

Problem solved

LAWRENCE SOLOMON

It doesn't add up. A private school in Toronto where whites feel lucky to have their children accepted in classes dominated by Asians and Indians. Where girls are the equal of boys in math. Where five and six-year-olds, as a matter of course, solve problems that befuddle kids many grades higher in conventional schools, public or private.

Welcome to Spirit of Math, a 600-student for-profit evening school that — with one 90-minute class per week — outperforms anything Canada produces. Until three years ago, Spirit of Math operated only in the outskirts of Toronto. Then, it licensed a school in Winnipeg. Two years ago it opened two more Toronto campuses. This fall, it expects to award its first franchise to a Toronto-area "Campus Developer" and, if the franchise-school concept proves successful, in coming years a new franchisee could be coming to a location near you.

Spirit of Math wasn't always a for-profit school. Charles Ledger, the junior high school teacher who first developed the Spirit of Math program, began by teaching it (or "Ledger Math," as his Grade 7, 8 and 9 students dubbed it) in the Toronto suburb of Willowdale in the 1980s. Spirit of Math proved so successful that the school soon dominated Canada's math competitions, winning more Canadian Junior High School Championships than all other schools combined. His students also won most of the Canadian championships in the Pascal Contest, a national mathematics contest sponsored by the University of Waterloo, and more than 80% of the Ontario Team Championships.

This was more than Canada's hide-bound public school system could fathom. The educational establishment decided it had nothing to learn from Ledger's methods — his approach was peculiar to himself, could not be duplicated, and thus had no wider applicability, it decided. Not only were Ledger's methods dismissed, after Spirit of Math was set up as a private school, the provincial Ministry of Education refused to give high school students credits for the math courses they took at Spirit of Math unless they also sat through day-school courses. The ministry won't license Spirit of Math unless it operates on a 9 a.m. to 4 p.m.



basis, and when an accredited Toronto-area day school that did operate on a 9 a.m. to 4 p.m. basis agreed to provide credits to Spirit of Math students that met its criteria, the ministry forced it to stop.

Despite the views of education bureaucrats, the Spirit of Math approach is highly reproducible, as Ledger's daughter and business partner, Kim Langen, now proves year after year. Langen trains teachers in her dad's methods with extraordinary results — Spirit of Math students continue to take top honours in math competitions

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across North America. Little wonder that parents line up early to register their kids for Spirit of Math each May — the classes rapidly fill up — and that the school has had requests to work its magic in communities across the continent. Spirit of Math attracts mostly good math students, disproportionately from ethnic communities that place high value in their children's education and are willing to spend the \$35 per class required to make a difference. By making their students adept at numbers and teaching them how to think through problems, Spirit of Math soon has them going to the head of their day-school class.

To its own surprise, Spirit of Math has realized that it, too, underestimated how much kids can learn at an early

age. It now raises the bar each year and introduces more concepts to their students at earlier ages. Sometimes, Spirit of Math discovers that learning is actually easier at young ages, as when it found that Grade 1 children more readily accepted the concept of negative numbers than children in Grade 4 or 5, the year that most schools introduce them.

To deliver its results, Spirit of Math also expects more of its teachers. Rather than lecturing to passive kids, teaching by rote, and prescribing set ways to solve problems, Spirit of Math finds ways of getting kids to discover solutions on their own, building their confidence and seizing on students' insights to draw lessons for them at the precise moment they're most receptive.

Spirit of Math succeeds partly because of its novel teaching methods and partly because it doesn't put up with pretense. It won't graduate students that haven't mastered their material, or re-admit even bright students who don't do its assignments. It thinks nothing of placing a less-able student in a lower grade with younger students, and it will even send such a child to a lower grade during the school year, if the child would otherwise slow down a class's progress.

Is this heartless? "You don't fool kids by pretending they have accomplished something they haven't," Langen states matter-of-factly. "They know when they've been given something that they haven't had to work for." She's seen her kids thrive after they've been held back a year. Don't these kids get teased, and lose self-esteem? "Kids don't care [if their classmates are of different ages]," she says. "We often have kids from three to four different grades in the same year. Some kids skip a grade or two, some are held back."

And some school systems imbue their students with the spirit of learning while others only dispirit them. If government-regulated school systems weren't so rigid, and were able to adopt successful innovations in learning, parents wouldn't be seeking outside schooling in large numbers. Until then, alternate schools will be filling the void, and doing the math.

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