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PISA in Finland: An Education Miracle or an Obstacle to Change?

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≈ The present article discusses the role and impact of the Programme for International Student Assessment (PISA) in Finland. PISA has created a new geography of education policies and reforms by shifting global interest away from Anglo-Saxon education systems to Asian countries, as well as to Finland and Canada in the West. The article describes how PISA has become evidence of the successful education reforms in Finland carried out since the 1970s, but at the same time has created a situation where the continuous renewal of the Finnish education system has become more difficult than before. The conclusion is that PISA is an important global benchmarking instrument, but that policy makers and the media need to make better use of the rich data that have been collected together with information about students' academic performance.

Keywords: Education policy, Education reform, International student assessment, PISA

Introduction

International benchmarking in education has become a lever for education reform. Indicators and especially data from various international student assessments are increasingly used as policy guides when targets for national education reforms are decided. Until very recently, this international benchmarking was done by using input statistics, such as enrolment ratios, class sizes, educational attainments and education spending. The main focus of educational performance in education systems that benchmark their policies and practices internationally is on student achievement in literacy, mathematics and science. Therefore, many national education policies today look similar – they focus on higher standards and closing achievement gaps by rewarding teachers for

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successful accomplishment of these strategic goals.

There are different ways to compare educational performance in different countries. The Organisation for Economic Cooperation and Development (OECD) has developed a system of education indicators that provide its 34 member countries and its candidate countries with systematic checkpoints of educational performance. The OECD's annual statistical reference publication, entitled *Education at a Glance*, is a commonly used policy guide in OECD countries and beyond. The European Commission provides similar education data for national policy making and benchmarking in European Union member and candidate countries. The United Nations maintains and shares education indicators that provide developing countries in particular with a global picture of how education systems around the world are performing. Although these global education data have become more systematic and reliable over the years, there are still inconsistencies and significant gaps that sometimes make international comparisons difficult. Aspects such as teaching, leadership and student learning outcomes can still only be compared in limited areas of schooling.

Two institutions that administer major international student assessments are the International Educational Assessment (IEA), based in Boston College, U.S.A., and the OECD, located in Paris, France. The IEA conducts different studies in regular cycles, such as the Trends in International Mathematics and Science Study (TIMSS), the Progress in International Reading Literacy Study (PIRLS) and the International Civic and Citizenship Education Study (ICCS). Participation in these studies is voluntary and often requires significant financial commitments from governments. The OECD coordinates the Programme for International Student Assessment (PISA), which was first implemented in 2000 in OECD member and candidate countries. It is worth noting that, although they measure the same areas of student achievement, these studies are not similar.

Since this journal issue discusses these international studies in more detail, the present article will not explain them in further depth. However, it is important to know that TIMSS and PISA, which both assess pupils' achievements in mathematics and science, are different in several important ways (Schleicher, 2009). Firstly, TIMSS measures how well students have learned different areas of the school curriculum, in other words, knowledge and skills included in mathematics and science teaching. PISA, in addition, focuses on how well students at the beginning of upper secondary school are able to use the knowledge and skills they have learned in new situations. Secondly, the IEA studies include a varying number of countries in four-year cycles, whereas PISA is primarily designed for developed OECD member countries, all of which have

participated in every three-year cycle since 2000. Finally, TIMSS and PIRLS examine pupils who are in the 4th and 8th grades regardless of their ages, whereas students taking PISA tests are all 15 years old at the time of the tests. This means that IEA assessments are also able to follow up the age cohorts of 4th graders from one cycle to the next, whereas PISA does not. After the inauguration of PISA in 2000, several OECD and European Union member countries, including Finland, opted out of TIMSS and PIRLS and now use PISA as their international benchmarking tool in educational performance.

International student assessment studies in Finland before PISA

In the 1980s, the Finnish education system had only a few features that attracted any interest among international educators. Many aspects of education were adopted from Finland's wealthier western neighbour, Sweden. In international comparisons, Finnish education was exceptional on only one account: Finnish 10-year-olds were among the best readers in the world (Elley, 1992). Other than that, international education indicators left Finland in the shadow of traditional education superpowers, such as Sweden, England, the United States, and Germany. What is noteworthy is that Finland has been able to upgrade human capital by transforming its education system from mediocrity to one of the best international performers in a relatively short period of time. This success has been achieved by education policies that differ from those in many other nations. Indeed, some of the education reform policies appear to be paradoxical because they depart so clearly from global education reform thinking.

Prior to the first cycle of PISA in 2000, many countries thought that their education systems were world class and that students in their schools were better learners than elsewhere. These countries include Germany, France, Norway, Sweden, England and the United States. Many former Eastern European socialist countries – Bulgaria, Romania, Hungary and Yugoslavia – and the Soviet Union believed their school systems were internationally at a high level and therefore able to compete with other leading education systems. There was a reason for this. Those who celebrated the good performance of their education systems often got this impression from available education indicators, such as educational attainment, spending and college graduation rates, as well as from the results of international competitions, such as the International Olympiads in Mathematics, Physics and Chemistry, events that were later also organised for other school subjects, including computer science, biology and philosophy.

In these academic scholarly competitions, high school students compete in advanced-level knowledge in their fields. Naturally, those education systems that have established effective selection systems to identify talents and special abilities early on and then provide gifted students with optimal learning opportunities have succeeded well in these games. Heavily populated nations with large numbers of students, like China, the United States and the former Soviet Union, have acquired a reputation as high-performing education nations on the basis of Academic Olympiads. Interestingly, several Central and Eastern European countries, among them Hungary, Romania and Bulgaria, are also ranked highly in the overall league tables of these Olympiads. Table 1 illustrates the position of Finland among some selected nations in Mathematics Olympiads since 1959, when Finland participated for the first time in these games.

Table 1: Finnish upper secondary school students in Mathematics Olympiads compared with their peers in selected countries since 1959.

	Medals			Number of participations	Number of participating students
	Gold	Silver	Bronze		
China	101	26	5	23	134
USA	80	96	29	34	216
The Soviet Union	77	67	45	29	204
Hungary	74	138	77	48	324
Romania	66	111	88	49	332
Russia	65	28	9	17	102
Bulgaria	50	89	88	49	336
Japan	23	52	30	19	114
Canada	16	37	66	28	168
Sweden	5	23	66	41	271
The Netherlands	2	21	48	38	250
Norway	2	10	24	25	142
Finland	1	5	47	35	224
Denmark	0	3	18	18	102

Source: International Mathematical Olympiad (<http://www.imo-official.org>).

Success in these Academic Olympiads was often used as a proxy of the quality of national education systems. Even if Finnish students' performance in mathematics is adjusted in relation to the size of its population, the relative position of Finland has fluctuated between 25 and 35 in the overall global

ranking list. Until 2001 – and in some circles quite some time after that – a common conception in Finland was that the level of mathematical and scientific knowledge and skills of Finnish students was at best modest by international standards.

As Finland attracts global attention today due to its high-performing education system, it is worth asking whether there has really been any progress in the performance of its students since the 1970s. If such progress can be reliably identified in any terms, the question then becomes: *What factors might be behind successful education reform?* When education systems are compared internationally it is important to have a broader perspective than just student achievement. What is significant from this analysis is the steady progress in Finland during the past three decades within four domains:

1. Increased levels of educational attainment of the adult population;
2. Widespread equity in terms of learning outcomes and the performance of schools;
3. Moderate overall spending and efficiency, almost solely from public sources; and
4. A good level of student learning as measured by international student assessments.

The present article discusses only the last domain; the other three are described in my other recent works (Sahlberg, 2011).

The ultimate criterion of the quality of a national education system is how well students learn what they are expected to learn. International comparisons of education systems put a strong emphasis on scores in standardised achievement tests. Although it is difficult to compare students' learning outcomes today with those in 1980, some evidence of progress of student learning in Finland can be offered using IEA and PISA surveys recorded since the 1970s (Kupari & Välijärvi, 2005; Martin et al., 2000; Robitaille & Garden, 1989). Since it is impossible to conclude whether there has been progress in student learning in general, let us look at some school subjects that have been included in international studies individually.

Mathematics is often used as a proxy for general academic educational performance. The studies available include the Second International Mathematics Study (SIMS) in 1981 (8th grade, 20 nations), the Trends in Mathematics and Science Repeat Study (TIMSS-R) in 1999 (8th grade, 38 nations) and the PISA survey in 2000 (15-year-olds, all 30 OECD member countries). These are the international student assessment surveys in which Finland has 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.

Table 2: Performance of Finnish students in international student assessment studies since the early 1960s.

	Population	Countries	Rank of Finland
IEA First International Mathematics Study (FIMS) 1962–67	13-year-olds and high school completion	12	Average performer
IEA First International Science Study (FISS) 1967–73	10 and 14-year-olds and high school completion	18	Average performer
IEA Study of Reading Comprehension 1967–73	10 and 14-year-olds and high school completion	14	Average performer (in one area third)
IEA Second International Mathematics Study (SIMS) 1977–81	13-year-olds and high school completion	19 (13-year-olds) 15 (high school)	Average performer
IEA Second International Science Study (SISS) 1980–87	At primary, middle and high school completion	23	10-year-olds high 14-year-olds Average performer
IEA Written Composition Study 1980–88	At primary, middle and high school completion	14	Average performer
IEA Reading Literacy Study 1988–94	9 and 14-year-olds	32	Top performer
IEA Third (later Trends in) International Mathematics and Science Study (TIMSS)	4 th and 8 th grade	1995: 45 1999: 38 2003: 50 2007: 59	Above average performer in 1999 (only participation)
IEA Progress in International Reading Literacy Study (PIRLS)	4 th grade	2001: 35 2006: 45	Not participated
IEA International Civic and Citizenship Education Study (CIVED and ICCS)	8 th grade	1999: 31 2009: 38	Top performer
OECD Programme for International Student Assessment (PISA)	15-year-olds	2000: 43 2003: 41 2006: 57 2009: 65	Top performer

Table 2 shows participation of Finland in major international student assessment studies since early 1960s, when the First International Mathematics Study was launched (Sahlberg, 2011). These studies normally compare student achievement in reading comprehension, mathematics and science at three points of education: at the end of elementary school (age 10), lower secondary school (age 14), and upper secondary school (age 17). Finnish students' performance in the Second International Mathematics Study (published in 1981) was at the international average in all areas of mathematics. The national average performance of Finland was clearly behind Hungary, the Netherlands and Japan in lower and upper secondary education. In 1999, the Third International Mathematics and Science Study ranked Finland 10th in mathematics and 14th in science among 38 participating countries. Since the first cycle of PISA in 2000, Finland has been one of the top performing nations in mathematics among all OECD member states. Progress has been similar in science since the Second International Science Study in the late 1970s. However, Finnish students have always performed well internationally in reading: Finnish 4th grade students were the best readers in the Reading Literacy Study in the late 1980s, and 15-year-olds have been ranked top in all four PISA cycles.

What might explain this evident gain in mathematics learning in Finnish schools? Although some research has been undertaken on this question, it contains more speculation and qualitative analysis than reliable answers (Hautamäki et al., 2008; Linnakylä, 2004; Ofsted, 2010; Välijärvi et al., 2007). In this analysis, three possible issues appear. Firstly, mathematics teaching is strongly embedded in curriculum design and teacher education in Finnish primary schools. For example, at the University of Helsinki, each year about 15% of students in the primary school teacher education programme specialise in teaching mathematics. This also allows them to teach mathematics in lower secondary schools. As a consequence, most primary schools in Finland have professionals who understand the nature of teaching and learning – and curriculum and assessment – in mathematics. Secondly, both teacher education and the mathematics curriculum in Finland have a strong focus on problem solving, thereby linking mathematics to the real world of students. Mathematics tasks in PISA are based on problem solving and using mathematics in new situations, rather than on mastery of the curriculum and syllabi. Thirdly, the education of mathematics teachers in Finland is based on subject didactics and close collaboration between the faculties of mathematics and education. This guarantees that newly trained teachers with master's degrees have a systematic knowledge and understanding of how mathematics is learned and taught. Both faculties have a shared responsibility of teacher education that reinforces the professional competences of mathematics teachers.

The era of PISA

PISA is increasingly being adopted as a global measure to benchmark nations' student achievement at the end of compulsory education. In 2009, the fourth cycle of this global survey was conducted in all 34 OECD member nations, as well as in 31 other countries or jurisdictions. It focuses on young people's ability to use their knowledge and skills to meet real-life challenges. "This orientation," as the OECD says, "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, 2007, p. 16).

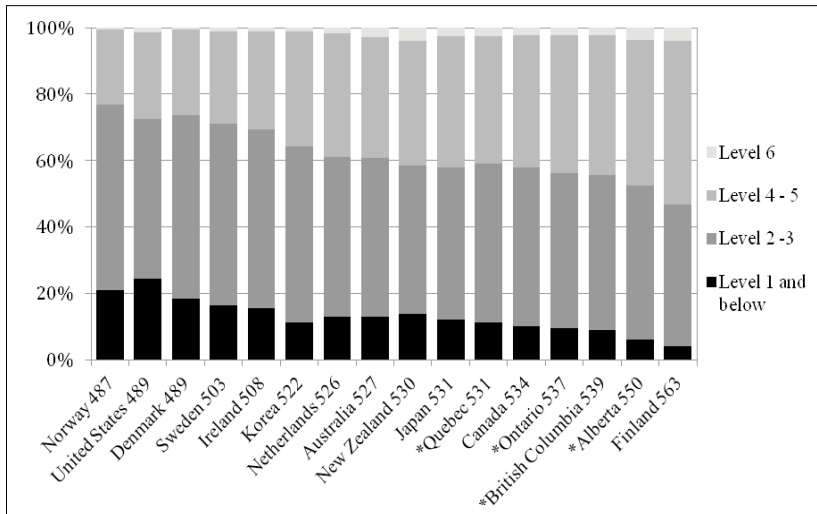


Figure 1: Percentage of students at each proficiency level on the PISA 2006 science scale in selected OECD countries and some Canadian provinces.

Source: OECD (2007).

Finland was the top overall performer among OECD countries in 2000 and 2003 PISA studies, and the only country that was able to improve performance. In the 2006 PISA survey, Finland maintained its high performance in all assessed areas of student achievement. In science, the main focus of the PISA 2006 survey, Finnish students outperformed their peers in all 56 countries, some of which are shown in Figure 1. In the 2009 PISA study, Finland was again the best performing OECD country, with high overall educational performance and equitable learning outcomes with relatively low cost. Significant

in this national learning profile is a relatively large number of best performers (level 6) and a small proportion low achievers (level 1 and below) in all measured subjects. More than half of Finnish students reached level 4 or higher in reading literacy, in comparison to the United States, where only approximately one quarter of all students were able to do the same. The Canadian provinces of Alberta, British Columbia, Ontario and Quebec also have more than 40% of students showing at least level 4 performance. Slovenia and Croatia, the two best South-East European countries in the 2009 PISA reading literacy study, and counties with similar performance profiles, both have about one quarter of their students at level 4 or higher (OECD, 2010a, p. 50).

Figure 2 shows another divergent trend of Finnish students' learning performance, as measured on the PISA science scale, in comparison to some other OECD countries over time (OECD, 2001, 2004, 2007, 2010a). It is noteworthy that student achievement in Finland also consistently demonstrates progress according to PISA data, unlike several education superpowers. It is important to note that any effects that teaching may have on these results in given education systems have been influenced primarily by education policies and reforms implemented in the 1990s, not by the most recent education reforms.

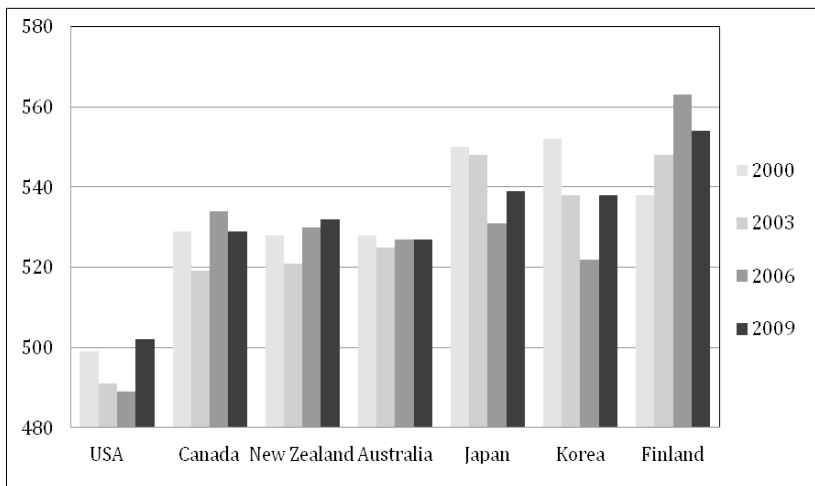


Figure 2: The performance of 15-year-old Finnish students in science in PISA Surveys between 2000 and 2009 in selected OECD countries.

Source: OECD (2001, 2004, 2007, 2010a).

Another question emerges: Why do Finnish students perform exceptionally well in science? Some factors suggested by Finnish science educators

include the following. Firstly, primary school teacher education has, for the past two decades, focused on redesigning science teaching and learning in schools so that students learn through experiential and hands-on science. At the same time, more and more new primary school teachers have studied science education during their teacher education – more than 10% of graduates of the University of Helsinki have studied some science education in their masters' degree programmes. These university studies, as part of normal teacher education, have focused on building pedagogical content knowledge and understanding of scientific process in knowledge creation. Thus, the science curriculum in comprehensive school has been transformed from a traditional academic knowledge-based curriculum to an experimental and problem-oriented curriculum. This change has been followed by massive national professional development support to all primary school science teachers. Thirdly, teacher education in all Finnish universities, including the faculties of science, has been adjusted to the needs of the new school curriculum. Today, science teacher education is coherent and consistent with the pedagogical principles of contemporary science teaching and learning that have been inspired by ideas and innovation from the United States and England.

There are not many international student assessments that focus on subjects other than reading, mathematics and science. However, the IEA International Civic and Citizenship Education Study (ICCS) is one that does, and it is the third IEA study designed to measure contexts and outcomes of civic and citizenship education (Schulz, Ainley, Fraillon, Kerr, & Losito, 2010). Built on IEA's Civic Education Study 1999, the 2009 ICCS studied the ways in which young people in lower secondary schools (typically grade 8) are prepared to undertake their roles as citizens in 38 countries in Europe, Latin America and the Asia-Pacific region. A central aspect of the study was the assessment of student knowledge about a wide range of civic and citizenship-related issues. In this study, *civic knowledge* refers to the application of civic and citizenship cognitive processes to civic and citizenship content. Civic knowledge is a broad term that includes knowing, understanding and reasoning; it is a key outcome of civic and citizenship education programmes and is essential to effective civic participation.

In the 2009 ICCS, Finnish 8th grade students scored the highest average score in civic knowledge along with their Danish peers, as shown in Figure 3. As in PISA and TIMSS, Finland also has the smallest between-school variation of student performance in the 2009 ICCS study. The 2009 ICCS shows that there is a strong relationship between the Human Development Index (HDI) and civic knowledge at the country level. The variation in HDI explains 54% of the

between-country variation in civic knowledge, showing that national averages of civic knowledge are related to factors reflecting the general development and wellbeing of a country. This finding is similar to those from other international studies of educational outcomes; however, it does not necessarily mean that there is a causal relationship between civic knowledge and the overall development of a nation. Paradoxically, this study also found that Finnish youth feel the least engaged in politics and civic issues in their everyday lives.

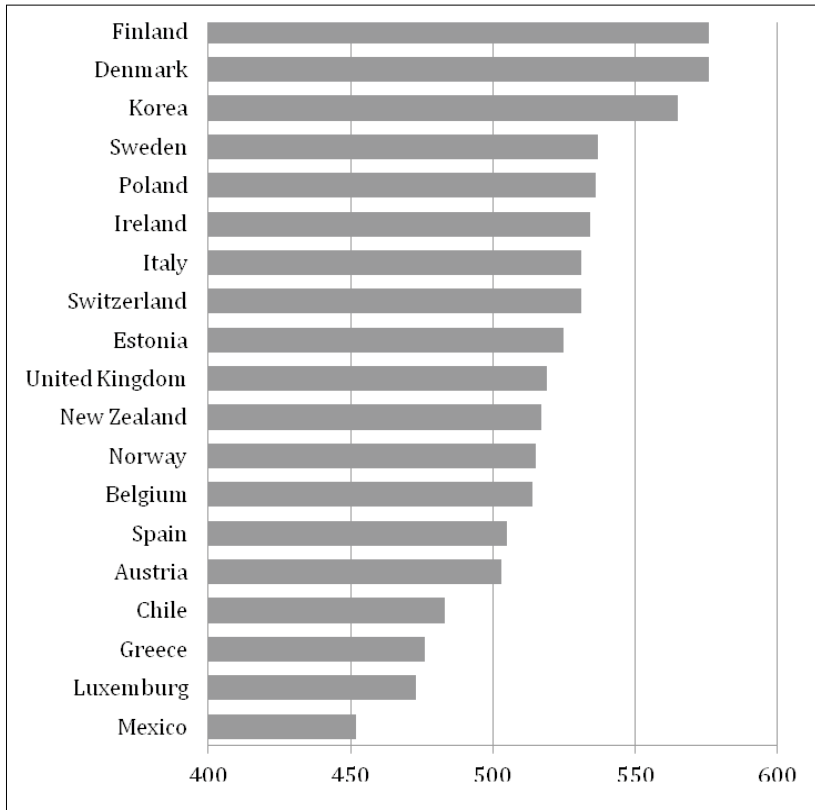


Figure 3: Civic knowledge of 8th grade students in OECD countries that participated in the 2009 International Civic and Citizenship Education Study (ICCS).

Source: Schulz et al. (2010).

All four PISA survey cycles since 2000 indicate that Finnish educational performance is consistent over all assessed education domains and that Finnish students, on average, score highly in every survey across all subjects – in reading,

mathematics and science. The quality as measured by international student assessment studies has been steadily improving since the early 1970s. PISA 2009 was the second cycle to focus on reading literacy, the first being in 2000. It therefore provides a unique opportunity to look at the trend of how well students can understand and use what they read. Although the national average of student performance in 2009 declined slightly from 2000, Finnish students' reading literacy remains at a high level in international terms. What is alarming in PISA 2009, however, is the finding that Finnish young people read less for pleasure than they did ten years ago, with half of the 15-year-old Finnish boys reporting that they do not read for pleasure (OECD, 2010c, p. 65). This is also clearly visible in national studies of reading comprehension and habits in Finland.

According to the OECD, "Finland is one of the world's leaders in the academic performance of its secondary school students, a position it has held for the past decade. This top performance is also remarkably consistent across schools. Finnish schools seem to serve all students well, regardless of family background, socio-economic status or ability" (OECD, 2010b, p. 117). The strength of Finland's educational performance is the consistently high level of student learning, combined with an equitable distribution across schools throughout the country.

Since its inauguration in 2000, PISA has had a huge impact on global education reforms, as well as on national education policies in the participating countries. It has become a significant pretext for educational development in Asia, Europe and North America, and is attracting increasing interest in rest of the world. Large scale education reforms have been initiated (in the United States, England, New Zealand, Germany, Korea, Japan and Poland), new national institutions and agencies have been created, and thousands of delegations have visited high-performing education jurisdictions, including Finland, Alberta, Ontario, Singapore and Korea, to find out the "secrets" of good education (Fullan, 2009; Sahlberg, 2011). In most of the over 65 participating education systems, PISA is a significant source of education policy development and the reason for many large-scale education reforms.

Emerging concerns: Is this really it?

Perhaps it is surprising to many that Finnish educators are not as excited about PISA as many foreigners would expect. Many teachers and school principals think that PISA measures only a narrow band of the spectrum of school learning. There are also Finns who see that PISA is promoting the transmission of education policies and practices that are not transferrable. This will,

they maintain, lead to a simplistic view of education improvement. Just as in sports, too strong an emphasis on international comparisons (or competitions) may lead to unethical means to boost performance temporarily just to raise the ranking in tables of results. A good education system and high educational performance is much more than measured academic scores. Some teachers in Finland are afraid that the current movement that judges the quality of education systems by using academic units of measurement only will eventually lead to a narrowing of the curriculum and teaching at the expense of social studies, arts, sports, music and the development of the whole person.

There is, indeed, increasing debate about what these international tests really measure and whether PISA alone can be used to judge the quality of education systems. Critics' and proponents' arguments are available in education literature (Adams, 2003; Bautier & Rayon, 2007; Bracey, 2005; Dohn, 2007; Goldstein, 2004; Prais, 2003; 2004; Riley & Torrance, 2003; Schleicher, 2007). The reader should note that PISA is not the only available international student assessment, and that other assessments actually measure different aspects of student learning than PISA. Nevertheless, the PISA study is the only international benchmark instrument that covers all OECD countries and that focuses on competences beyond the curriculum taught in schools. It is also worth noting that there is growing criticism among Finnish educators about the ways that students' performance and success in education systems are determined by using only the test scores from academic student assessments. Many would like to see a broader scope of student learning considered in these assessments, such as learning-to-learn skills, social competences, self-awareness or creativity.

Finnish people also need to avoid the illusion that the current ways of measuring the performance of education systems will last forever. Although there are clear advantages to relying on global education indicators – especially those related to the economics of education – and student achievement numbers produced by PISA and other surveys, there will be growing pressure in the coming years to develop educational units of measurement that more inclusively cover a broader range of learning and the changing face of future societies. PISA only looks at one part of this desired outcome of education. At the same time, as Peter Mortimore writes:

PISA also suffers some limitations: It assesses a very limited amount of what is taught in schools; it can adopt only a cross-sectional design; it ignores the role and contribution of teachers; and the way its results are presented – in some, at least, of its tables – encourages a superficial, 'league table' reading of what should be a more interesting but essentially more complex picture. (Mortimore, 2009, p. 2)

Many teachers and principals in Finland have a sceptical view of international measurements and benchmarking tools, as mentioned above. They perceive teaching and learning as complex processes and are aware that measuring these processes reliably is difficult. Moreover, there is an increasing number of practitioners who realise the danger and the consequences of teaching to the test rather than to learn and understand. The Finnish conception of learning in schools is based on the principles of making all students active in teaching and learning. Finland has not adopted the standardised testing systems that are common in many other countries, but instead relies on intelligent forms of accountability, including self-assessment and inspection, portfolio assessment and sample-based national assessments.

When the stakes in international student assessments get higher, so does the chance of wrongdoing. Every education system that runs high-stake national assessments or examinations knows this, and it is also known as Campbell's law (Sahlberg, 2010). Reported testing scandals in Atlanta, Philadelphia, Texas and Washington DC in the United States, as well as nationwide cheating in Indonesia, are all alarming signs of what may be ahead as the role of assessment and related data becomes more prevalent (New York Times, 2011). The New York Times concludes its report on growing school cheating in the United States with a grim conclusion: "Never before have so many had so much reason to cheat. Students' scores are now used to determine whether teachers and principals are good or bad, whether teachers should get a bonus or be fired, whether a school is a success or failure." (ibid.)

What is a good education system?

International student assessments provide valuable information about the quality of education systems, but student achievement as measured by these tests is not the whole story. At best, TIMSS, PIRLS and PISA offer comparable and standardised evidence of student achievement in mathematics, science and reading literacy, as well as characteristics related to teaching in schools. Most teachers and principals know that a good school is much more than a place that produces high achievement results. Similarly, a good education system must meet other important criteria than just good scores in international student assessments. Public media, and unfortunately also many policy makers, miss these facts when they judge the quality of education systems simply by the position of countries in international league tables of educational achievements.

In the present article, I have proposed that a good education system should also demonstrate that it is getting better in its education participation and

graduation rates, system-wide equity of learning outcomes and performance of schools, and efficiency in using financial and human resources in achieving these objectives. It is not enough, therefore, that an education system can be labelled as good or great by using only the data from international student assessments. There are several education systems today that rank well in international test score tables but have high drop-out rates, wide achievement gaps, or widespread use of private tutoring to boost pupils' academic performance. Another characteristic that is often not included in international comparisons is the scale of other forms of structural failure within education systems. Grade repetition, exclusion of students with special needs and inequality of educational opportunities are still typical in many countries, but these factors are not taken into account in the measurement of educational performance in international comparisons.

PISA has revealed some important aspects of what high-performing education systems have in common. Take Korea, Japan, Alberta, Ontario and Finland. They have all scored consistently high – with some minor exceptions – in all PISA cycles since 2000 in reading literacy, mathematics and science. All of these jurisdictions also have smaller variation between schools than the OECD average performance. This suggests that the schools in these education systems are able to deal successfully with students' socioeconomic differences. Finland, as one of the strong performers in PISA, has the most even educational performance profile of all OECD countries, with only about 7.7% of national reading literacy variation from between-school variance, the OECD variance being 42% (OECD, 2010a). This means that the affect of pupils' family background, especially their socioeconomic status, in academic achievement is smaller in countries that also have a higher overall national achievement score, as shown in Figure 4.

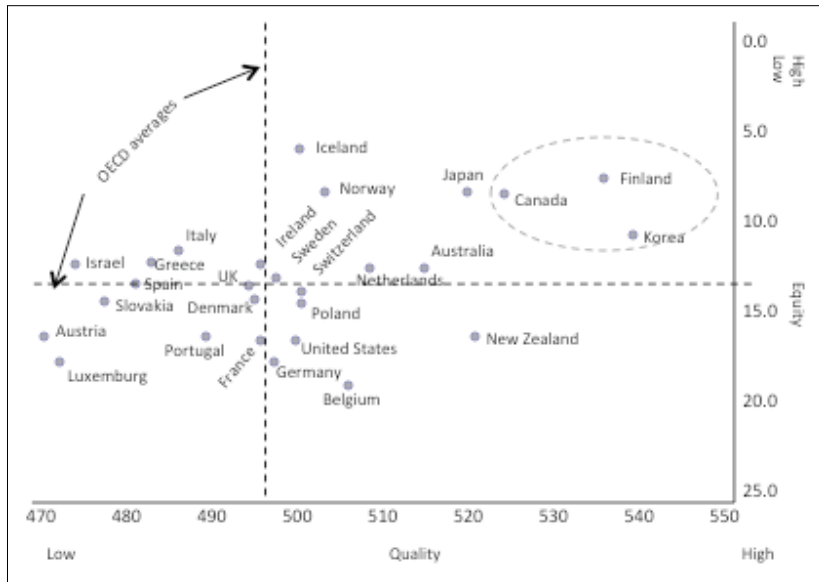


Figure 4: National average PISA score and percentage of variance of student reading performance as a function of socioeconomic status in 2009 in selected OECD countries.

Source: OECD (2010a).

International student assessments also help policy makers to understand other features of their education systems in the international context. Such important variables as students' attitudes toward school, their learning habits and classroom experiences are all important when the performance of education systems is evaluated. National research and statistics in Finland provide systematic information about the conditions in which students study and teachers teach. PISA is also an invaluable benchmarking tool for non-academic aspects of educational performance in Finland and in other countries.

Indeed, Finland is often used as a model of successful reform and strong performance in education. "As societies move beyond the age of low-skill standardization," writes Andy Hargreaves, "Finland contains essential lessons for nations that aspire, educationally and economically, to be successful and sustainable knowledge societies" (Hargreaves et al., 2008, p. 92). However, reform ideas and policy principles that have been employed in Finland since the 1970s will not necessarily work in other cultural or social contexts. For example, in Finland, like in other Nordic countries, people trust each other, and therefore also their teachers and principals, more than in many other countries (OECD,

2008). Similarly, there are other socio-cultural factors that are mentioned by some external observers, such as social capital, ethnic homogeneity and the high professional status of teachers, that may have a key role when transferability of education policies is considered (Schleicher, 2009; OECD, 2010b; Fullan, 2011).

Many want to learn from the Finns how to develop a good education system. Understanding Finnish educational success needs to include an awareness of the socio-cultural, political and economic perspectives. Indeed, there is more to the picture than meets the eye. An external OECD expert review team that visited Finland observed that “it is hard to imagine how Finland’s educational success could be achieved or maintained without reference to the nation’s broader and commonly accepted system of distinctive social values that more individualistic and inequitable societies may find it difficult to accept” (Hargreaves et al., 2008, p. 92). Another visiting OECD team confirmed that the Finnish approaches to equitable schooling rely on multiple and reinforcing forms of intervention with support that teachers can get from others, including special education teachers and classroom assistants (OECD, 2005). Furthermore, Finland has shown that educational change should be systematic and coherent, in contrast with the current haphazard intervention efforts of many other countries. One conclusion was that “developing the capacities of schools is much more important than testing the hell out of students, and that some non-school policies associated with the welfare state are also necessary” (Grubb, 2007, p. 112). Scores of news articles on Finnish education have concluded that trust, teacher professionalism and taking care of those with special needs are the factors that distinguish Finnish schools from most others.

Conclusion

PISA has radically changed the geography of education since it was first introduced in 2000. Former education superpowers – the United States, England, France, Germany and Sweden – have lost their centre-stage roles to Canada and Finland in the West, and Korea, Singapore and Japan in the East. PISA has made Finland an education phenomenon that has brought thousands of people to take a first-hand look at schools where most children seem to be learning well. Finnish teachers are celebrated, school principals admired and the entire education system praised for its exceptional success. This sudden and unexpected international fame has also forced the Finns themselves to find out what has brought this new situation about.

However, PISA has not affected Finnish education policies or structures as it has done in Germany, Japan, Australia or Norway. Quite the opposite.

Being at the centre of attention has made many decision makers and reformers careful not to disturb the high-performing education system. The period between 1970 and 2000 was an active and innovative time of brave reforms and renewal of education in Finland. As I have written elsewhere, the time after PISA can be characterised as one of moderate policies and a lack of innovation in Finnish pre-university education (Sahlberg, 2011). It is possible, of course that the slow pace of educational renewal has been due to other reasons as well. In 2011, ten years after the publication of the first PISA results, Finland suffers from a lack of a clear vision for its education system and confusion over significant budget cuts at a time of domestic financial difficulties. On the level of schools and municipalities, the main concerns are structural changes in administration, pressure to increase productivity, and the expanding diversity of the student population, all of which affect how well schools are able to fulfil their aspirations.

In addition to making Finland an education celebrity, PISA has also brought some challenges. Firstly, finding answers about the possible reasons behind strong educational performance has turned the focus from the future to the past among the education community in Finland. Visitors to Finland often want to know what enabled the Finns to transform their education system when most others did not. Many university professors, education authorities and school principals have spent much of their time and resources in travelling, making presentations and writing about the Finnish education system in the past and present to tell the story of education reform in Finland. This has often been done at the expense of the continuing development of the education system for the future. Ironically, the success of Finnish education during the past three decades is due to forward-looking education policies and active learning from other countries' education reforms and innovations.

Secondly, being in the lead is not always easy. Just as in hiking or skiing, it is easier to follow others and learn from their actions than to lead the way. Finland has always depended on ideas and innovations from other education systems. In other words, Finland has been an importer of education policies and solutions. Now these roles have changed. Many countries would like to borrow or transfer models of schooling from Finland. In Finland, the response to these inquiries has been passive until very recently. However, 'education trade' is becoming a new potential area of income for experts and businesses in Finland. This may have some unexpected consequences unless the provision of highest quality education is first guaranteed for the Finnish people.

Thirdly, continuous occupation of the top position often leads to a state of complacency. It encourages the feeling that when everything seems to work

well there is no need to make any changes to the way things are. Although there are many who believe that good education is more than high scores in some academic subjects, there is an increasing tendency to justify policies and the distribution of financial resources by using performance in international assessment studies like PISA.

It is important that international student assessment studies are used wisely in policy making and education reform architecture. There is much more information in these existing studies that governments and the media have been able to use for better policies and deeper news reporting. Before considering any new forms of data collection, we should make better use of what we already have. PISA and other international benchmark tools are important for any government that cares about education in an open, globalised world. Using these data for the good of our teachers and students is a continuing challenge for us all.

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