



The Serpent in Finland's Garden of Equity

by Sandra Stotsky

Essay Review of *Finnish Lessons: What Can the World Learn from Educational Change in Finland* by Pasi Sahlberg (NY: Teachers College Press, 2011)

To appear in the *Journal of School Choice* in a slightly different form

About four decades ago, Finland introduced major reforms to grades 1-12 and teacher education, with noteworthy results. In 1970, less than 10% of its students graduated from high school. By 2010, most high school-age students attended high school and most of these students graduated. What did Finland do to achieve such a dramatic increase in high school graduation rates? And to be among the highest-scoring countries on all the mathematics, science, and reading tests for 15-year olds given by PISA (Programme for International Student Assessment) since 2000? We can find some answers in an account of the policy changes that contributed to these results by Pasi Sahlberg, director of the Center for International Mobility and Cooperation in Finland. We need to look elsewhere for other possible reasons.

First, some background facts from Statistics Finland 2011. The cohort completing compulsory education, which ends in grade 9, consists of about 64,000 students. In 2010, about 50% chose to enroll in an upper secondary general (academic) high school. About 41% chose to enroll in an upper secondary vocational high school. About 9% did not enroll in either type of high school.

In 2010, over 32,700 high school graduates (mostly if not all from academic high schools) passed the matriculation examination, which determines eligibility for admission to a university. Almost 6000 (or about 9% of the grade 9 cohort) began studies at a university. Almost 6000 (or another 9%) began studies at a polytechnic school (post-secondary schools of applied sciences established in the 1990s). A small percentage chose to go to a vocational high school. Statistics Finland 2011 notes that almost 20,000 didn't get a university placement.

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Center for
School Reform

February
2012

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Neither Statistics Finland nor Sahlberg's book provides information on what happens to high school graduates whose applications for a university placement are rejected (each year the vast majority of new passers do apply). Other sources of information suggest that it may take several years of trying for many to enter because of the universities' rigorous entrance examinations.¹ In the long run, about one-third of academic high school graduates enter a university (as of 2000).

Although 25% of their studies are in core subjects, very few vocational high school graduates take the matriculation examination, Sahlberg notes. They are assessed differently for admission to the polytechnic schools.² About a third of the students at these schools come from vocational high schools.³ Apparently, most vocational high school graduates go directly into the work force.

Now let's look at those who become teachers. As all sources indicate, they must be graduates of an academic high school. They must get a place at a university (which means they are in the top 9% of their grade 9 cohort). Those who seek to teach grades 1-6 must complete a five-year program at a university consisting of a three-year BA degree program, followed by a research-based two-year M.Ed. degree program, both in the Department of Educational Sciences. Those who seek to teach a subject in grades 7-12 complete a program lasting from five to over seven years. The longer program consists of a three-year BA degree program with a major in the subject, a master's degree program in the subject, both under the auspices of faculty in the arts and sciences, and a research-based M.Ed. degree. The shorter program is a compression of the longer one.

So, what key elements in Finland's educational reforms were suggested by Sahlberg's book?

- (1) Compulsory schooling and a common curriculum for all in grades 1- 9. No accelerated curriculum for fast learners.
- (2) Intensive support for students with special needs throughout the grades.

- (3) Choice of an academic or vocational high school after grade 9. Students are entitled to considerable "counseling and career guidance" in grades 7, 8, and 9 to "reduce the risk" that they make "ill-informed decisions." Although students may have to pay for their books, meals, and transportation and often take more than three years to complete a high school program, upper secondary school is free.
- (4) Last but not least, a highly competitive process for admission to a teacher training program, whether for kindergarten, elementary, or secondary teaching. The first cut for prospective elementary teachers is based on their matriculation examination scores, their high school record, and relevant out-of-school activities. Top candidates must then pass a written exam on assigned books on pedagogy, demonstrate social and communication skills in a role-playing activity, and explain in an interview why they want to become teachers.

According to Sahlberg, the goal of teacher education is related to "sustaining Finnish national culture and building an open and multicultural society" (p. 73). National curriculum guidelines for high school clearly stress preservation of national culture: "the basic values of upper secondary school instruction are built on Finnish cultural history, which is part of Nordic and European cultural heritage. At upper secondary school, students should learn how to treasure, assess and renew their cultural heritage."⁴

The benefits of such a competitive process for prospective teachers are obvious to an American educator. Teacher preparation programs can concentrate on instruction, curriculum, and research because admitted students have a deep understanding of the content of the subjects they will teach. Because of their academic qualifications and pedagogical training, teachers can be granted a great deal of autonomy in what they do in the classroom to address the National Curriculum Framework for Basic Education, a document that sets forth general academic objectives but leaves curriculum development and textbook selection for grades 1 to 9 to the schools themselves. Because of teachers'

academic and pedagogical qualifications, no external or national tests are needed in grades 1-9, the teaching profession itself is held in high respect, and there is an extremely low attrition rate. Only 10 to 15% of teachers leave during the course of a career, Sahlberg's book notes.

However, one would never know that choice and competition were key elements in Finnish education reform by reading what teacher educators in the USA laud Finland for, to judge by the endorsements of Sahlberg's book and the two forewords in it. In one of these forewords, Andy Hargreaves of Boston College's education school claims that choice and competition are not part of the Finnish education system, just equity and collaboration. Yet, competition clearly drives high school students seeking admission to a university or to a teacher preparation program. And choice is pivotal for the motivation to continue education at the upper secondary level.

Moreover, while there are no standardized tests in grades 1-9, there are many internal assessments and pressures in the upper secondary school. As Sahlberg notes on p. 25, teachers assess student achievement at the end of each 6-7 week period, or five or six times per subject per school year. Further, the high-stakes matriculation examination, paid for by student fees and often retaken for a higher score by students determined to get a place at a university, has a "notable effect on curriculum and instruction."

Our teacher educators like the benefits of Finnish reform: teacher autonomy in grades 1-9, no external tests or test-based accountability, and a collaborative approach at the school level to the curriculum. But apparently they don't like the conditions that produced these benefits or understand that the motivational elements of choice and competition are simply in different parts of the Finnish educational system. It seems that Finnish students, not Finnish teachers, are held accountable for student learning after students complete grade 9.

Although Sahlberg warns that Finland's achievements can't be easily replicated by other countries, his book doesn't sufficiently stress how one basic condition—choice—helps to lead, as planned, to the

extraordinarily high graduation rates from high school. Or the increasingly important role played by vocational high schools not only in Finland but in other European countries as well. In fact, he himself ends by denouncing choice and competition (p. 134), perhaps because he knows that his audience in this country thinks choice means charter schools or vouchers.

Sahlberg does emphasize the academic requirements for admission to and exit from teacher preparation programs. And he quotes from elementary teachers who would find their profession less appealing if the academic bar were lowered. According to them, an increase in intellectual demands has made elementary teaching in Finland more, not less, attractive to academically competent high school graduates.

So far, no education school dean or education policy maker in the USA has picked up on how Finland upgraded its teacher preparation programs, for elementary teachers in particular. In fact, our teacher educators go out of their way to ignore this key component of Finnish reforms. In a Roundup Post on Changing Teacher Prep on an *EducationWeekly* blog on January 31, 2012, all the contributors could suggest to "Attract Top Candidates" is increased starting salary, passion, and perseverance. Yet, average teaching salaries in Finland are not different from those in other major professions. Moreover, there is no single salary schedule: upper secondary teachers have higher salary scales than lower secondary teachers, who have higher salary scales than elementary teachers, Sahlberg notes.

A common curriculum makes much sense in a country where the average comprehensive school (grades 1-9) has about 200 students—i.e., about 22 per grade (p. 137). But, variation in talents and interests is as much a characteristic of Finnish adolescents as of any other group of adolescents. Finland does not seek equity in admission to a university (competition for a place is described elsewhere as "fierce"²⁵) or to a teacher training program. Nor does it seek a common curriculum in even its academic high schools. In these high schools alone, there are eight different diploma programs for students to choose from and

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complete. Moreover, a National Board of Education issues guidelines for these high school diploma programs that include assessment criteria. High school education in Finland is not the collaborative, equality-oriented setting educators in the USA think characterizes all of Finnish education.

However, there is at least one visible snake in the Garden of Equity that Finnish educators turned their comprehensive schools into by decentralizing curriculum development and promoting a particular kind of mathematics curriculum in its teacher training schools. Perhaps they deliberately intended to reduce the mathematical content traditionally taught in 1-9 in order to slow down the “gaps in achievement” that study of mathematics as a discipline typically leads to. Whether or not it was their intention, an emphasis on equality of outcome was bound to lead to the “mathematics of daily life” for all rather than to the “structure of mathematics” for those with interest and aptitude for mathematics, as mathematicians have characterized the differences. For two decades, they have expressed concerns about the rigor of the mathematics curriculum in grades 1-9 because its deficiencies have spilled over to Finland’s high schools, universities, and polytechnic schools, a topic not discussed in Sahlberg’s book.

Mathematics instructors have also pointed to an unhealthy relationship between the PISA tests and this weak curriculum in grades 1-9. In a petition originally published in *Helsingin Sanomat* in February 17, 2005, over 200 professors and other instructors of mathematics at Finnish universities and polytechnic schools attributed their nation’s strong showing in mathematics on PISA to the “compatibility” of the content of PISA with recent reforms.

Referring to the extensive TIMSS 1999 survey in which Finnish students were below average in geometry and algebra, they concluded their analysis by saying:⁶

“A proper mathematical basis is needed especially in technical and scientific areas, biology included. The PISA survey tells very little about this basis, which should already be created in comprehensive school. Therefore, it

would be absolutely necessary that, in the future, Finland would participate also in international surveys which evaluate mathematical skills essential for further studies.”

It may be the case that Finnish educators chose to participate after 1999 in a test oriented to the kind of mathematics curriculum they had been training new teachers to implement in grades 1-9. (PISA first came out in 2000.)⁷ In fact, mathematics instructors in schools beyond grade 9 are suggesting that first place in the PISA mathematics test may be a “Pyrrhic victory.” They ask: “Are Finnish basic schools stressing too much numerical problems of the type emphasized in the PISA study, and are other countries, instead, stressing algebra, thus guaranteeing a better foundation for mathematical studies in upper secondary schools and in universities and polytechnics?”⁸

A mathematician at the University of Helsinki and on Finland’s Matriculation Board described the grades 1-9 mathematics curriculum as follows:⁹

- Mathematics at school became descriptive - exact definitions and proofs were largely omitted.
- Geometry and trigonometry were neglected.
- Computations were performed by calculators and numbers and not on a more advanced level.

Sounds like the “math wars” here. But Sahlberg’s book comments only on the opposition of the business community to Finland’s educational reforms (p. 121). Not a word about the academic opposition, which is far more serious. Nor does Sahlberg explore the inherent contradiction in a country that seeks equality in educational outcome by grade 9 but still wants to produce a knowledge-based economy and its own mathematically sophisticated engineers (although one begins to wonder).

Yes, there are lessons for Americans from Finland’s reform efforts, but not the ones highlighted by our teacher educators. Sahlberg’s book helps to make it clear why the Validation Committee for the Common Core State Standards Initiative included the person in charge of the development of benchmarks on

PISA.¹⁰ And why the Obama administration supports standards for college readiness in mathematics that point to little more than Algebra I. Is this how parents in this country want demographic “gaps” closed?

Nor is it clear that parents would support the recommendations in Sahlberg’s final pages that advocate “engagement” and “creativity” as “pointers of success.” Some education policies in this country have already begun to aim our schools and teachers on the yellow brick road to “creativity,” a goal that can’t be measured or evaluated objectively, in addition to reducing time on academic learning. They need to ask “who does it really benefit?”

Clearly, one can applaud Finland’s goal of raising the educational level of its population, its success in attracting and retaining its most able students as teachers, and its effectiveness in teaching struggling or special education students. But we also need to ask whether it is fair—or wise—for any country to choose to sacrifice the interests (and minds) of the most talented children in its school system for the sake of equality of outcomes. Finland may better serve not as an educational model for our country but as a warning of what happens when excellence is perceived as incompatible with a distorted view of equity.

Endnotes

1. Osmo Kivinen, Jouni Nurmi, and Ritva Salminiitty. “Higher Education and Graduate Employment in Finland.” *European Journal of Education*, 2000, 35, 2.
2. <http://www.ncee.org/programs-affiliates/center-on-international-education-benchmarking/top-performing-countries/finland-overview/finland-school-to-work-transition/>
3. Kyosti Tarvainen and Simo Kivela. “Severe Shortcomings in Finnish Mathematics Skills.” *Matematiikkalehti Solmu*, 2005, 9, 23. <http://solmu.math.helsinki.fi/2005/erik/KivTarEng.html>
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5. Finland, Revised version, September 2007. *World Data on Education*. 6th edition, 2006/07, compiled by UNESCO-IBE. (<http://www.ibe.unesco.org/>)
6. Kari Astala et al. “The PISA Survey Tells Only a Partial Truth of Finnish Children’s Mathematical Skills.” *Matematiikkalehti Solmu*, 2005, 8, 31. <http://solmu.math.helsinki.fi/2005/erik/PisaEng.html>
7. It may also be the case that PISA’s developers were encouraged during the 1980s to develop a mathematics test that was “compatible” with the kind of K-12 mathematics curriculum or textbooks being developed or implemented in many countries besides Finland. How is one to know whether the chicken or the egg came first?
8. Kyosti Tarvainen and Simo Kivela. “Severe Shortcomings in Finnish Mathematics Skills.” *Matematiikkalehti Solmu*, 2005, 9, 23. <http://solmu.math.helsinki.fi/2005/erik/KivTarEng.html>
9. Olli Martio. “Mathematics Curriculum Development in Finland – Unexpected Effects.” http://www.jem-thematic.net/files_private/Pariisi2608.doc
10. Andreas Schleicher



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