

A short history of educational reform in Finland

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April 2009

¹ The views expressed in this chapter are those of the author alone and do not necessarily represent those of the European Training Foundation or any of the European Union institutions.

Abstract

Finland, a democratic welfare state and the northernmost member of the European Union is an example of a nation that has been able to transform its traditional economy into a modern knowledge economy within relatively short period of time. Education has played important role in this process. This chapter argues that system-wide excellence in student learning is attainable at reasonable cost, using education policies differing from conventional market-oriented reform strategies prevalent in many other countries. Unlike many other education systems, test-based accountability and externally determined learning standards have not been part of Finnish education policies. Relying on data from international student assessments, indicators and earlier policy studies, this chapter describes how steady improvement in student learning has been attained through Finnish education policies based on equity, flexibility, creativity, teacher professionalism, and mutual trust. The conclusion is that educational reform in Finland has been built upon ideas of good leadership that place an emphasis on teaching and learning, encouraging schools to craft optimal learning environments and implement educational content that best helps their students reach the general goals of schooling, and professional leadership of schools.

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1. Educational performance in Finland since the early 1980s

Finland went through a fundamental economic and cultural transformation during the last three decades of the 20th century. For the sake of curiosity, in 1950, according to Routti and Ylä-Anttila (2006), the Finnish economic structure corresponded quite closely to that of Sweden in 1910. Since the 1950s industrial and economic development in Finland was based on an investment-driven economy in which the main elements of economic production were machinery, engineering, and forestry-based industries. The late 1980s marked the beginning of the specialization of production, trade and research and development in the Finnish economy. The emerging knowledge-based economy coincided with the opening of the economy and deregulation of capital flows. Routti and Ylä-Anttila (2006) describe this transformation by saying that

there are few, if any, other examples of natural resource-abundant countries that have managed to transform their industrial structures toward higher knowledge intensity and value added so rapidly and successfully as Finland (p. 6).

1. Transition to the knowledge-based economy has significantly increased domestic knowledge generation. In the late 1970s Finland ranked at the lower end of the OECD (Organisation for Economic Co-operation and Development) countries in research and development intensity. According to the OECD, Finland invests 3.5 percent of GDP in research and development (R&D) which is the second highest in OECD after Sweden (OECD, 2008; Routti & Ylä-Anttila, 2006). Interestingly, during the biggest economic recession of peacetime in the early 1990s R&D investments were kept in agreed levels and private investment even increased (Castells & Himanen, 2002). It is noteworthy that the building of an equity-based and well-performing Finnish education system has occurred with relatively modest education spending. Moreover, the education system is primarily financed from public sources. In 2006, some two percent of total education expenditure came from private sources, while 99 percent of primary and secondary education expenditure was publicly financed (OECD, 2008). Indeed, total expenditure on educational institutions as a percentage of GDP for all levels of education declined from 7.9 percent in 1992 to 6.3 percent in 1995 and most recently to 6.0 percent in 2002 (Hirvi, 1996). This indicates that high participation rates and equity coupled with good learning achievement have been established without increasing educational spending, quite the contrary. Since the economic crisis of 1990s, local education authorities have increasingly struggled with shrinking budgets, leading to enlarged class sizes,

reducing some school-support services, and, in many cases, also merging and closing of schools to gain efficiency (Rinne, Kivirauma & Simola, 2002). The number of comprehensive schools (grades 1 to 9) has declined by 20 percent over the last ten years. Nevertheless, basic conditions for good secondary level schooling for all have been made available throughout the country. I argue that securing necessary resources for and investments in initial preparation of teachers in the universities has contributed positively later on to teaching force that has not only been adoptive to necessary school improvement but also capable to look for scientifically-based solutions to common problems in their schools.

In the 1980s the Finnish education system had only a few features that attracted any interest among international educators and many aspects of education were adopted from its wealthier western neighbor, Sweden. Indeed, Finland's education system was recognized internationally exceptional on only one account: However, the Finnish 10-year-olds were among the best readers in the world (Allerup & Mejdning, 2003; Elley, 1992). Other than that, international education indicators left Finland in the shadows of traditional education superpowers, such as Sweden, England, USA, and Germany. This chapter shows how Finland has been able to upgrade its human capital by transforming its education system from less-than-average to one of the best international performers since the 1980s. It also discusses how that success has been achieved by implementing education reforms that differ from those in many other nations. Finally, it suggests some education reform principles that may have been significant drivers of today's good educational performance.

As Finland attracts global attention due to its high-performing education system, it is worth asking whether there was any progress in this performance since the 1980s. If progress can be reliably identified, then, consequently, the question becomes *what factors might be behind successful education reform?* In my recent analysis of educational reform policies in Finland (Sahlberg, 2007), I describe how Finland changed its traditional education system, with little to celebrate in terms of international comparisons, into a model of a modern, publicly financed education system with widespread equity, good quality, large participation – all of this at reasonable cost (OECD, 2008; Sahlberg, 2007; Schleicher, 2006). What is significant from this analysis is the steady progress during the past three decades within four main domains: (1) increased level of educational attainment of the adult population, (2) widespread equity in terms of learning outcomes and performance of schools, (3) a good level of student learning as measured by international student assessments, and (4) moderate overall spending and efficiency, almost solely from public sources. Before

describing how the educational change since the 1970s, I will briefly summarize the main elements determining the level of Finnish educational system performance.

1.1 Level of educational attainment

First, there has been a steady growth in participation in all levels of education in Finland since 1970. The growth has been especially rapid in the upper-secondary education sector in the 1980s and, then, within the tertiary and adult education sectors in the 1990s, up to the present. Education policies that have driven Finnish reform since 1970 have prioritized creating equal opportunities, raising quality, and increasing participation within all educational levels across Finnish society. More than 99% of the age cohort successfully complete compulsory basic education, about 95% continue their education in upper secondary schools or in the 10th grade of basic school (some 3%) immediately after graduation, and 90% of those starting upper secondary school eventually receive their school leaving certification, providing access to tertiary education (Statistics Finland, 2008). Two thirds of those enrol either in academic universities or professionally oriented polytechnics.

Moreover, more than 50% of the Finnish adult population participates in adult-education programs. What is significant in this expansion of participation in education is that it has taken place without shifting the burden of costs to students or their parents. According to recent global education indicators, only 2% of Finnish expenditure on educational institutions is from private sources compared to an OECD average of 13% (OECD, 2008). Overall progress since 1970 in educational attainment by the Finnish adult population (15 years and older) is shown in Figure 1. The current situation is congruent with a typical profile of the human capital pyramid in advanced knowledge economies (OECD, 2008), i.e. having about 30 percent of lower and higher educational attainments and about 40 percent of secondary education degree holders.

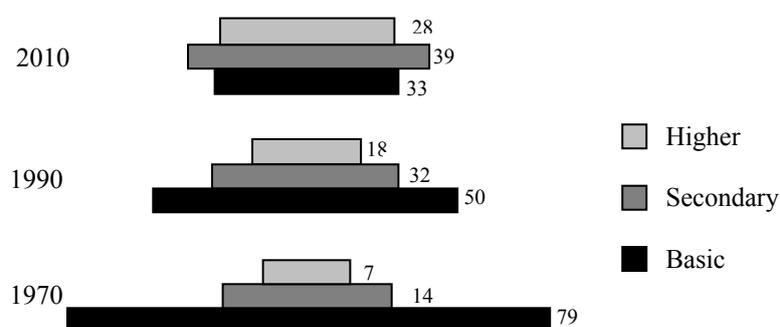


Figure 1. Level of educational attainment among the Finnish adult population (15 years and older) since 1970, levels in 2010 are estimates (Sahlberg, 2006b)

Evolution of the level of educational attainment in Finland, as shown in figure 1, illustrates a typical human capital profile of modern knowledge economies. Current education policies in Finland encourage two-thirds of secondary school leaving age cohort to enrol in tertiary education. Until recently that figure has set to around 70 percent.

1.2 Equity of educational outcomes

Second, education opportunities and, therefore, good learning outcomes have spread rather evenly across Finland. There was a visible achievement gap among young adults at the start of comprehensive school in early 1970s due to very different educational orientations associated with the old parallel system (Aho, Pitkänen, & Sahlberg, 2006). This knowledge gap strongly corresponded with the socio-economic divide within Finnish society at that time. Although students' learning outcomes began to even out by the mid-1980s, streaming through ability grouping in mathematics and foreign languages kept the achievement gap relatively wide.

After abolishing streaming in comprehensive school in the mid-1980s and, therefore making learning expectations similar for all students, the achievement gap between low and high achievers began to decrease. Practically this meant that all pupils, regardless of their abilities or interests, studied mathematics, sciences and foreign languages in same classes. Earlier all these subjects had three levels of curricula that pupils were streamed based on their performance in these subjects. First evidence of more equitable learning outcomes came from the OECD's *Programme for International Student Achievement (PISA)* survey in 2000. In that study Finland had one of the smallest performance variations between schools, less than one tenth of that variation in Japan, in reading literacy between schools of all OECD nations. A similar trend continued in the 2003 PISA cycle in mathematics and was even strengthened in the PISA survey in 2006 (OECD, 2001; 2004; 2007a). Figure 2 shows performance variance within and between schools in the OECD nations as assessed by science scale in 2006.

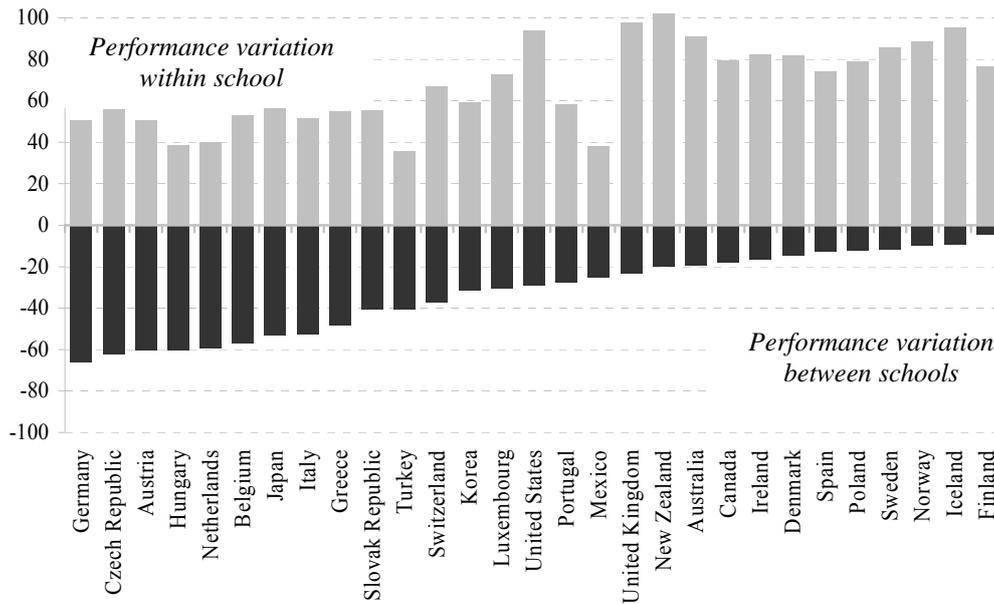


Figure 2. National variance within and between schools in student science performance in the 2006 PISA cycle (OECD, 2007a).

According to figure 2, Finland has less than 5% between-school variance on the PISA science scale whereas the average between-school variance in other OECD nations is about 33%. The fact that almost all Finnish inequality is within schools, as shown in figure 2, means that the remaining differences are probably mostly due to variation in students' natural talent. Accordingly, variation between schools mostly relates to social inequality. Since this is a small source of variation in Finland, it suggests that schools successfully deal with social inequality (OECD, 2007b). This also suggests, as Grubb (2007) observed, that Finnish educational reform has succeeded in building an equitable education system in a relatively short time, a main objective of Finland's education reform agenda set in the early 1970s.

1.3 Student learning

Third, Finnish students' learning is at a high international level as determined by recent comparative student achievement studies. Although it is difficult to compare students' learning outcomes today with those in 1980, some evidence can be offered using International Educational Assessment (IEA) and OECD PISA surveys since the 1980s (Kupari & Välijärvi, 2005; Martin et al., 2000; OECD, 2001; Robitaille & Garden, 1989). Based on these data I reported elsewhere a summary of Finnish students' mathematics performance since 1981 compared to their peers in other countries (Sahlberg, 2007). The studies used include the Second International Mathematics Study (SIMS) in 1981 (8th grade, 20 nations), Trends in

Mathematics and Science Study (TIMSS-R) in 1999 (8th grade, 38 nations) and the OECD PISA survey in 2000 (15-year olds, all 30 OECD member countries). These are the international student assessments surveys in which Finland participated since 1980. Since the nations participating in each international survey are not the same and the methodology of IEA and OECD surveys is different, the international average as a benchmarking value does not always provide a fully comparable or coherent picture.

OECD PISA is increasingly being adopted as a global measure to benchmark nations' student achievement at the end of compulsory education. In 2006, the third cycle of this global survey was conducted within all 30 OECD member nations and in 27 other countries. It focuses on

“young people’s ability to use their knowledge and skills to meet real-life challenges. This orientation reflects a change in the goals and objectives of curricula themselves, which are increasingly concerned with what students can do with what they learn at school and not merely with whether they have mastered specific curricular content” (OECD,2007a, p. 16).

In the 2006 PISA survey, Finland maintained its high performance in all assessed areas of student achievement. In science, the main focus of the 2006 PISA survey, Finnish students outperformed their peers in all 56 countries of which some are shown in figure 3.

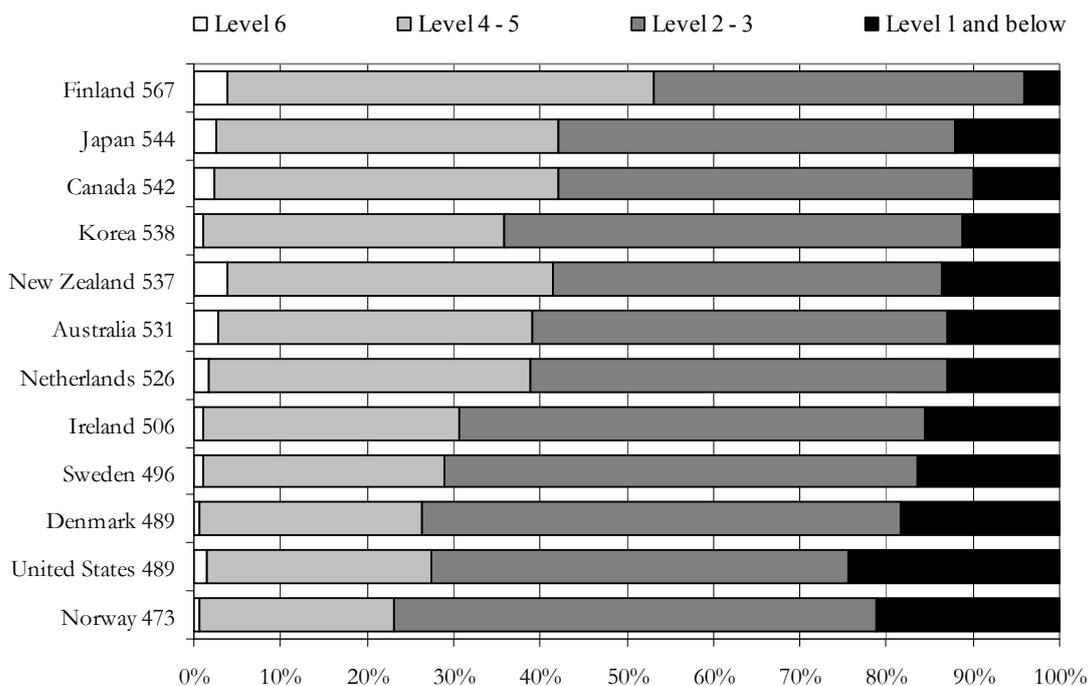


Figure 3. Percent of students at each proficiency level on the science scale (OECD, 2007a) where level 2 refers to minimum and level 6 to excellent proficiency in some OECD countries.

Figure 3 suggests that Finnish students' learning achievement in science has advanced from the earlier international comparisons from international average to success over the last 25 years. It is also significant that the proportion of high-achievers (level 6) is among the highest and low-achievers (level 1 and below) is by far the smallest in Finland. As figure 3 shows, more than half of Finnish students perform in science at least at level 4, superior to most others.

All three PISA survey cycles since 2000 also indicate that Finnish educational performance is consistent over all assessed educational domains and that Finnish students, on average, score high in every survey across all subjects – in mathematics, science and reading literacy.

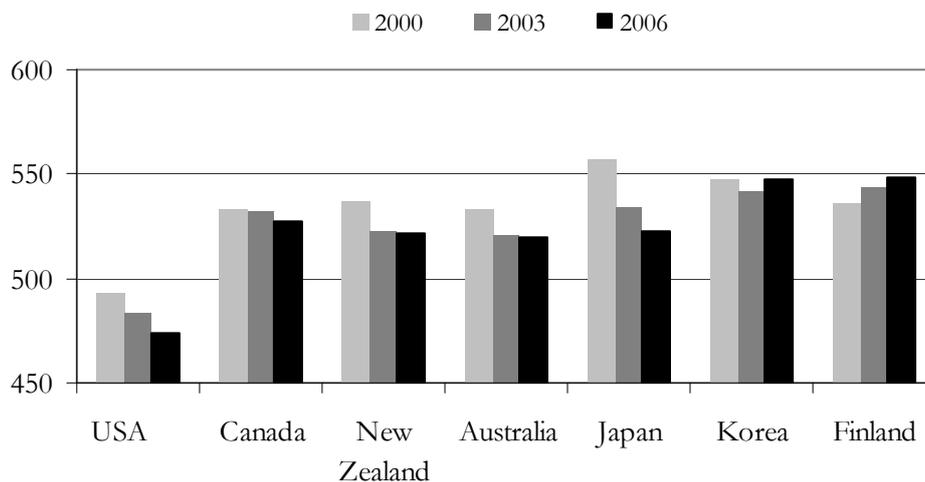


Figure 4. Finnish 15-year old students' performance in mathematics in three OECD PISA surveys between 2000 and 2006 in selected OECD countries

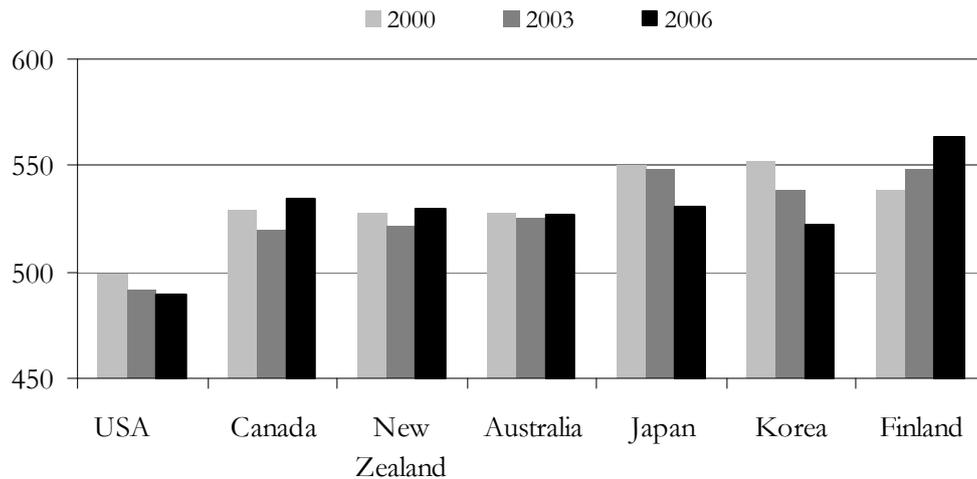


Figure 5. Finnish 15-year old students' performance in science in three OECD PISA surveys between 2000 and 2006 in selected OECD countries

Figures 4 and 5 show another divergence of Finnish students' learning performance trend as measured in the OECD PISA mathematics and science scales in comparison to some other OECD countries over time. It is remarkable that student achievement in these subjects show progress in Finland also according to the PISA data contrary to many other education super powers. It is important to note that any affects that teaching may have on these results in given education systems has been influenced primarily by education policies and reforms implemented in the 1990s.

There is, indeed, an increasing debate of what these international tests really measure and it is beyond the scope of this chapter to discuss those issues or the validity of these studies. Criticism and proponents' arguments are available, for example, in Adams (2003), Bautier and Rayon (2007), Dohn (2007), Goldstein (2004), Nagy (1996), Prais (2003; 2004), Riley and Torrance (2003), Sahlberg (2007), and Schleicher (2006; 2007). Reader should also note that the OECD PISA is not the only available international student assessment and that the others are actually measuring different aspects of teaching and learning than PISA. Nevertheless, the OECD PISA study is the only international benchmark instrument that covers all OECD countries and also focuses on competences beyond normal school curriculum. It is worth of note that there is a growing amount of criticism also among Finnish educators to the ways students' performance and success of education systems is determined using international student assessments.

1.4 Reasonable spending on education

It seems that Finland has been able to reform its education system by increasing participation at all levels, making good education achievable to a large proportion of its population, and attaining comparatively high learning outcomes in most schools throughout the nation. All of this has been accomplished by financing education, including tertiary and adult education, almost exclusively from public sources. One more question regarding good educational performance remains to be addressed: *How much does it cost the Finnish tax-payers?* In OECD nations for which data on comparable trends are available for all educational levels combined, public and private investment in Finnish education increased 34% from 1995 to 2004 in real terms, while the OECD average for the same period was 42%. Expenditure on educational institutions as a percentage of GDP in Finland is at the OECD average, 6.0% in 2005 (OECD, 2008). Less than 2% of total Finnish expenditure on education institutions comes from private sources. At present, tertiary education remains fully financed from public funds, and therefore free, for everyone living in Finland.

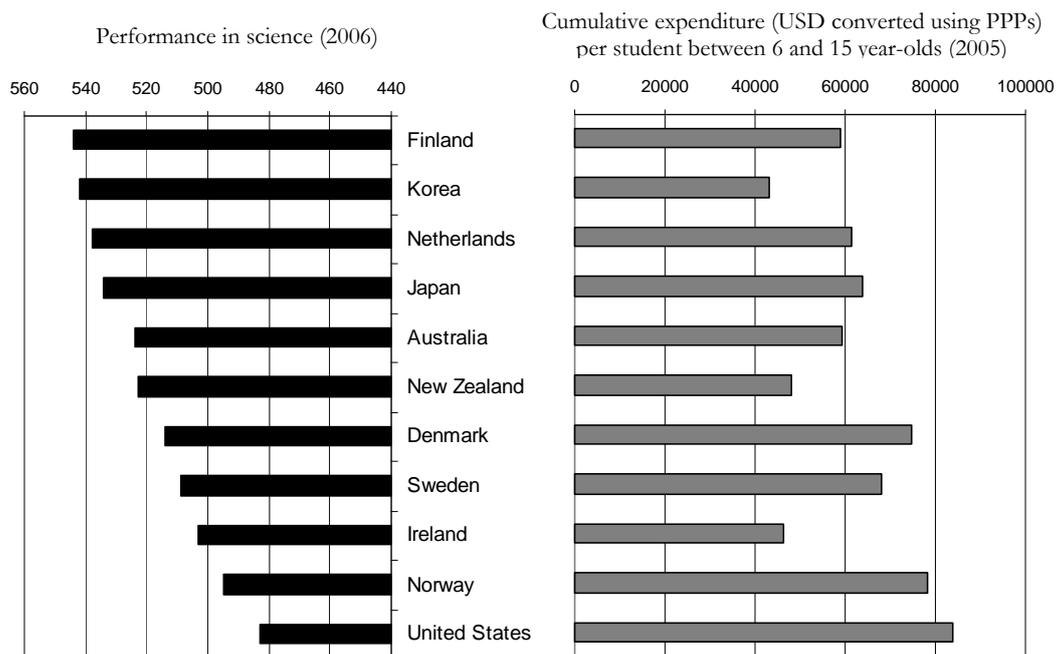


Figure 6. Relationship between PISA performance in science at age 15 and cumulative expenditure per student between 6 and 15 (2005, 2006) in some OECD countries.

Figure 6 summarizes students' mean performance on the PISA science scale in relation to educational spending per student in 2006. These data indicate that good educational performance in Finland has been attained at reasonable cost. Figure 6 also suggest

that there is no correlation between the quality of education system as measured by the OECD PISA study and the level of financial investment in education. For example, the United States and Norway have the highest level of spending in education among those countries included in figure 6 but their student outcome results are the lowest. This, of course, doesn't suggest any causal logic between education expenditures and learning outcomes, except that there is no correlation between the two. Efficiency is therefore more important than level of expenditure.

Finnish educational success has encouraged people to search for causes of such favourable international performance. Most visitors to Finland discover elegant school buildings filled with calm children and highly educated teachers. They also recognise the large autonomy that schools enjoy; little interference by the central education administration in schools' everyday lives; systematic methods to address problems in the lives of students and targeted professional help for those in need. Much of this may be helpful to visitors in benchmarking their own country's practice in relation to a leading education nation such as Finland. However, much of the secret of Finland's educational success remains undiscovered:

- *What has the educational change process been like?*
- *How much did Finnish educators take note of global education reform movements in creating their own approaches?*
- *What is the role of other public sector policies in making education system work so well? What role does the culture play?*

Before discussing these questions, let us look at what Finnish students do after leaving compulsory education at the age of 16. Most of them will go to upper-secondary school of their choice.

2. Secondary education in Finland

Compulsory education in Finland lasts nine years. Unlike in most other countries, Finnish children start formal education at the age of seven. As we have written elsewhere, most Finnish students complete nine-year basic school on time, without repeating grades (Väljærvi & Sahlberg, 2008). As shown by table 1, 3300 young people, or some 5 percent of all basic school leavers in 2006 decided not to continue education immediately after completing compulsory education at the age of 16 (Committee Report, 2005). This high number of youths dropping out of education is considered as one of the biggest problems in the Finnish education system today. Still, rather than solving that problem by issuing legislation that would make upper-secondary education compulsory, the education authorities are working

together to find ways of providing a meaningful educational option for all. Table 1 indicates how the options that basic school leavers confront have been selected by pupils between 2000 and 2006.

Table 1.

Enrolment in upper secondary education of basic school leavers in Finland between 2000 and 2006

	2000	2003	2006
Basic school leavers	66 250	60 850	66 700
Total number of young people continuing education after compulsory basic school	93.0 %	94.5 %	95,0 %
- general upper secondary education	61 650	57 450	63 350
	53.7 %	55.1 %	54.5 %
- vocational education	35 600	33 500	36 350
	36.3 %	37.0 %	37.5 %
- voluntary additional 10 th grade	24 050	22 500	25 000
	3.0 %	2.4 %	3.0 %
Drop-outs from the formal education system	2 000	1 450	2 000
	7.0 %	5.5 %	5.0 %
	4 600	3 400	3 000

Source: Statistics Finland (2008).

Table 1 also shows that in 2006 about 95 percent of those who completed compulsory basic education will continue their studies at upper secondary level or in the additional 10th grade of basic school. In 2008, the ratio between students who enrolled in general and vocational upper secondary education was 55 percent and 37 percent respectively of entire enrolling student cohort. It is expected that in 2009 less than five percent or 3,250 basic school leavers will opt not to continue studying in formal upper secondary education. Some of them would enroll in other post-compulsory educational programs. The voluntary additional 10th grade of basic school has proved to be a useful option for most young Finns who chose that option after comprehensive school: in 2006 out of 1800 of those who studied one additional year in basic school 85 percent enrolled in general or vocational secondary education (35 and 50 percent respectively). Fewer than two percent of pupils who enroll in additional 10th grade drop out from the education system during the school year. The agreed education policy target of having only 2.5 percent basic school leavers not immediately continue education in upper secondary level is ambitious and requires systematic measures from education authorities as well as from schools. According to current education policies (Committee Report, 2005), the

voluntary additional 10th grade of basic school will be made available for more pupils who would benefit from that, student guidance and career counseling will be made available for all students and methods of teaching will be developed in both basic and secondary schools.

2.1 Completion rates of upper secondary education

It is noteworthy that in Finland all education after the nine-year basic school is non-compulsory—for both providers and students. Rather than making upper secondary education part of compulsory education, Finnish education policies have relied on developing equal opportunities for all to participate in the secondary education of their individual choice and, at the same time, creating incentives for young people to stay on in the education system after completion of compulsory education. Since the introduction of the comprehensive basic school in the 1970s the education policy target has been to provide a place of study in post-compulsory education institution for all young people (Aho et al., 2006). Since most of the general and vocational upper secondary schools today are under municipal education administration, they will decide on the provision and accession policies of post-compulsory education. However, this doesn't mean that municipalities would have complete freedom in education provision. Curricula, teachers' professional requirements and expectations regarding overall pedagogical environments are fairly unified throughout the country that create common culture of schooling in Finland.

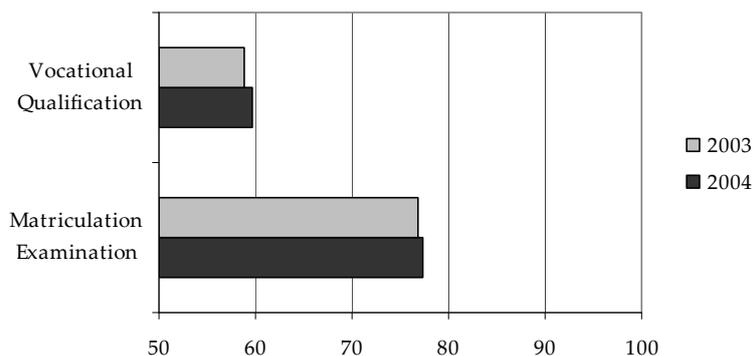


Figure 7. Proportion of upper secondary school students who successfully completed their studies by the target time (3.5 years) in 2003 and 2004 (Statistics Finland, 2008).

Due to the non-compulsory nature of upper secondary education, one of the criteria of both quality and effectiveness of post-compulsory education is the completion rate. As part of the newly introduced education efficiency system in Finland, since 1999 the state authorities have collected systematic data and analyzed completion rates in upper secondary education. If ideal

completion time of vocational or general upper secondary studies is set at 3.5 years, then about three out of four general education students and three out of five vocational education students successfully completed their studies in that desired time (figure 7).

Because individual study plans are not tied to age groups or classes many students will take more time to complete their studies than others. Some of them, however, will leave the education system without a qualification or diploma. Therefore, a look at the drop-out rates provides an alternative view on the quality and efficiency of secondary education. According to national statistics (Committee Report, 2005), during recent years about two percent of general upper secondary school students terminate their studies annually without moving to any other upper secondary education or training. Approximately the same number of students moves from general to vocational secondary education and complete their studies there. In vocational secondary education the situation is worse. For example, in 2008 about 9 percent of vocational school students terminated their initial studies of whom 1.5 percent continued education in some other school or institution.

Drop-out from formal education and training in Finland is slowly declining and in Upper secondary education, drop-out rates are substantially lower compared with most other countries (OECD, 2008; Välijärvi & Sahlberg, 2008). As far as all upper secondary education is concerned, 5 percent of students terminated their studies during the academic year 2007-08 without graduation. The need for preventing educational failure and drop-out from the education system is biggest in secondary and tertiary vocational education. Keeping students in education has become a particular incentive to schools through the results-based central government funding scheme that was introduced in upper secondary vocational education earlier this decade. When the results-based financing index for education and training provider is calculated, reduced drop-out rates and thus improved completion rates have a weight of 28 percent. Although the financing index regards a fairly small part of overall education budgets, this has rapidly focused the attention of schools and teachers on the measures that would on one hand improve the early recognition and prevention of problems that might lead to drop-out, and on the other hand strengthen direct support to students' learning and overall well-being in school. Vocational schools in particular have developed innovative solutions for those students whose learning styles prefer a more practically oriented curriculum. For example, practice-oriented 'innovation workshops' have become a popular way to increase the attractiveness and relevance of secondary education for many students who are at risk of leaving school.

2.2 Participation in post-secondary education

There are no studies of international comparisons with which to judge the achievement level of Finnish students when they leave upper secondary school. Therefore, assessing the quality of secondary education is complicated. One factor that indicates quality of education—in tandem with secondary education completion rates—is the tendency of secondary school graduates to continue learning in tertiary level institutions. Tertiary education institutions in Finland have increased their number of entrants. The education policy target today is to provide a publicly financed tertiary level study places for 65 percent of the age cohort (Ministry of Education, 2004). In 2005 there were nearly 180 000 students in Finnish universities and 133,000 in polytechnics. Compared with the situation 20 years before, the number of tertiary education students has tripled. The average age of new tertiary education students in Finland is 21 years. Critics argue, among them academics and business leaders that highly educated and trained Finns enter the labor market too late and that traditional academic degrees are suffering from inflation due to lowering the academic expectations regarding entrants.

High participation rates and good completion of intended education in all levels of education in Finland does not mean that all would be satisfied with the situation. There are two sources of criticism that mostly concern the quality of knowledge and skills of upper secondary school graduates when they enter tertiary education or labor markets. Universities have continuously complained that too many students begin their studies at university with insufficient basic knowledge, inappropriate attitudes and undeveloped independent learning skills. One reason for this reaction is the increasing intake in tertiary education institutes. Another reason is the universities' inability to adjust to different competencies that students have when they enter higher education.

The complaints by employers have a similar tone. Although there are no reliable studies to determine how common dissatisfaction among employers is, anecdotal evidence from the feedback from business leaders indicates that focus on more general occupational knowledge, skills and competencies does not always prepare people for jobs that require very specified skills. Making on-the-job-learning as a part of all vocational programs and including employers as a third party in performance-based assessment for qualifications have eased the criticism and improved the compatibility between vocational education and labor market requirements.

Reforming higher education is at the core of education policy in 2009. Changes in legislation will dramatically renew the governance of the Finnish universities. The number of

universities is likely to decrease, influence of business sector and society in governance increase and eventually sources of financing of universities become broader based.

3. Teaching, learning and school organization

System-wide excellence in student learning in lower secondary level indicates that the majority of basic school leavers have developed sufficient knowledge and learning skills to continue studying in upper secondary level successfully. Relying on the PISA 2006 data, the percentage of those students who reached only proficiency level 1 or 0 in mathematics was 6.8 percent in Finland. The same indicator in the USA was 25.7 percent and in the OECD countries on average 21.4 percent. Furthermore, a total of 77 percent of Finnish students, the percentage being the highest among OECD countries (the OECD average 57 percent), reached proficiency level 3 or higher and seem to have acquired the literacy skills needed to cope with the demands of further learning and work posed by today's knowledge societies (OECD, 2004). Similar trends were observed in reading literacy in PISA 2000 (OECD, 2001). Nevertheless, some national studies (National Board of Education, 2005) warn that 15 to 20 percent of basic school leavers have severe gaps in basic knowledge and skills that are general requirements for further secondary education. It is often argued that proficiency requirement in basic school subjects in Finland is higher than PISA proficiency level 1.

3.1 Transition to upper secondary education

There are two factors that affect on students' lifelong learning path. First, when entering upper secondary education Finnish students have no experience of high-stake standardized testing in school unlike their peers in many other countries where testing has become an integral element of school life. In a comparative study on teachers' experiences in different accountability policies we concluded that "the pressure of a structured instructional model of teaching and external assessment of pupils' achievement is having dramatic consequences according to some teachers" (Berry & Sahlberg, 2006, p. 24). This study also suggests that in Finland most basic school teachers teach in order to help their students to learn, not to pass tests. The PISA 2003 study provides some evidence for this argument: Finnish students experience less anxiety in mathematics compared to their peers in other countries (OECD, 2004; Kupari & Välijärvi, 2005; Sahlberg, 2007). Second, students are well prepared to make their decision regarding post-compulsory education options because of widely available counselling and career guidance in the basic school. During the three-year lower secondary school all students are entitled to have two hours a week educational guidance and

counselling. This reduces the risk that students make ill-informed decisions regarding their further studies. It also helps students to put more effort on those areas of their studies that are particularly needed in upper secondary school.

Students today enter the transition point between basic and upper secondary education with different knowledge, skills and attitudes than before. The changing student population has been one driver to help the developing upper secondary education system to better reflect the new situation. Implemented reforms of upper secondary education in Finland have had a fundamental impact on school organization, especially regarding teaching and learning. Traditional school organization that is based on presentation-recitation models of instruction, age-grouping, fixed teaching schedules and dominantly classroom-based seatwork has been gradually transformed to more flexible, open and interaction-rich learning environments where an active role for students comes first (Aho et al. 2006). Ongoing school improvement has been facilitated by implementing structural changes in upper secondary school and by enriching schools and classroom with alternative instructional arrangements and teaching methods.

3.2 General upper secondary education

The general upper secondary school had a traditional organization until 1985 when the new Act on General Upper Secondary Education abolished the old system and introduced a modular curriculum structure. This change enabled schools to rearrange time scheduling of teaching. Two annual semesters were replaced by five or six periods. This, in turn, changed local curriculum planning because schools had more flexibility to allocate lessons into different periods (Väljärvi, 2004). The next phase of development was to replace age cohort-based grouping of students with a non-graded organizational system. The non-graded general upper secondary school brought more choice to students in planning their own studies – both regarding the content and time sequencing. The new curriculum framework placed a stronger emphasis on understanding students' cognitive development and also invited schools to make the best use of their own and their community's strengths. Although students have more freedom in terms of their studies, all students are obliged to study 18 compulsory subjects within minimum of 75 compulsory courses that are required in general upper secondary education diploma.

An important factor affecting the nature of teaching and learning in general upper secondary school is the nature of student assessments and school evaluation. Teachers assess the achievement of each student at the end of each course which means approximately five or

six times per subject per school year. The National Matriculation Examination that students take after successfully completing all required courses is a high-stake examination and has therefore a visible affect on curriculum and instruction. Nevertheless, general secondary school can be characterized by having a strong focus on learning, creativity and various methods of studying rather than concentrating on passing tests and exams.

3.3 Vocational upper secondary education

Vocational secondary education has been adapted to fit better to the new economic and political situations. The structure, curricula and methodology of vocational education have been renewed according to the expectations of knowledge-based economy and required labour knowledge and skills. One of the key policy targets has been to increase the attractiveness of vocational education in upper secondary level (Ministry of Education, 2004). Currently, approximately 37.5 percent of new upper secondary school students start their studies in vocational schools.

The *structure* of vocational education was simplified and all initial vocational qualifications today consist of 120 credits which equals to three years of full time study. One quarter of the study time is allocated to general or optional courses. The number of vocational qualifications was reduced to 52 and related programs of study to 113. In principle, vocational school students are eligible to take the Matriculation Examination but only very few do. Moreover, providers of secondary education are required to promote that students will have access to general secondary schools from vocational schools, and vice versa, if they wish to include courses from other schools to their learning plans.

The *curriculum and student assessment* were revised to match the structural changes as well as the needs of labour markets and the knowledge society. The new curriculum was balanced between specific occupational needs and the expectations of increased professional flexibility and related lifelong learning policies. Performance assessment of achieved professional knowledge and skills is arranged in collaboration with three key stakeholders: school with employers and employees representatives.

Methods of instruction and training are gradually changing in vocational secondary schools. At least one sixth of the training has to be arranged as on-the-job learning that is an integral part of the curriculum. Alternative workshops, apprenticeship training and virtual learning have become commonplace in secondary education. The result-based part of the funding system allocates a factor of 6 percent on the top of the school's core funding for staff

development. Vocational schools are increasingly investing these funds to upgrade their teachers' pedagogical knowledge and skills.

4. Global educational reform movement

Rather than shifting emphasis towards standardized knowledge of content and mastery of routine skills, some advanced education systems are focusing on flexibility, risk-taking, creativity and problem solving through modern methods of teaching, such as co-operative learning, and through the use of multilateral clusters, community networks and ICT in teaching. The number of examples is increasing, including China, an economic power that is loosening its standardized control on education by making a school-based curriculum a national policy priority. Japan and Singapore are adopting the idea of "less is more" in teaching in order to make room for creativity and innovation. Even in England, the most test-intensive region in the world, the government is putting an end to all standardized testing in secondary schools. As a reaction to the overemphasis on knowledge-based teaching and test-based accountability, authorities in Alberta (Canada), Wisconsin (USA) and some countries of the European Union are developing more dynamic forms of curriculum, introducing more intelligent forms of assessment and accountability and enhancing sustainable leadership in education in order to find alternative instructional approaches that promote the productive learning required in knowledge economies. Instead of focusing on single institutions, education reforms are beginning to encourage clustering of schools and communities. At the core of this idea is *complementarity*, i.e. co-operation between and striving for better learning in the cluster. Clustering and networking also appear to be core factors in nations' economic competitiveness and efforts to cope with globalization.

Indeed, globalization is a cultural paradox: it simultaneously unifies and diversifies people and cultures. It unifies national education policies by integrating them with broader global trends. Because problems and challenges are similar from one education system to the next, solutions and education reform agendas are also becoming similar. Due to international benchmarking of education systems by using common indicators and the international comparisons of student achievement, the distinguishing features of different education systems are becoming more visible. For example, the OECD's PISA has mobilized scores of education experts to visit other countries in order to learn how to redefine their own education policies. However, globalization has also accelerated international collaboration, exchange of ideas and transfer of education policies between education systems. Analyzing global policy developments and education reforms has become a common practice in many ministries of

education, development agencies and regional administrations. Therefore, the world's education systems inevitably share some core values, functions and structures. The question arises whether increased global interaction among policy-makers and educators, especially benchmarking of education systems through agreed indicators and borrowing and lending educational policies, has promoted common approaches to education reform throughout the world.

Although improvement of education systems is a global phenomenon, there is no reliable, recent comparative analysis about how education reforms in different countries have been designed and implemented. However, the professional literature indicates that the focus on educational development has shifted from structural reforms to improving the quality and relevance of education (Hargreaves & Goodson, 2006; Sahlberg, 2007). As a result, curriculum development, student assessment, teacher evaluation, integration of information and communication technologies into teaching and learning, proficiency in basic competencies (i.e., reading and writing) and mathematical and scientific literacy have become common priorities in education reforms around the world. In my earlier works (Sahlberg, 2009) I have called this the *Global Educational Reform Movement (GERM)*.

The inspiration for the emergence of the GERM comes from three primary sources. The first is the new paradigm of learning that became dominant in the 1980s. The breakthrough of cognitive and constructivist approaches to learning gradually shifted the focus of education reforms from teaching to learning. According to this paradigm, intended outcomes of schooling emphasize greater conceptual understanding, problem-solving, emotional and multiple intelligences and interpersonal skills, rather than the memorization of facts or the mastery of irrelevant skills. At the same time, however, the need for proficiency in literacy and numeracy has also become a prime target of education reforms. The second inspiration is the public demand for guaranteed, effective learning for all pupils. Inclusive education arrangements and the introduction of common learning standards for all have been offered as means to promote the ideal of education for all. The third inspiration is the accountability movement in education that has accompanied the global wave of decentralization of public services. Making schools and teachers accountable for their work has led to the introduction of education standards, indicators and benchmarks for teaching and learning, aligned assessments and testing and prescribed curricula. As Popham (2007) has noted, various forms of test-based accountability have emerged where school performance and raising the quality of education are closely tied to the processes of accreditation, promotion, sanctions and financing. Table 2 presents a more comprehensive description of the

distinction between ‘*global education reform movement*’ and ‘*alternative reform movement*’ as it is presented in Sahlberg (2009).

Table 2.

Global features of education development and alternatives since the early 1980s.

Education Policies and Reform Principles	
<i>Global Education Reform Movement (GERM)</i>	<i>Alternative Reform Movement (ARM)</i>
Strict Standards Setting clear, high, centrally prescribed performance standards for all schools, teachers and students to improve the quality and equity of outcomes.	Loose Standards Setting clear but flexible national framework for school-based curriculum planning. Encouraging local solutions to national goals in order to find best ways to create optimal learning opportunities for all.
Focus on Literacy and Numeracy Basic knowledge and skills in reading, writing, mathematics and the natural sciences serve as prime targets of education reform.	Focus on Broad and Deep Learning Teaching and learning focus on deep, broad learning, giving equal value to all aspects of the growth of an individual’s personality, moral character, creativity, knowledge and skills.
Teaching for Predetermined Results Reaching higher standards as criterion for success and good performance; minimizes educational risk-taking; narrows teaching to content and use of methods beneficial to attaining preset results.	Encouraging Risk-taking and Creativity School-based and teacher-owned curricula facilitate finding novel approaches to teaching and learning; hence, encourages risk-taking and uncertainty in leadership, teaching and learning.
Transferring External Innovations for Educational Revolutions Sources of educational change are external innovations brought to schools and teachers through legislation or national programs. These often replace existing improvement strategies.	Learning from the Past and Respecting Pedagogical Conservatism Teaching honours traditional pedagogical values, such as teacher’s role and relationship with students. Main sources of school improvement are proven good practices from the past.
Test-based Accountability School performance and raising student achievement are closely tied to processes of promotion, inspection and ultimately rewarding schools and teachers. Winners normally gain fiscal rewards whereas struggling schools and individuals are punished.	Responsibility and Trust Gradual building of a culture of responsibility and trust within the education system that values teacher and principal professionalism in judging what is best for students and in reporting their learning progress. Targeting resources and support to schools and students who are at risk to fail or to be left behind.

The GERM has had significant consequences for teachers’ work and students’ learning in schools. Because this agenda promises significant gains in efficiency and quality of education, it has been widely accepted as a basic ideology of change, both politically and professionally. Table 2 describes some effects that the GERM has had and is having in schools, especially on

teaching and learning (Hargreaves, 2003; Hargreaves & Fink, 2006; Sahlberg, 2006a, 2007, 2009). It also identifies alternative reform principles that have been adopted in places such as the Nordic countries.

The GERM emphasizes some fundamental new orientations to learning and educational administration. It suggests three strong directions to improve quality, equity and effectiveness of education: putting priority on learning, aiming at good learning achievement for all students and making assessment an integral part of the teaching and learning process. However, it also strengthens market-like logic and procedures in education. First and most importantly, the GERM assumes that external performance standards, describing what teachers should teach and what students should do and learn, lead to better learning for all. By concentrating on the basics and defining explicit learning targets for students and teachers, such standards place strong emphases on mastering the core skills of reading, writing, mathematical and scientific literacy. Second, the GERM assumes that the most effective way to improve education systems is to bring well-developed innovations to schools and classrooms. Systematic training of teachers and staff is an essential element of this approach. Third, the GERM relies on an assumption that competition between schools, teachers and students is the most productive way to raise the quality of education. This requires that parents can choose schools for their children that schools have enough autonomy and, that schools and teachers are held accountable for their students' learning.

A sustainable knowledge society is grounded upon the power to think, learn and innovate. It depends equally on individual and collective ways of doing these things. Learning to think, to learn and to innovate requires more than orderly implementation of externally mandated regulations and technical reforms. Learning together, creating new ideas and being able to live with other people and the environment in peace and harmony, all high-demand features of modern schooling, best occur in a context decidedly different from what some of our schools offer young people and their teachers today. Let us look at next which aspects of the national education system have brought Finland to the international limelight and attention of so many educators and policy-makers.

5. The key features of the Finnish education system

Explaining either success or failure of any social system is difficult. What students learn in schools is, in fact, a result of a complex set of factors – most of them beyond real control of school or teachers. Finland is not an exception. The culture of Finland, welfare society and ethnic characteristics of its people all play a role also in how education system operates. In

short, it is impossible to give a precise description or answer to the question of why Finland is doing well in education. Therefore, what follows is an attempt to identify possible factors in the Finnish education system that may have contributed to the good performance of its schools and individuals (Väljærvi et al., 2002, Linnakylä, 2004, Simola, 2005, Sahlberg, 2006a, 2006b, 2007). This analysis provides further support for the earlier assertion that Finland has adopted alternative approaches in education policies to raise student achievement. Before embarking on this analysis, however, Väljærvi and his research team (2002) have observed that:

Finland's high achievement seems to be attributable to a whole network of interrelated factors in which students' own areas of interest and leisure activities, the learning opportunities provided by school, parental support and involvement as well as social and cultural context of learning and of the entire education system combine with each other (p. 46).

(i) Same comprehensive basic school for all

All Finnish children start their compulsory nine-year comprehensive basic schooling in August of the year they become seven years old. Normally, class-based primary school lasts six years followed by three-year lower secondary school, although the new law allows some variation. Today it is widely recognized that the six-year primary school experience provides the cornerstone for high quality education for all Finnish citizens. Research shows (for example, in Biddle & Berliner, 2002) that investment in primary education as children learn basic knowledge and skills and adopt attitudes of lifelong learning pay off in later grades through better aptitude and learning skills, as well as through positive overall outcomes.

All basic school teachers must hold a Masters degree to become permanently employed. Primary school teacher preparation was converted from a three-year program at teachers' colleges to four- or five-year university programs in the late 1970s. Hence, most primary school teachers today possess higher university degrees. Westbury and colleagues (2005) point out that preparing teachers for a research-based profession has been the central idea of teacher education developments in Finland since the mid-1970s.

The Finnish comprehensive school is a formal and fully publicly financed system and also, as 'a matter of pedagogical philosophy and practice' (Väljærvi et al. 2002, p. 29). Well-equipped schools are typically small with class sizes ranging from 20 – 30 students. Primary schools (grades 1 to 6) typically have fewer than 300 pupils and class sizes are, by international standards, average or below. In 2008, one third of Finnish comprehensive schools had fewer than 50 pupils; just 4 % of all schools had 500 or more pupils.

Because most Finnish schools are small, they often forge close educational communities of teachers and pupils. Most teachers in primary schools are highly educated and continually update their professional knowledge and skills. Curriculum reform has made primary schools a place where play and learning are combined with alternative pedagogical approaches to help children master basic academic knowledge and skills. Many primary schools therefore have become learning and caring communities rather than merely instructional institutions that prepare pupils for the next level of schooling.

The fact that all children enrol in identical comprehensive schools regardless of their socioeconomic background or personal abilities and characteristics has resulted a system where schools and classrooms are heterogeneous in terms of pupil profiles and diverse in terms of educational needs and expectations (Välijärvi & Malin, 2003). Comprehensiveness, the leading idea in implementing the basic values of equity in education, also means that all students receive a free, two-course warm meal daily, free health care, transportation, learning materials, and counselling in their own schools.

Finnish children start compulsory schooling one to three years later than do children in most other nations. This suggests that Finnish pupils learn relatively better within a shorter time, compared to their international peers. Finnish education policy has never compromised the principle of extended childhood at the expense of increasing time devoted to formal education.

(ii) Well-trained teachers in primary school

In Finnish society, the teaching profession has always enjoyed great public respect and appreciation (Simola, 2005). Parents trust teachers as professionals who know what is best for their children. Teachers therefore have considerable classroom independence in selecting most appropriate pedagogical methods. Consequently, primary schools are quite independent in designing their own curriculum, teaching and learning arrangements, and in using public funds. Classroom teaching is considered an independent, high status profession that attracts some of the best secondary school graduates (Välijärvi et al., 2002, Simola, 2005, Westbury et al., 2005). Indeed, only about 10 % of some 6 000 applicants are accepted annually to the Faculties of Education within Finnish universities. This implies that university teacher education departments can select some of the nation's best students from among top scorers on university entrance examinations.

The main reason for the high appeal for becoming a Finnish primary school teacher is the fact that the Masters degree is the basic requirement to be permanently employed as a

teacher in Finnish school. For primary schools, this has had several positive consequences for teachers and for society at large. One important factor is that a Masters degree in education not only qualifies one to teach school but opens the door to employment in public administration or in the private sector. Primary school teachers who join the labour market after graduation don't feel that their professional career is limited only to primary school work. Indeed, young graduates with Masters Degree in primary school teaching are much-sought by human resource departments within Finnish businesses and industries. Most importantly, however, a Masters degree guarantees access to post-graduate studies made widely available in most Finnish universities today. Many teachers, especially in primary schools, seize the opportunity of continuing their academic studies. During the past decade, Finnish schools have noted an upsurge in school principals and teachers possessing a PhD in education.

In international comparisons, Finnish teacher education programs are distinguished by their depth and scope (Jussila & Saari, 2000, Westbury et. al., 2005). The balance between the theoretical and practical in these programs helps young teachers master various teaching methods as well as the science of effective teaching and learning. Curriculum reform in the mid-1990s revealed that teachers with high professional competency are quite motivated and easy to engage in school development processes in their own schools as well as in national and international projects. They also tend to work just as seriously at developing their own personal professional knowledge and skills.

Finnish teachers are conscious, critical consumers of professional development and in-service training services. Just as the professional level of the teaching cadre has increased over the past two decades, so has the quality of teacher professional development support. Most compulsory, traditional in-service training has disappeared. In its place are school- or municipality-based longer-term programs and professional development opportunities. Continuous upgrading of teachers' pedagogical professionalism has become a right rather than an obligation. This shift in teachers' learning conditions and styles often reflects ways that classroom learning is arranged for pupils. As a consequence of strengthened professionalism in schools, it has become understood that teachers and schools are responsible for their own work and also solve most problems rather than shift them elsewhere. Today the Finnish teaching profession is on par with other professional workers; teachers can diagnose problems in their classrooms and schools, apply evidence-based and often alternative solutions to them and evaluate and analyze the impact of implemented procedures.

(iii) Intelligent accountability

Finland has not followed the global accountability movement in education that assumes that making schools and teachers more accountable for their performance is the key to raising student achievement. Traditionally, evaluation of student outcomes has been the responsibility of each Finnish teacher and school. The only standardized, high-stakes assessment is the Matriculation Examination at the end of general upper secondary school, before students enter tertiary education. Prior to this culminating examination, no external tests are either required or imposed on Finnish classrooms.

As a consequence of decentralized education management and increased school autonomy, education authorities and political leaders have been made accountable for their decisions making implementation of policies possible. This has created a practice of reciprocal accountability in education system management where schools are increasingly accountable for learning outcomes and education authorities are held accountable to schools for making expected outcomes possible. Flexible accountability has had a major positive impact on teaching and, hence, on student learning. All assessment of student learning is based on teacher-made tests, rather than standardized external tests. By fifth grade, Finnish pupils no longer receive numerical grades that would enable directly comparing pupils with one another. In fact, grades are prohibited by law. Only descriptive assessments and feedback are employed. It is not unusual for teachers to view regularly scheduled teacher-made classroom tests as opportunities for learning as much as for assessing student achievement.

Primary school, particularly, is, to a large extent, a 'testing-free zone' reserved for learning to know, to do, and to sustain natural curiosity. Teachers also experience more genuine freedom in curriculum planning; they do not need to focus on annual tests or exams. Increased teacher and school autonomy in the 1990s has led to a situation where schools can not only arrange teaching according to their optimal resources, but allocate teaching time within the national curriculum framework differently from school to school. This is rarely possible in more rigid and test-heavy education systems.

The focus of teaching in Finland is typically on learning, rather than on preparing students for tests (Berry & Sahlberg, 2006). Different teaching methods are commonly employed throughout the school system. New innovations are fairly readily accepted by teachers if they are regarded as appropriate for promoting student learning. Stress and anxiety among pupils and teachers is not as common as it is within education systems having comparatively more intensive accountability structures.

Naturally, reliance on the teachers' and schools' abilities to judge and report on their pupils' achievement doesn't arise without shortcomings. Some think that students who leave

the ninth grade and enrol in upper secondary education are not so much treated equally as they are selected based on teacher-made assessments and grades. Indeed, there are sometimes large differences among criteria that teachers use to evaluate their students, even within the same school. A related problem arises when students move to a new school and carry grades they may have earned under differing expectations than those held by their new schools. Regardless of these and other issues, Finnish parents, students, and teachers seem to prefer flexible forms of accountability that enable schools to keep the focus on learning and permit more degrees of freedom in curriculum planning compared to an external standardized testing culture prevailing in some other nations.

(iv) Culture of trust

Much of what has been previously noted is only possible when parents, students, and authorities genuinely trust teachers and schools. It is necessary to realize that the Finnish education system was highly centralized before the great reforms in the 1970s were introduced and implemented nationwide and remained centrally controlled until 1985. Schools were previously strictly regulated by the central agencies; a dense network of rules and orders regulated the daily work of teachers. The gradual shift toward trusting schools and teachers began in the 1980s, when major phases of the initial reform agenda were completely implemented and consolidated within the education system. In the early 1990s, the era of a trust-based school culture formally started in Finland.

The culture of trust simply means that education authorities and political leaders believe that teachers, together with principals, parents and their communities, know how to provide the best possible education for their children and youth. In Finland, this transition from bureaucratic central administration to a decentralized culture of trust happened during deep economic crisis and public budget cuts in the 1990s (Aho et al., 2006). It was argued that the culture of trust was introduced because local authorities did not want central bureaucrats making difficult financial decisions that would affect their children and schools. Fortunately, local wisdom in deciding what is best for people seemed to work well also for more difficult issues, such as reducing expenditures and realigning existing operations with new budgeting realities.

The culture of trust can only flourish in an environment that is built upon good governance and close-to-zero corruption. Tellingly, Finland also performs well in international good-governance rankings by Transparency International. Public institutions generally enjoy high public trust and regard in Finland. Trusting schools and teachers is

therefore a natural consequence of a generally well-functioning civil society. Honesty and trust, as Lewis (2005) observes, are often seen as among the most basic values of Finnish society.

Inviting teachers and schools to participate in social development had an enormous positive impact on the Finnish education sector in the 1990s. Teachers could see that the system believed that schools and communities are the places where decisions concerning the curriculum and overall arrangement of schooling should be made. Teachers, with their high professional and moral qualifications, mostly welcomed this new responsibility. Also, schools very quickly embraced their new roles in leading change within the culture of trust. School improvement not only emerged in Finland as a consequence of this new trust, but also became much more diverse than earlier. Each school, at least in theory, could design its own change strategy with mission statements, vision and implementation methodologies, and schedules. This dimension of trust has played the most significant role in propelling Finland's education system past those of many other nations.

(v) Distributed moral leadership

The success of Finnish education is not the result of any major national education reform per se. Instead, education reform and development in Finland has been based on the continual adjustment of schooling to the changing needs of individuals and society. Rinne and colleagues (2002) claim that although the emergence of the new public sector management meant revolutionary changes in Finnish educational discourse this new rhetoric and practices have not been able to take root in education as easily as in other parts of society. Nevertheless, as Aho and colleagues (2006) say, the basic values and the main vision of education as public service have remained unchanged since 1968. Governments from the political left and right have respected education as the key public service for all citizens and maintained their belief that only a highly and widely educated nation will be successful in world markets.

Sustainable educational leadership has enabled Finnish schools and teachers to concentrate on developing teaching and learning as they best see it to be needed. Leadership in education sector has increasingly followed the idea of distributed leadership, i.e. sharing responsibilities among all actors in education to achieve expected results (Hargreaves et al., 2007). Rather than allocating financial resources and time to implement new reforms repeatedly, teachers in Finland have been given professional freedom to develop pedagogical knowledge and skills related to their individual needs. After a decade of centralized in-service

teacher training, following the launch of comprehensive school reform in the 1970s, the focus of professional development programs has shifted to meet authentic demands and expectations of schools and individuals.

In education systems that undergo wave after wave of reforms, frequent emphasis often is on implementation and consolidation of externally designed changes. The main result is often frustration and resistance to change rather than desire to improve schools. In Finland, however, education policies have increasingly invited schools to design their own development plans and implementation strategies based on the national curriculum and policy frameworks and oversight systems. These frameworks serve as guiding principles for municipalities and schools in delivering education services to their members. As a consequence, decentralization and increased local autonomy not only provided schools with more freedom to establish optimal teaching methods and learning environments, but also has given them authentic leadership and responsibility in education development and school improvement.

6. Conclusion

Human capital, i.e. citizens' knowledge and skills are commonly viewed as key success factors for economic development and social well-being. Education is the vehicle to enhance human capital and also preserve cultural unity as globalisation proceeds. It has therefore been a highly regarded priority of Finnish public service since the day when the first national law on public education was issued in the early 1920s. It is not surprising, then, that improving the quality of and also enhancing equity in education have served as central themes in the modern Finnish education policies since the 1980s.

Various strategies focused on altering education policies have been advocated to raise student achievement. Some recommended strategies are based on menus of elements or functions within the education system to be improved (in Blankstein, 2004, for instance). Globally, new practices are often mandated by issuing laws and regulations that coerce schools and teachers to change their behaviours. The Finnish approach to improve learning and achievement of all students, by contrast, is based on a long-term vision and a set of basic values that have been accepted by Finnish society. A key objective of Finnish education policy since early 1970s has been to provide all citizens with equal opportunities to receive a high quality education, regardless of age, domicile, gender, economic situation, or native language.

This chapter has described the short history of educational reforms in Finland and also explored why there has been steady progress in education system performance, especially in student achievement compared to international averages, as assessed by international comparison studies such as IEA studies and PISA. This chapter also stressed that the progress has not been accomplished by following mainstream global education reform principles, but rather by relying on a longer-term vision and systematic improvement of policies and practices to attain that vision. Simultaneously, Finnish participation in post-compulsory – both upper secondary and tertiary – education has increased significantly. The success of Finland as a small, remote European nation has been built upon flexibility and creativity in all aspects of society. In its education system, these principles have enabled schools to experiment with creativity, and teachers and students to assume risks while seeking to reach their goals, whether these goals represent effective teaching or productive learning. Interestingly, evidence from the most recent studies indicates that Finnish students experience less anxiety and stress than many of their peers in other countries (OECD, 2004). In the national PISA report Kupari and Välijärvi (2005) conclude that only 7 % of Finnish students said they feel anxiety when working on mathematics tasks at home compared to 52 and 53 % in Japan and France respectively. Similar observations from Finnish classrooms have been reported by scores of foreign journalists in their newspapers around the world.

Unlike other education systems that have experienced education reform since the 1990s, the Finnish education system has not been infected by high-stakes testing policies. The main reason is that the education research community focused on policy-making has remained unconvinced that high-stakes testing policies actually increase student learning. For example, Amrein and Berliner (2002) have argued that the ultimate success of a high-stakes testing policy is whether it positively affects student learning, not whether it can increase student scores on a particular test. If student learning remains unaffected, the validity of such high-stakes tests must be questioned. Finnish education authorities and especially teachers have not been convinced that frequent high-stakes testing and stronger accountability would be beneficial to students and their learning outcomes.

Education policies are necessarily interdependent on other social policies and on the overall political culture of a nation. The key success factor in Finland's development of a well-performing knowledge economy with good governance and a respected education system has been its ability to reach broad consensus on most major issues concerning future directions of Finland. The conclusion is that Finland seems particularly successful in implementing and maintaining seven key policies that constitute sustainable educational

leadership and change, as defined by Hargreaves and Fink (2006). These seven elements of policy development and reform principles have been prominent in Finland and are also at the core of this chapter's conclusions. These policy elements of sustainability, which are described in more detail elsewhere (Aho et al., 2006), are:

(a) Depth: The purpose of schooling remains focused on holistic development of personality including knowledge, skills, values, creativity, and interpersonal characteristics. Schools are places for learning and caring, where learning comes before testing; achievement is defined in relation to one's own development and growth, rather than in relation to universal standards.

(b) Length: Education policy development has been built upon longer-term vision and strategic principles, such as equal opportunities for all and putting learning before teaching. Rather than seeking short-term gains, education development has focused on consolidating these basic values within the education system.

(c) Breadth: Education leadership has gradually diffused from the centre to local levels. Leadership is not only limited to daily managerial duties and administration but especially addresses the responsibility and right to lead continuous development of the education system.

(d) Justice: Attaining the goal of offering equal opportunities to a quality education for all has required creating and maintaining a socially just school network consisting of uniformly excellent schools. This equity principle has remained the leading policy commitment since the early 1970s.

(e) Diversity: The school network is based on the idea of inclusive education that promotes diversity in schools and classrooms. Steering of teaching and learning has never been based on written standards, but rather upon guidelines encouraging creative solutions within increasingly diverse social and human environments.

(f) Resourcefulness: Young talented, creative individuals have been appointed over the past three decades to lead schools, local education offices, and central departments, guided by the belief that competencies often override routine experience. Systematic and research-based ways to prepare and continuously develop leaders and to maintain their knowledge and skills was introduced in the 1980s.

(g) Conservation: Education development has represented a balance between bringing in new innovations and employing existing good practices. The public recognizes that many needed educational innovations already exist somewhere in the system. This was a key acknowledgement of teachers' wisdom and realization that learning from past experiences is at least as important as introducing totally new and often alien ideas in schools.

Significantly, most of these seven sustainability principles were incorporated into early versions of Finland's education policies as early as the 1970s. While the principle of justice (i.e., equity and equal opportunities) has remained a leading value of Finland's long-range education vision, strong, systematic emphasis on leadership at all levels of education began to emerge in 1980s. Since then, it has remained clear that education policies must be based on depth, length, and breadth of leadership, and that diversity and resourcefulness are conservative drivers of educational change. Finally, one of Finland's key success factors has been early recognition that learning from past experiences can build a better future.

Education policies to raise student achievement in Finland have put a strong accent on teaching and learning by encouraging schools to craft optimal learning environments and establish instructional content that would best help students to reach the general goals of schooling. It was assumed very early that instruction is the key element that will make a difference in what students learn in school, not standards, assessment or alternative instructional programs. As the level of teacher professionalism gradually increased in schools during the 1990s, the prevalence of effective teaching methods and pedagogical classroom and school designs increased. The new flexibility within the Finnish education system enabled schools to learn from each other and thus make best practices universal by adopting innovative approaches to organize schooling, encouraging teachers and schools to continue to expand their repertoires of teaching methods and individualizing teaching to meet the needs of all students. At the same time, schools were helped to maintain and build strong support systems for teaching and learning – healthful nutrition, health services, psychological counselling and student guidance became regular elements of every school. For example Schleicher (2006) concludes in his analysis of Finnish success that building networks of schools that stimulate and spread innovations helps to explain Finland's greatest success 'to make strong school performance a consistent and predictable outcome throughout the education system, with less than 5 % variation in student performance between schools' (p. 9). The fact that almost all inequality in Finland is within school as shown in figure 2 means that the inequality that remains is probably mostly due to students' natural talent variation. Accordingly, variation between schools mostly corresponds to sociological inequality. Since this is a small source of variation in Finland, it suggests that schools deal with sociological inequality very successfully.

Will Finland continue to maintain its high-performing education system? Although the new public sector management philosophy has not been adopted in Finland as it has been

in the UK or the USA, signs are growing that the Finnish education system will soon be expected to devote increasing attention to efficiency and productivity.

The Finnish Ministry of Education (2005) has introduced new measurements and standards for schools and teachers. This implies that the productivity of individual schools and municipalities will be assessed and that subsequent reward or sanction policies will be implemented. Some Finnish educators fear that this productivity program will eventually reduce total schools and teachers and, thus, will seriously affect opportunities for equity-based quality teaching and learning. Whether all Finnish schools and teachers will survive in this race for increased productivity with lessened resources remains to be seen.

Fortunately, however, the foundation of the Finnish education system remains on solid ground. Teachers and school principals are well trained and enjoy considerable respect by the other members of the society. Students take their work in schools seriously and their parents trust in the education provided by Finnish public schools. Comprehensive nine-year compulsory schooling that provides similar learning opportunities to all pupils has become one of the main institutions avoiding social division and structural inequality within a Finnish society that is confronting the increasing demands of productivity, effectiveness, and competition. It is also noteworthy that Finnish youth are actively engaging in out-of-school activities in youth organizations, such as sports and arts clubs, that often play an important role in providing further opportunities to learn and grow.

In conclusion, the Finnish society has always depended on creative people who have learned how to learn and who use their skills effectively and productively. Finnish business leaders have often played a balancing role when major changes have been introduced into the public sector. Perhaps in light of this latest 'innovation' of educational productivity the Finnish education system and society in general will be adaptable enough to find the best way to cope with it.

Note: This chapter is based on previously published articles in Sahlberg, P. (2006b). Raising the bar: How Finland responds to the twin challenge of secondary education? *Profesorado*, 10(1), 1–26, Sahlberg, P. (2007). Education policies for raising student learning: The Finnish approach. *Journal of Education Policy*, 147–171, and Sahlberg, P. (2009). Learning first: School accountability for a sustainable society. In J-C Couture, K.D. Gariepy and B. Spencer (Eds.) *Educational accountability: Professional voices from the field*. Rotterdam: Sense Publishers, pages not available.

7. References

- Adams, R. J. (2003). Response to 'Cautions on OECD's recent educational survey (PISA)'. *Oxford Review of Education*, 29(3), 377–389.
- Aho, E., Pitkänen, K., & Sahlberg, P. (2006). *Policy development and reform principles of basic and secondary education in Finland since 1968*. Washington, DC: World Bank.
- Allerup, P., & Mejdning, J. (2003). Reading achievement in 1991 and 2000. In S. Lie, P. Linnakylä, & A. Roe (Eds.), *Northern lights on PISA: Unity and diversity in Nordic countries in PISA 2000* (pp. 133-146). Oslo: University of Oslo, Department of Teacher Education and School Development.
- Amrein, A. L., & Berliner, D.C. (2002). High-stakes testing, uncertainty, and student learning, *Education Policy Analysis Archives*, 10(18). Retrieved March 18, 2006 from <http://epaa.asu.edu/epaa/v10n18/>
- Bautier, E., & Rayon, P. (2007). What PISA really evaluates: literacy or students' universes of reference? *Journal of Educational Change*, 8(4), 359–364.
- Berry, J., & Sahlberg, P. (2006). Accountability affects the use of small group learning in school mathematics. *Nordic Studies in Mathematics Education*, 11(1), 5–31.
- Biddle, B. J., & Berliner, D. C. (2002). Research synthesis: Small class size and its effects. *Educational Leadership*, 59(5), 12-23.
- Blankstein, A. (2004). *Failure is not an option. Six principles that guide student achievement in high-performing schools*. Thousand Oaks: Corwin Press.
- Castells, M., & Himanen, P. (2002). *The information society and the welfare state. The Finnish model*. Oxford: Oxford University Press.
- Centre on Education Policy (2006). *From the capital to the classroom Year 4 of the No Child Left Behind Act*. Washington, DC: Centre on Education Policy.
- Committee Report (2005). *Report of the committee on transition from basic to secondary education and training*. Helsinki: Ministry of Education.

- Dohn, N. (2007). Knowledge and skills for PISA – Assessing the assessment. *Journal of Philosophy of Education, 41*(1), 1–16.
- Elley, W.B. (Ed.). (1992). *How in the world do students read?* Hamburg: Grindeldruck GMBH.
- Goldstein, H. (2004) International comparisons of student attainment: some issue arising from the PISA study. *Assessment in Education: Principles, Policy and Practice, 11*(3), 319-330.
- Grubb, N. (2007). Dynamic inequality and intervention: Lessons for a small country. *Phi Delta Kappan, 89*(2), 105 – 114.
- Hargreaves, A., & Fink, D. (2006). *Sustainable leadership*. San Francisco: Jossey-Bass.
- Hargreaves, A., & Goodson, I. (2006). Educational change over time? The sustainability and nonsustainability of three decades of secondary school change and continuity. *Educational Administration Quarterly, 42*(1), 3-41.
- Hargreaves, A. (2003). *Teaching in the knowledge society. Education in the age of insecurity*. New York: teachers College Press.
- Hargreaves, A., Halasz, G., & Pont, B. (2007). *School leadership for systemic improvement in Finland. A Case study report for the OECD activity “Improving School Leadership”*. Paris: OECD.
- Hirvi, V. (1996). *Koulutuksen rytminvaihdos. 1990-luvun koulutuspolitiikka Suomessa* [The rhythm change in education. Finnish education policy in the 1990s]. Helsinki: Otava.
- Itkonen, T., & Jahnukainen, M. (2007). An analysis of accountability policies in Finland and the United States. *International Journal of Disability, Development and Education, 54*(1), 5–23.
- Jussila, J., & Saari, S. (Eds.). (2000). *Teacher education as a future-molding factor: International evaluation of teacher education in Finnish universities*. Helsinki: Higher Education Evaluation Council.

- Kupari, P., & Välijärvi, J. (Eds.). (2005). *Osaaminen kestäväällä pohjalla PISA 2003 Suomessa* [Competencies in on the solid ground PISA 2003 in Finland]. Jyväskylä: Institute for Educational Research, University of Jyväskylä.
- Lewis, R. (2005). *Finland, cultural lone wolf*. Yarmouth: Intercultural Press.
- Linnakylä, P. (2004). Finland. In H. Döbert, E. Klieme, & W. Stroka (Eds.). *Conditions of school performance in seven countries. A quest for understanding the international variation of PISA results* (pp.150-218). Munster: Waxmann.
- Martin, M.O., Mullis, I.V.S., Gonzales, E.J., Gregory, K.D., Smith, T.A., Chrostowski, S.J., Garden, R.A., & O'Connor, K.M. (2000). *TIMSS 1999 International Science Report: findings from IEA's repeat of the Third International Mathematics and Science Study at the eighth grade*. Chestnut Hill: Boston College.
- Ministry of Education (2004). *Development plan for education and research 2003–2008*. Helsinki: Ministry of Education.
- Ministry of Education (2005). *Opetusministeriön hallinnonalan tuottavuusohjelma 2006–2010*. [Education Sector Productivity Programme 2006-10]. Helsinki: Ministry of Education.
- Nagy, P. (1996). International comparisons of student achievement in mathematics and science: A Canadian perspective. *Canadian Journal of Education*, 21(4), 396–413.
- National Board of Education (2005). *Perusopetuksen matematiikan kansalliset oppimistulokset 9. vuosiluokalla 2004* [National assessment in mathematics in the 9th grade of basic education in 2004]. Helsinki: National Board of Education.
- OECD (2001). *Knowledge and skills for life: First results from PISA 2000*. Paris: OECD.
- OECD (2004). *Learning for tomorrow's world. First results from PISA 2003*. Paris: OECD.
- OECD (2007a). *PISA 2006: Science competencies for tomorrow's world. Vol.1*. Paris: OECD.
- OECD (2007b). *No more failures. Ten steps to equity in education*. Paris: OECD.
- OECD (2008). *Education at a glance: OECD indicators 2008*. Paris: OECD.

- Popham, J. (2007). The no-win accountability game. In C. Glickman (Ed.), *Letters to the next President: What we can do about the real crisis in public education* (pp. 166-173). New York: Teachers College Press.
- Prais, S.J. (2003). Cautions on OECD's recent educational survey (PISA). *Oxford Review of Education*, 29(2), 139-163.
- Prais, S.J. (2004). Cautions on OECD's recent educational survey (PISA): rejoinder to OECD's response. *Oxford Review of Education*, 30(4), 569-573.
- Riley, K., & Torrance, H. (2003). Big change question: As national policy-makers seek to find solutions to national education issues, do international comparisons such as TIMSS and PISA create a wider understanding, or do they serve to promote the orthodoxies of international agencies? *Journal of Educational Change*, 4(4), 419-425.
- Rinne, R., Kivirauma, J., & Simola, H. (2002). Shoots of revisionist education policy or just slow readjustment? *Journal of Education Policy*, 17(6), 643-659.
- Robitaille, D.F., & Garden, R.A. (Eds.). (1989). *The IEA study of mathematics II: context and outcomes of school mathematics*. Oxford: Pergamon Press.
- Routti, J., & Ylä-Anttila, P. (2006). *Finland as a knowledge economy. Elements of success and lessons learned*. Washington, DC: World Bank.
- Sahlberg, P. (2006a). Education reform for raising economic competitiveness. *Journal of Educational Change*, 7(4), 259-287.
- Sahlberg, P. (2006b). Raising the bar: How Finland responds to the twin challenge of secondary education? *Profesorado*, 10(1), 1-26.
- Sahlberg, P. (2007). Education policies for raising student learning: The Finnish approach. *Journal of Education Policy*, 22(2), 147-171.
- Sahlberg, P. (2009). Learning first: School accountability for a sustainable society. In J-C Couture, K.D. Gariepy, & B. Spencer (Eds.), *Educational accountability: Professional voices from the field*. Rotterdam: Sense Publishers, pages not available.

- Schleicher, A. (2006). *The economics of knowledge: Why education is key for Europe's success*. Brussels: The Lisbon Council.
- Schleicher, A. (2007). Can competencies assessed by PISA be considered the fundamental school knowledge 15-year-olds should possess? *Journal of Educational Change*, 8(4), 349–357.
- Simola, H. (2005). The Finnish miracle of PISA: Historical and sociological remarks on teaching and teacher education. *Comparative Education*, 41(4), 455–470.
- Statistics Finland (2008). *Education*. Retrieved March 30, 2009, from <http://www.stat.fi/til/>
on
- Väljärvi, J., & Sahlberg, P. (2008). Should 'failing' students repeat a grade? *Journal of Educational Change*, 9(4), 385-389.
- Väljärvi, J. (2004). Implications of the modular curriculum in the secondary school in Finland. In J. van den Akker, W. Kuiper, & U. Hameyer (Eds.), *Curriculum landscapes and trends* (pp.101-116). Dordrecht: Kluwer.
- Väljärvi, J., & Malin, A. (2003). The two-level effect of socio-economic background. In S. Lie, P. Linnakylä, & A. Roe (Eds.), *Northern lights on PISA: Unity and diversity in Nordic countries in PISA 2000* (pp. 123–132). Oslo: University of Oslo, Department of Teacher Education and School Development.
- Väljärvi, J., Kupari, P., Linnakyla, P., Reinikainen, P., Sulkunen, S., Törnroos, J., & Arffman, I. (2007). *Finnish success in PISA and some reasons behind it II*. Jyväskylä: University of Jyväskylä.
- Väljärvi, J., Linnakylä, P., Kupari, P., Reinikainen, P. & Arffman, I. (2002). *Finnish success in PISA. Some reasons behind it*. Jyväskylä: Institute for Educational Research, University of Jyväskylä.
- Westbury, I., Hansen, S-E., Kansanen, P., & Björkvist, O. (2005). Teacher education for research-based practice in expanded roles: Finland's experience. *Scandinavian Journal of Educational Research*, 49(5), 475-485.