenced tests is that they can be used to make valid comparisons among students, schools, provinces and countries. If Ashley comes home with an ‘A’ in grade eight science, a typical parent asks, “What did the rest of the class get?” or “What mark did Hank, Jill and Annette get?” – those three being in competition with Ashley. Even if universities accepted students according to an unchanging standard (in fact they cynically change their “standards” according to the required number of available bodies), parents would still need to compare

their child's achievement with that of others in order to give sensible career and educational advice. I have a grandson whose ambition is to be a helicopter pilot in the armed forces; he has the range of potential skills to be a good one, but he will have to work very hard to overcome the academic hurdles. If he happens to be in a school with unusually high standards, he will be disadvantaged in gaining acceptance to the program he wants. Ironically, in Ontario and other provinces where there are no meaningful standardized tests or examinations at the end of high school, it pays to attend a school with low standards, i.e., one that gives higher marks for a lower level of achievement. At an extreme the difference between schools' average marks (for the same level of achievement), may be 10 percentage points; a variation of 2 or 3 is normal, small but still crucial. Canny students have been known to transfer from a good high school to a bad one for their graduation year. The unfairness to students is not only in acceptance to programs - scholarships are also typically awarded on the basis of raw school marks. A highly professional and successful teacher in one of the best public high schools in Toronto once asked me, "What can I do? To give my students a fair chance I have to keep lowering my standards and giving higher marks for poorer work?" I had no answer.

Another advantage of norm-referenced achievement tests is their economy. They are easily administered and quickly scored (in most cases) by machine. This means that they can be easily taken annually, giving parents a quick warning if things are going astray. As a principal who administered tests annually (together with the now banned, politically-incorrect tests of ability), I used them to identify less advantaged children with unrecognized potential. Primary teachers frequently confuse readiness, maturity, and appropriate attitudes with ability and achievement. Thus highly-intelligent disadvantaged children, lacking promotion and teaching from home, may fall behind before they are recognized, if they ever are. After five years of schooling at the child's "own rate of progress", such children are likely to be irremediably lost by the end of third grade, quite possibly becoming troublemakers. In addition, annual testing is useful as a way to identify the quality of teaching. Teachers understandably object that single shot tests every few years reflect their students' background culture more than their teaching. But if the same class achieves an average gain of 1.2 grade levels a year for four years and only 0.8 of a grade level in the fifth year, there is a problem. The problem may or may not be the teacher, but it requires recognition and investigation. The absence of annual tests also makes it easier for educators to deceive parents when they flatly refuse to consider allowing an outstanding student to skip a grade.

European examinations (including the International Baccalaureate) at the end of high school are generally hybrids of criterion- and norm-referenced tests. Their criteria are more closely related to curricula than are

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American college boards (e.g., SATs) and have traditionally themselves set the criteria (the program is what the exam tests), as was the case in Britain, or closely followed a national curriculum, as in France. However, as academic success has become more competitive, the problems of varying scores from year to year attributable to varying difficulty in the examinations have led to increasingly-acknowledged statistical norming.

A complication with Canadian (and, today, many European) final-year exit tests and examinations is the problem of combining two very different assessments – the teachers' and the tests'. Teachers and some parents argue that the teacher knows the student best, that the teacher's mark, based on ten months' experience, is more valid than the score on a test taking a couple of hours. On the other hand, there is the problem of teachers' differing standards and of their essentially marking their own success; not many teachers like to think they have failed with a large portion of the class. The answer in most jurisdictions has been to give "equal weight" to each.

That sounds fair. Teachers tend to value attitudes and behaviour such as effort, diligence, memory (of what the teacher has said), and compliance (one can't grade an assignment not done). School assignments are sometimes influenced by the knowledge and diligence of a parent. Tests place greater value on accuracy, inference, logic, knowledge, analysis and skill. Both sets are important; teachers' marks tend to correlate better with future teachers' (professors') and test results better with other external measures such as tests of aptitude. In some fields of work, diligence and manners are crucial; in others it helps more to be smart. There is of course considerable overlap between the two measures.

British Columbia, for example, simply adds the two scores (teacher and test) together. This procedure does little to resolve the inherent unfairness of the teacher or school score described above. If two scores are added, one objective, one subjective, the result is subjective. Quebec has the answer. A school's marks are transformed to the metric of the same student's performance on the external exam. The students are then scored in the combined results in terms of their collective performance on the external exam, but individually are ranked with half the weight given to their school marks. School mark inflation or deflation has no effect on the combined score. The effect of a complex formula is to provide a student's final score based on the same scale across the province, but whose rank, compared with other students in her school, is based equally on his or her scores on the two measures.

One of the common objections to external tests is that "they do not test what I teach". Superficially, that seems reasonable; it is not fair to test a student in advanced physics who has not taken the relevant course. In practice, commercial achievement tests are based on the common objectives of provincial curricula – and, at least in the basic skills, they are not

nearly as different as provincial bureaucrats like to imagine. Canadians are a mobile people, but students have more difficulty with social than academic adaptation.

### **What should be our priorities for standardized testing?**

It should be clear that the debate should not be between norm-referenced and criterion-referenced tests. In practice, tests are often hybrids – even teachers’ tests and examinations, not standardized, have implicit norms as well as (one hopes) explicit criteria. Sometimes those informal norms defy common sense when one looks at how teachers’ marks are used. For example, why should English marks in grade 12 usually fall between 50 and 90, math marks between 20 and 100? Why should it be easier to both get a scholarship and fail in math and science than in English and history?

The weaknesses of teacher and school marks are most evident in terms of graduation and movement to post-secondary education. Graduation should be based on clear standards – as it is in most jurisdictions except Ontario. Students throughout the province should be judged on the same basis in order to win a scholarship or gain entry to a highly competitive program – just as they would to win a hockey scholarship or win a prize in gymnastics. In neither of the latter cases would they win simply on the basis of their own coach’s assessment. This is the first priority – and one which nearly all developing countries recognize. Of lesser importance is the choice between criterion-referenced and norm-referenced tests.

In the case of grade 12 exit assessment, my preference would be a hybrid, along the lines of the International Baccalaureate, but at two levels, both lower than the I.B. itself which would remain an option for the most advanced students. The lower level would essentially consist of tests of what is needed for good citizenship, with emphasis on literacy, numeracy, and basic knowledge and understanding in science, finance, health, etc. Test results should be combined with teachers’ assessments of work over the year and final exams, notably in areas not well assessed by objective tests.

In the lower grades, annual tests are necessary – too much can go wrong in three years and accountability is important throughout the system. Norm-referenced tests are the most efficient and economical and serve the broadest band of purposes.

Criterion-referenced tests are most important in areas such as physical fitness and the arts. There are basic standards of fitness which should be required of all students. Similarly in music, there are basic standards in knowledge, appreciation as well as choral and instrumental performance that are valuable to all.

None of these things is particularly difficult or expensive. The smaller provinces could form a consortium to produce and implement

common measures. The idea that New Brunswick students need different tests from those in Nova Scotia and Manitoba is simply absurd in the twenty-first century. It is unrealistic to imagine that Ontario would ever condescend to join such a consortium. Its problem is not financial. The evaluation deficit in Canada is one of will, not money.

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## **Are We Asking Enough of our Students?**

### **THEN (1932)**

*These problems were expected to be mastered by grade 3 students during the last week of May in 1932. They are taken from "The Opportunity Plan: A series of lesson outlines and exercises, based on the Prescribed Course of Study for the Province of Ontario, and designed to meet the needs of the individual pupil", Edited by W. E. Hume.*

1. (a)  $60 = ? \text{ doz.}; \frac{1}{2} \text{ doz.} = ?; \frac{1}{4} \text{ doz.} = ?; 1 \frac{1}{2} \text{ doz.} = ?; 2 \frac{1}{2} \text{ doz.} = ?.$   
 (b)  $1 \text{ lb.} = ? \text{ oz.}; 5 \text{ lb.} = ? \text{ oz.}; \frac{1}{4} \text{ lb.} = ? \text{ oz.}; 2 \frac{1}{2} \text{ lb.} = ? \text{ oz.};$   
 $1 \frac{1}{4} \text{ lb.} = ? \text{ oz.}$   
 (c)  $2 \text{ pts.} = ? \text{ qts.}; 12 \text{ qts.} = ? \text{ gals.}; 5 \text{ qts.} = ? \text{ pts.}; 3 \text{ gals.} = ? \text{ qts.};$   
 $18 \text{ qts.} = ? \text{ gals.}$
2.  $16 \overline{)52734} \quad 17 \overline{)73640} \quad 14 \overline{)29509} \quad 21 \overline{)38906}$
3. Round steak costs 20¢ per pound. Jim bought 1 ½ lb. How much did he pay? What was his change out of \$1.00? What coins would he receive?
4. Divide the numbers in Question 2 by 29, 47, 58, 64.
5. Subtract and add.  

$\begin{array}{r} 30654 \\ \underline{8279} \end{array}$	$\begin{array}{r} 70600 \\ \underline{38964} \end{array}$	$\begin{array}{r} 600006 \\ \underline{\quad 874} \end{array}$	$\begin{array}{r} 30000 \\ \underline{8685} \end{array}$
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6. Divide the numbers in Question 2 by 73, 87, 94, and 38.
7. Multiply.  

$\begin{array}{r} 305 \\ \underline{654} \end{array}$	$\begin{array}{r} 487 \\ \underline{209} \end{array}$	$\begin{array}{r} 354 \\ \underline{870} \end{array}$	$\begin{array}{r} 689 \\ \underline{406} \end{array}$	$\begin{array}{r} 807 \\ \underline{609} \end{array}$
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8. Read and write in figures: DCCLXIV; CCCLXXXV; twenty thousand and twenty; ninety-three thousand three hundred and thirty-three; two hundred thousand and two hundred and twenty-two.
9. (a) Find the cost of 3 quarts of milk at 7¢ per pint.  
 (b) Find the cost of 1 ½ doz. pears at 40 ¢ per dozen.  
 (c) If I pay 78¢ for a 3 lb. pail of honey, how much per pound does it cost?  
 (d) A 14 lb. bag of flour costs 98¢. How much is that per lb.?  
 (e) On banking day our teacher had the following: 3 one dollar bills; 3 fifty cent pieces; 7 quarters; 12 ten cent pieces; 8 five cent pieces and 17 coppers. How much money did she have?

10. (a) The grocer counted out twenty-four eggs. How much would I pay at 32¢ per dozen?
- (b) I saw that the scales showed five and one-half pounds as the butcher weighed a chicken. If the chicken was 32¢ per pound, how much did my mother pay?
- (c) Mr. A's gasoline tank on his car holds fourteen gallons. How much would it cost to fill it at 29¢ per gallon? At the price of gasoline near your home?
- (d) Jack's father bought him a bicycle for \$25.00. After using it for two years his chum Jim bought it for \$12.75. How much did the use of the bicycle cost Jack for the two years?
- (e) A grocer bought a fifteen pound basket of blueberries for \$2.40. How much did he pay for one pound? If he sold them for 20¢ per pound how much did he get for the basket? How much did he gain by selling them?

### **NOW (2006)**

*These problems are part of Ontario's EQAO test for grade 3 students in May 2006. Because so many of the test items included space-eating graphs, maps, and drawings of various kinds, we have reproduced only the word problems. The entire test can be viewed by clicking [here](#).*

1. Which of the following could be the temperature on a warm, sunny day?

-23 °C      5°C      25°C      100°C

2. Britta uses estimation to solve the following problem.

82

28

+91

Which is closest to the sum?

$80 + 20 + 80$

$80 + 29 + 90$

$80 + 30 + 90$

$80 + 30 + 100$

3. Which of the following is another way to show  $4 \times 6$ ?

$4 + 4 + 4 + 4$

$6 + 6 + 6 + 6$

$4 \times 4 \times 4 \times 4$

$6 \times 6 \times 6 \times 6$

5. Each face on Jaime's number cube has a different number:

1, 2, 3, 4, 5, 6

He rolls the number cube 1 time. What are the chances the number cube lands with a 2 or a 5 facing up?

1 out of 5

2 out of 4

2 out of 6

4 out of 6

6. Kevin is making a number pattern by repeating the first three numbers he writes in the same order. Which of the following could be Kevin's pattern?

2, 4, 6, 2, 4, 6, 2, ...

2, 4, 6, 8, 10, 12, 14, ...

2, 4, 2, 4, 2, 4, 2, ...

2, 2, 4, 4, 6, 6, 2, ...

7. Chloe wants to solve the number sentence shown.

$$23 - 6 = \square$$

Which of the following number sentences could Chloe use to check her answer?

$$26 - 3 = 23$$

$$23 + 6 = 29$$

$$17 - 6 = 11$$

$$17 + 6 = 23$$

16. Which addition sentence is related to  $16 - 5 = 11$ ?

$$16 + 5 = 21$$

$$5 + 11 = 16$$

$$6 + 5 = 11$$

$$11 + 16 = 27$$

17. Allan has 600 cards in his collection. Billy has 387 fewer cards in his collection than Allan. How many cards does Billy have in his collection?

987

387

323

213

22. Which number can be placed in the box to make this number sentence true?

$$183 + \square = 200$$

393

383

27

17

23. David must wait 1 year before he is old enough to join the baseball team. Which of the following is closest to the total number of days in 1 year?
- 356
  - 360
  - 365
  - 376
24. The number pattern below shows how Judy is counting aloud by 25s. She starts at 150 and counts by 25s.  
150, 175, 200, 225, 250  
What will Judy's 7<sup>th</sup> number be?
- 250
  - 275
  - 300
  - 325
25. There are 28 students in Daniel's class. The list shows how all the students get to school each morning.
- 3 ride in cars
  - 4 walk
  - ? ride in buses.
- What is the total number of students who ride in buses to get to school?
- 7
  - 21
  - 24
  - 28

*There are some interesting differences between the two sets of questions. The most obvious, of course, is that the 1932 questions are arithmetically much more advanced. In addition, the 1932 questions tend to be about family and adult matters, while the 2006 questions are mostly peer-oriented.*

## **WHAT'S NEW?**

### [The Child is the Father of the Man](#)

Statistics Canada reports that "children aged 8 or 9 whose reading ability in school was better than their peers had significantly higher test scores in literacy a decade later." [more](#)

### [School Choice in Sweden](#)

Sweden, the poster child of socialism and big government, funds its independent schools on the same basis as its state schools. This Fraser Institute paper describes the strengths and weaknesses of this policy. [more](#)

### [Math Education: An Inconvenient Truth](#)

Using multiplication as an example, this 15-minute video shows parents very simply and clearly why their kids are having trouble with math at school. Although the video references American texts, the principles hold true for Canadian texts such as *Math Quest*. [video](#)

## **BOOK REVIEWS**

***Collective Bargaining in Education: Negotiating change in today's schools.*** Jane Hannaway and Andrew J. Rotherham, eds. Harvard Education Press. 2006. 312 pages.

This book brings together essays from the few researchers who have systematically studied the effect of collective bargaining on education, along with other analysts, practitioners and teachers' union officials. The volume shows the disappointing polarization that characterizes discussion of this topic. Since collective bargaining shapes the way public schools are organized, financed, staffed, and operated, it is high time that its role is placed under a strong light.

The excerpt below explains the difference between employee interests and children's interests.

***(Excerpt pp 230-233)***

“The teachers unions are often misunderstood. Their friends think about them in much the same way they think about teachers: as caring deeply about kids, promoting quality education, and fighting for important social principles. Their enemies see them as nothing short of malevolent: as oligarchic organizations that force unwilling teachers to join and are unconcerned about the best interests of kids. Neither is an adequate characterization. To understand the teachers unions, we have to get beyond stereotypes and think about them as social scientists might think about any organization.

“Consider business firms, for example. Economists have done an excellent job of understanding these organizations by recognizing that profit is the fundamental interest that drives their behavior. Thus, economists fully expect firms to pollute the water and air when polluting is less costly than not polluting, and they are right. This is why we have laws against pollution. The problem is not that firms are malevolent and out to destroy the environment. The problem is that their interests are different from the public's interest in a clean environment.

“Teachers unions can be understood in much the same way, except they are not driven by profits. Their survival and well-being depend on their ability to attract members and resources, and these define their fundamental interests. It follows that the unions have an interest in pushing for stronger collective bargaining laws, because these enhance their success in

gaining members and resources. Similarly, they have an interest in protecting member jobs. They have an interest in fighting for higher salaries, more valuable health and retirement benefits, better working conditions, and other job-related things that their members want. They have an interest in pressing for reduced class sizes, and in other ways increasing the demand for teachers. They have an interest in fighting for higher education budgets and higher taxes. And so on.

“None of this has anything to do, at least directly, with what is best for children. It is possible, of course, that some union objectives – higher spending and smaller classes, for example – are actually good for kids. Yet there is no strong evidence that this is so; and even if there were, any benefits for children would be accidental by-products of what the unions do in their own self-interest. It is quite clear, on the other hand, that self-interest often leads them to do things that are *not* good for kids, such as protecting the jobs of incompetent teachers. Just as business firms knowingly pollute if it is in their self-interest to do so, so the teachers unions knowingly pursue objectives that are bad for kids. They don’t do it because they are malevolent. They do it because they are normal organizations guided by their own interests....

“Moreover, just as union interests are not the same as the interests of children, so teacher interests are not the same as the interests of children. Teachers expect their unions to press for more benefits, to get them more time off, to protect them from administrators, to impose restrictive work rules, and in a host of other ways to promote their job-related interests – and none of this is premised on what is best for children.

“When the unions engage in behavior that is contrary to the best interests of children, then, teachers are complicit in what they are doing. It is a mistake to think that the unions are the source of these problems, and that teachers are somehow not responsible and are even victims themselves. Exceptions aside, teachers *are* responsible and they are *not* victims. As things now stand, the unions do the teachers’ bidding in a powerful way. But if the unions did not exist, teacher interests would continue to be the same employee interests that they are now, and they would still come into conflict with the interests of children. In the final analysis, the real problem here is not union power per se, but *employee power* exercised on behalf of *employee interests*.”

(from “*Union Power and the Education of Children*”, by Terry M. Moe. Dr. Moe is a senior fellow at the Hoover Institute, a member of the Institution’s Koret Task Force on K-12 education, and a professor of political science at Stanford University.)

***Educational Entrepreneurship: Realities, challenges, possibilities.*** Frederick M. Hess, Ed. Harvard Education Press. 2006. 299 pages.

As recognition grows that American and Canadian education systems are so calcified that reform is practically impossible, reformers are starting to think outside the box. One possible option is to harness the power of entrepreneurs to shake up public education and bring it into the 21<sup>st</sup> century. This book takes a look at some new models that are being tried out today.

The excerpt below discusses some of the reasons why entrepreneurs (EMOs) have not been all that successful to date.

***(Excerpt pp 197-200)***

“Any entrepreneur proposing to operate public primary and secondary schools must confront the ideology of American schooling – an array of deeply held but often unexamined normative beliefs embedded in American culture. EMOs had no choice but to tackle the first of these beliefs head on: that it is wrong to make a profit running schools. Perhaps because this fight alone was so taxing, they often elected to accommodate a range of standard schooling practices where to do otherwise would have required violating another tenet of the ideology. But their adherence to conventions compromised both their educational and financial results.

***Localism***

“The two hundred-year tradition of localism in primary and secondary education contained two distinct expectations that hinder nationally minded entrepreneurs, and especially EMOs: local control and differentiation. Opponents of private operators invoked the public’s commitment to both local control and school differentiation when they argued that charter school legislation was intended to spawn community-based schools, each with its own lay board, each tailored to the unique needs of its students, and each a laboratory for an innovative model – not to foster a system of schools that implemented a common design and was operated by an out-of-state corporation....

***Class Size and Structure***

“EMOs also rarely confronted the ideology of class-size reduction, even though reducing staffing costs was essential to improving productivity and realizing a profit. Throughout the 1990s, when the EMOs were launched, and continuing today, the national teachers union pressed for smaller classes. Smaller classes made intuitive sense to the public: Teachers, with fewer children to handle, could devote more attention to individual students. Entrepreneurs knew that the research support for achievement gains from reduced class size was weak at best. They also knew that many of the nations with the strongest results in rigorous comparisons of academic achievement made use of much larger classes – not smaller – than

American norms, and that increasing class size (and thereby lowering staffing costs) was among the few obvious levers for reducing costs. Yet few EMOs made use of larger classes, and several actively promoted *smaller* classes as a primary value to their customers....

#### *Teacher Invention*

“Generations of American teachers have been schooled in an ideology in which prestige is often accorded those who exercise creativity in the classroom, rather than those whose students obtain academic results. But leaving teachers to develop their own lesson plans in critical elementary subjects, as did most U.S. schools, makes for a kind of institutionalized chaos. The consequences are predictable; a few lessons are exceptional, the majority mediocre....

#### *Teacher Qualifications*

“Few work environments are as people intensive as schools. EMO founders knew that selecting and retaining the strongest teachers, and letting go of the weakest, was critical to realizing exceptional academic results. They were willing to confront the teachers unions on the dismissal of plainly incompetent teachers, sensing that public opinion was squarely on their side. Yet they did surprisingly little to challenge other components of the orthodoxy, in particular teacher selection and compensation. Unions contend that teachers are largely interchangeable and of equal ability, and what matters is their formal preparation and working conditions. But research finds otherwise; as measured by value-added testing, switching from an average teacher to a strong one has approximately twice the effect on achievement gains as a 10 percent reduction in class size. Research also suggests that teachers who have graduated from selective-admission colleges and who have strong intellectual skills, verbal aptitudes, and subject-matter knowledge are the most effective. Yet EMOs failed to publicly challenge the prevailing assumption that teacher preparation – certification and advanced degrees in teaching – drove teacher quality. Nor did they systematically organize to recruit teachers with these characteristics. Given the culture of K-12 schooling, to do so would have been to invite charges of elitism.

#### *Pedagogy*

“A final component of the culture of American schooling is pedagogical faddism – the adherence to a constantly repackaged set of progressive notions that often are neither proven practicable and effective in the classroom nor based on science. Whether to inquiry learning, multiple intelligences, the disparagement of ‘facts’ and ‘right answers’, or to the insistence that writing skills are best fostered by withholding corrections, EMOs showed a surprising obeisance. As in district-run schools, teachers were often discouraged from lecturing in favor of small group of independent activities where students ‘discovered’ knowledge. These activities proved ex-

ceptionally difficult to orchestrate so that real learning occurred, and much time was wasted that could have been applied to traditional instruction. (from “*Opportunities, but a Resistant Culture*” by Steven F. Wilson. Dr. Wilson is the Michael R. Sandler Senior Fellow at the Center for Business and Government at Harvard University’s John F. Kennedy School of Government and a consultant to Edison Schools.)

***Myths, Lies and Downright Stupidity: Get Out the Shovel – Why Everything You Know Is Wrong.*** John Stossel. Hyperion Books. 2006. 284 pages.

A fun read, this book describes many popularly-held beliefs on a variety of topics, including parenting, health, business, and government. Of particular interest to those following the education scene will be the chapter titled “Stupid Schools”. As with other areas of the book, the format is to state a “myth” and follow it with a “truth” counterpoint. Regular readers of the *SQE Forum* will be familiar with many of these education myths, but will enjoy the way the author lays out his counter-arguments. (Review by Nancy Wagner)

The excerpt below shows why many politicians aren’t motivated to champion school choice policies.

***(Excerpt pp 121-124)***

“Jenny Sanford isn’t just *any* parent, she happens to be the wife of South Carolina’s governor. After Mark Sanford was elected, the Sanfords and their four boys moved to the state capital in Columbia. Their first big challenge was: Where will we send our kids to school?

“They wanted to send them to public schools, but the middle school near the governor’s mansion was rated ‘below average’. The Sanfords quickly learned that *they* wouldn’t have to send their kids to that school – they could get access to the *best* schools because of the governor’s position. Mrs. Sanford told me that school superintendents called and wrote her, inviting her to ‘choose their best schools and send my children there. And I said, ‘But it’s not fair because if I lived down the street here, [I] wouldn’t be allowed to do that.’ They said, ‘You’re married to the governor! So forget the rules.’

“That’s how it works. The privileged get special breaks. The Sanfords didn’t think it was fair for them to take advantage of that, so they dug into their own pockets and sent their kids to private school. Then the governor proposed a plan that would make it easier for all kids in South Carolina to have the same choice they had. He called his plan ‘put parents in charge’. It would allow parents to pick any school they wanted, and if they chose to leave the government schools for a private school, they’d get a tax credit to help pay the tuition.

“Letting parents choose, he said, would start competition between schools.

GOVERNOR SANFORD People expect and demand choice in every other area of their life. Nobody would accept the notion of, I only get one kind of toothbrush. We’re all made better by competition.

STOSSEL People say the kids are too important to leave them up to the market, to competition. They might fall through the cracks.

GOVERNOR SANFORD The kids are in fact falling through the cracks right now!

“He’s right about that. In South Carolina about half of the kids don’t graduate from high school within four years. But how did the education establishment react to the governor’s plan? School boards objected. Teachers’ unions objected. PTAs sent *kids* home with letters saying, ‘Contact your legislator. How can we spend state money on something that hasn’t been proven?’

“The state legislature rejected the school-choice proposal sixty to fifty-three. It was a ‘great victory’ for education, said state school superintendent Inez Tenenbaum.

INEZ TENENBAUM It was an unproven, unaffordable, and unaccountable plan.

STOSSEL Well, it’s unproven because politicians, unions, won’t let anyone try it. But why not let a thousand flowers bloom?

INEZ TENENBAUM You have no idea what the private sector is going to produce.

STOSSEL That’s the beauty of it! The private sector constantly produces more than you or I as individuals could imagine, because a million minds create.

INEZ TENENBAUM I don’t buy that.

“Tenenbaum said there was no need for an ‘unproven’ scheme because her schools were getting better all the time.

INEZ TENENBAUM We need to stay the course. If you look at every indicator for South Carolina schools, South Carolina is not last. We have been ranked as having some of the highest standards of learning in the entire country.

STOSSEL But the kids don’t achieve them. You’re *last* in SAT scores.

INEZ TENENBAUM SAT is an indicator that really shouldn’t be used to judge any state.

STOSSEL Aren’t the parents better judges than your tests, if the parent says, ‘I hate this school, I wanna put my kid in [another] school?’

INEZ TENENBAUM Parents can get out, parents have public school choices.

STOSSEL [A] lousy public school versus another lousy public school! Why not give them more choice, why not let them take half the money you spend, and try these private alternatives?

INEZ TENENBAUM Because you do not have the same kind of accountability in private schools that you have in public schools.

“Accountability? The head of a government monopoly has the nerve to talk about accountability? Accountability is why *private* schools perform better. Every day they are held accountable by parents, and if they fail the kids, the school administrators lose their jobs.

“Government schools are accountable only to politicians. It’s why almost no school is ever closed, no matter how bad it is. No one loses his job when the kids fail.

“It’s not news that government monopolies perform poorly. The fall of the Soviet Union is not a secret. Why would we think a monopoly would work for schools?”

## **SQE ACTIVITIES**

### *SQE Newsletter Archives*

We have added most of the old SQE and OQE newsletter archives to our web-site, organized alphabetically by topic. If you want to find out more about, say, semestered schools, just click [here](#) and scroll down to “Semestering” and you will find a number of articles on the subject.

## **AND NOW FOR SOMETHING COMPLETELY DIFFERENT**

If computer error messages were written in haiku....

Yesterday it worked  
Today it is not working  
Windows is like that

For more ruefully-true haikus on computer disasters, click [here](#).

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