

# Real Finnish Lessons

The true story of an education superpower

GABRIEL HELLER SAHLGREN

WITH A FOREWORD BY PROFESSOR JULIAN LE GRAND





# **Real Finnish Lessons**

The true story of an education superpower

**GABRIEL HELLER SAHLGREN**

**WITH A FOREWORD BY PROFESSOR JULIAN LE GRAND**

## THE AUTHOR

Gabriel Heller Sahlgren is research director at the Centre for the Study of Market Reform of Education (CMRE), an affiliated research fellow at the Research Institute of Industrial Economics in Stockholm, Sweden, and a PhD student at the London School of Economics. He is the author of numerous publications on issues relating to applied microeconomics, including *Incentivising Excellence: School Choice and Education Quality* (CMRE and IEA 2013).

### ***Acknowledgements***

The author thanks Charlotte Fox, Jonathan Friedman, Henrik Jordahl, Sirkku Kupiainen, Neil McIntosh, Tim Oates, and (especially) Tino Sanandaji for helpful comments and suggestions.

This monograph is the winner of the 2014 Charles Douglas-Home Memorial Trust Award, an annual prize established to promote the ideals of freedom and democracy. Support towards research for this report was given by the Institute for Policy Research.

ISBN No. 978-1-910627-08-2

© Centre for Policy Studies, April 2015

Printed by 4 Print, 138 Molesey Avenue, Surrey

# CONTENTS

Summary

Foreword

1. Introduction	1
2. From Poster Child to Ominous Slippage	4
3. Questioning the Fashionable Policy Explanations	7
4. The Iron Cage of History	18
5. The Times They Are A-Changin'	49
6. Lessons from Finland?	63

Endnotes

## SUMMARY

- In the first international PISA league tables, published by the OECD in 2001, Finland achieved top positions in mathematical, reading, and scientific literacy. Since then, policymakers from around the world have tried to learn from its extraordinary and unexpected success. However, Finnish scores in all domains slipped in PISA 2009, and to an even greater degree in PISA 2012.
- Why did Finland achieve such success in PISA? The standard policy explanations for the country's rise include its focus on equity, with the comprehensive school reform of the 1970s as the bedrock, and the absence of standardised tests, accountability, and market reforms. Other explanations highlight comparatively little school- and homework, and the country's current teacher education system.
- Yet there is little hard evidence for any of the standard explanations – in fact, most research explicitly does not support them.

- Furthermore, a closer examination of Finland's results over time reveals that its rise began well before most of the highlighted policies were able to take effect. For example, the lack of accountability and the high level of autonomy for schools and teachers are recent phenomena. Up until the 1990s, the Finnish education system was centralised and had little autonomy.
- Finland's complicated and unique history appears to be an important explanation for its educational success, not least via the high social status and quality of teachers. This dates back to their distinctive role in the nation-building process, beginning in the 19<sup>th</sup> century, and is therefore unlikely to be caused by current policies.
- Finland was also a comparatively “late developer” in terms of industrialisation, economic growth, rollout of mass education, and development of a welfare state. As a result, Finnish culture for long remained more traditional than in other Nordic countries, reflecting its similarities with high-performing East Asian nations. This is likely to have underpinned the country's improvements in international tests via a “wealth effect”, which first increases and later decreases educational performance as a function of income.
- In education, the special socio-economic and cultural trajectory meant that a hierarchical and traditional schooling climate remained largely in place until relatively recently. Perhaps most conspicuous, pupil-led teaching methods were for long absent from Finnish classrooms, despite admonishments from the educational establishment. Incidentally, an increasing body of research suggests that traditional methods are superior for raising pupil achievement.

- The recent fall in performance may in part be explained by the fact that many of the above preconditions for success are now being eroded. The country's culture is catching up with the radical economic transformation that took place in the second half of the 20<sup>th</sup> century. In particular, the traditional and teacher-centred educational culture is being replaced by more pupil-led ways of working.
- While a degree of caution in seeking lessons from Finland's success is always necessary, the in-depth analysis in this monograph shows that existing popular explanations for the country's achievements, such as its lack of market reforms and accountability, do not withstand scrutiny. Instead, it suggests that the country's rise was to a large extent shaped by socio-economic and historical factors, as well as the retention of a traditional educational culture.

## FOREWORD

For the last decade or so, Finland's education system has been a poster child for many education experts and policymakers throughout the world. This reputation stems from the country's outstanding performance in international tests in the early part of this century. In consecutive PISA studies, Finland achieved top positions in literacy, numeracy, and science, rivalling even the East Asian tigers in overall performance. Consequently, the Finnish education model went from obscurity to world famous within only a few years.

Perhaps most remarkable was the fact that Finland was seemingly able to achieve the excellent results without resorting to the draconian education model that has been the trademark of East Asia. Similarly, it also appeared to have spurned many of the market and accountability reforms undertaken in its Scandinavian neighbours, the United Kingdom, and elsewhere. All this made Finland an especially attractive model for opponents of some of the major trends in education policy worldwide.

However, the country's performance has begun to falter in the last couple of years – in both absolute and relative terms. Proponents



of the traditional explanations for the Finnish success appear either to ignore the on-going decline or to come up with ad hoc arguments in an attempt to save their original ones.

Yet the main problem with the traditional explanations of the Finnish education “miracle” was that they originated from the idea of “best practice”, an approach that highlights current arrangements in high-performing countries as the key determinant without adequate consideration of whether these are causally linked to performance. Consequently, the policy lessons drawn from this approach are not particularly reliable and might in fact do more harm than good.

So, while many have used Finland’s experience to support their own pet theories on the desirability of certain types of education, its rise and decline have never been systematically analysed in a rigorous fashion. In this masterly exploration of the Finnish phenomenon, Gabriel Heller Sahlgren remedies this situation. He refutes many of the standard explanations, and shows convincingly how the outcomes, both positive and negative, are better explained by a detailed examination of Finland’s history and educational culture. His research is an object lesson in how difficult it is to make international comparisons of policy without a full understanding of the politics, economics, and history of the countries concerned. It is a must read, not only for those interested in the Finnish experience, but for anybody concerned with education and school reform in general.

*Julian Le Grand is Richard Titmuss Professor of Social Policy at the London School of Economics.*

# 1. INTRODUCTION

The problem of education in the modern world lies in the fact that by its very nature it cannot forgo either authority or tradition, and yet must proceed in a world that is neither structured by authority nor held together by tradition.

Hannah Arendt, *The Crisis in Education*, 1954

“We didn’t think we were that good”, a headteacher at a school outside of Helsinki mused. “Right before the first PISA results were released, I was involved in a Nordic cooperation project in education. And nobody cared about Finland.”<sup>1</sup>

The headteacher’s Nordic colleagues were not alone. During the 20th century, few were interested in the Finnish schooling system. But at the turn of the millennium, this changed rapidly. When the first results of PISA – a now established global ranking of 15-year old pupils’ performance produced by the OECD – were released in December 2001, Finland emerged seemingly out of nowhere as a top performer, leaving other Nordic countries behind by a considerable margin. Instead, Finland found itself competing with the best East Asian countries. The world was baffled – as were the Finns. It was a “PISA miracle”.

Suddenly, Finland's school system was catapulted to stardom. And for the next decade it was the rock star of education worldwide, with droves of policymakers and pundits visiting the country to find out the secrets behind its results.

But then the tide turned. In December 2013, the latest PISA results showed that Finland had slipped in two consecutive studies. Was it just a temporary setback? Or had the world mistaken a rock star for a "one decade wonder"?

This monograph tells the story of how a small Nordic country first triumphed and then began to slip in a global education race spurred by the emergence of PISA. It also discusses which policies, if any, might be relevant to policymakers in other countries. It is a story that goes beyond the fashionable explanations of Finnish success as highlighted in the international media. Indeed, while the focus so far has been on certain characteristics of Finland's current education system, there has been little rigorous analysis of whether those features can explain the country's performance historically.

Similarly, the socio-historical context in which Finland's rise and decline emerged has not been explored sufficiently. An education system does not exist in a vacuum; it is necessary to dig deeper into the country's social, political, and cultural underpinnings to understand its workings.

This is perhaps especially important in the case of Finland, whose modern history has been tumultuous. Having been annexed by Russia from Sweden in 1809, the country achieved independence in 1917, soon to be followed by a bloody civil war between socialists and conservatives in 1918. Later it endured an invasion by the USSR in 1939 to 1940, while teaming up with Germany in

1941 to 1944 to invade the Soviets, whose advances led to an armistice that in turn compelled Finland into conflict with the Germans. All this set the prelude for the country's unusually close and delicate relationship with the USSR during the Cold War.

In addition, and partly because of these factors, Finland has historically been poorer and less educated than its Scandinavian neighbours, spending the second half of the 20th century rapidly narrowing this gap. This trajectory also ensured a different societal and educational culture, which is often ignored in the international debate.

The story told here attempts to fill the gaps in the current discussion, and to tease out a more complete picture of Finland's educational rise and decline. Admittedly, this is far from an easy task. While analysing the credibility of hitherto presented hypotheses is relatively straightforward, it is unfortunately impossible to conclusively determine the factors behind changes in Finland's educational performance and what can be learnt from these. Yet, for what it is worth, this is an attempt at getting a bit closer to the truth.

## **2. FROM POSTER CHILD TO OMINOUS SLIPPAGE**

The story begins in December 2001, when the results from the first PISA study were released. The PISA survey was created by the OECD as a response to member countries' demand for a reliable metric of pupils' knowledge and skills. Every three years, nationally representative samples of 15-year old pupils sit a test in mathematical, reading, and scientific literacy. The number of participants has increased over time, and in the latest 2012 survey 65 countries and economies were represented.

One subject is selected to be the main domain for each cycle, and total test scores in each subject are comparable across all future cycles only after it has been the main domain once. This means that while reading literacy scores are comparable over time from the first assessment, mathematical and scientific literacy scores are only fully comparable over time from 2003 and 2006 respectively. It also means that we cannot be sure when Finland peaked in PISA in other subjects than reading literacy.<sup>2</sup>

Nevertheless, in the first PISA 2000 results, Finland shocked both itself and the world, achieving top positions in all three subjects.

And the success story continued. While there were no statistically significant achievement changes in the subjects that can be reliably linked to full future assessments, Finland came in first or second place in all three subjects in 2003 and 2006.<sup>3</sup> In the mid-2000s, therefore, Finland was clearly a poster child of PISA.

But then something happened. Finnish scores in all domains slipped slightly in PISA 2009 and then more strongly in PISA 2012. Between 2006 and 2012, Finland's performance declined by 18 points in scientific literacy, 23 points in reading literacy, and 29 points in mathematical literacy. On average, this was the largest fall of all Nordic countries in this period.<sup>4</sup> The news hit Helsinki like a bomb. "[T]he golden days are over", one Finnish website dramatically announced.<sup>5</sup>

Of course, the decline should have been expected given other evidence. In TIMSS, a more curriculum-focused international test, Finnish 13-year old pupils fell by 38 points between 1999 and 2011 in mathematics – leaving the country's 14-year olds to perform slightly lower in 2011 than its 13-year olds did in 1999. In science, however, there was only a statistically insignificant decline of six points.<sup>6</sup> Nevertheless, Finnish domestic sample-based tests in different subject areas, including science, also show a decline in pupil knowledge since the late 1990s and early 2000s.<sup>7</sup> The same applies to evaluations of more general competences. Indeed, one such test indicated a drop of the equivalent of 46 PISA points between 2001 and 2012 among pupils in the final year of compulsory education.<sup>8</sup>

While these results do not tell us exactly when Finland began falling in the different subjects, they show a rather clear-cut picture: the Finnish education miracle has stalled and gone into reverse in recent years.

Certainly, it remains the highest performing country in Europe on average, which should be compared with its neighbours' much lower performance. For example, Sweden has fallen significantly in international tests since the mid-1990s, and is now one of the lower-performing countries in Europe.<sup>9</sup> So it is clearly important to put Finland's decline in perspective.

Nevertheless, focusing on the country's peak results in PISA is insufficient when attempting to draw policy lessons for other nations. Finland's performance trajectory has changed, and it is therefore important also to look at the potential reasons for its current decline and what can be learnt from it.

### **3. QUESTIONING THE FASHIONABLE POLICY EXPLANATIONS**

But let us start with the rise. Looking at articles and books about the lessons from Finland, there is no shortage of policy explanations for the country's initial performance in PISA. In general, a strong focus on equity is highlighted as the bedrock in this respect.<sup>10</sup> This began when the old two-stream system was abolished gradually across the country in the 1970s, following the Special Systems Act in 1968, in favour of nine-year comprehensive schooling modelled after similar reforms in Sweden and Norway.<sup>11</sup> To succeed in accommodating pupils with diverse learning needs in the same schools, special education, often part-time, increased rapidly as a result of the reform.<sup>12</sup> The comprehensive school reform and its egalitarian implications are often considered key for the Finnish education system's success.<sup>13</sup>

Other explanations include the absence of standardised tests, accountability, and market reforms. They also highlight collaboration among, and autonomy for, schools and teachers, who are trusted to do their jobs without anybody looking over their shoulders.<sup>14</sup>



This is also something that is highlighted by senior Finnish officials. “We trust municipalities, schools, headteachers, and teachers, who have freedom and autonomy to do their job well and tweak it to local circumstances”, Aulis Pitkälä, Director General at the Finnish National Board of Education (NBE), said. “It sounds idealistic, but you need to trust.”

This trust is then often linked to the competitive teacher education, which only accepts on average about 10 per cent of applicants who all graduate with master’s degrees.<sup>15</sup> These features are supposed to ensure high quality teachers, who are deemed crucial for pupil achievement.<sup>16</sup>

Another oft-voiced idea is that Finnish children do well because they do not have to study as much as other children. Finnish school days are relatively short, with a comparatively low teaching load, and pupils do not complete as much homework as children in other countries. This allows them to play more, while also freeing up time for teachers to collaborate and share ideas. So, it is supposed, “less is more” when it comes to producing higher PISA achievement.<sup>17</sup>

If this story were true, Western countries, and many others, would clearly be on the wrong path. In both England and the US, for example, education policy since the 1980s has focused on changing the external incentive structure in schools by increasing accountability and introducing market-based reforms. Similarly, they have also aimed to increase instructional time and schoolwork. Critics of these reforms have often cited the Finnish success story in an attempt to repudiate these policies.

Indeed, this is the message from Dr Pasi Sahlberg, a world-famous Finnish educationalist. In his view, the Global Education

Reform Movement (GERM), as he calls it, has infected the world with school accountability, market-based reforms, and more schoolwork. According to him, an important part of Finland's secret is that it has not followed those trends.<sup>18</sup>

And the suggested prescriptions for other countries follow these explanations. In a 2012 House of Commons lecture, Dr Sahlberg argued that the absence of standardisation, competition, and accountability are key Finnish lessons for English policymakers. He also stressed the importance of equity and the “less is more” approach.<sup>19</sup> The implication of Finland's success is therefore in many cases that other countries should be doing essentially the opposite of what they are doing currently.

***“It was certainly not the 1970s reforms that made Finnish schools successful”***

But, in fact, there is little basis for any of these arguments. “We have very little evidence regarding any of the claims that are made regarding Finnish PISA performance”, said Dr Tuomas Pekkarinen of the Finnish Government Institute for Economic Research. Instead, arguments regarding what makes Finland successful tend to rest on expert opinion.

Here it is important to note that observations of high- and low-performing countries' characteristics, which are often used as evidence by pundits and policymakers, are not particularly useful. This is because this “best practice” approach tells us nothing about causality. It is impossible to know whether the feature someone chooses to emphasise has spurred, been irrelevant for, or even hindered a country's success.<sup>20</sup>

To see why, consider a hypothetical country with an inherent advantage that is difficult to observe, for example unusually highly

motivated pupils. In this country, it takes less instructional time to achieve the same or even better results than in other countries. This, in turn, makes it look as if the country's pupils are doing well because they receive less instructional time – even if they actually would be doing better if they got more.

The same problem applies to the OECD's official PISA reports, which include one chapter that supposedly explains why certain countries do better than others. Yet this chapter is little more than a firework of high-level correlations between countries' characteristics and their results, which reduces its evidence value considerably.<sup>21</sup>

It might not be surprising, therefore, that the economics of education research, which takes stronger precautions to tease out causal relationships, does not support most of the highlighted policy explanations behind Finland's improvements.

Indeed, a recent study suggests that the comprehensive school reform, the supposed bedrock of Finland's performance, did not have more than a marginal direct positive impact on pupil achievement. It had no overall effects on arithmetic or logical reasoning test scores among male army conscripts, and only a tiny overall positive impact on verbal reasoning test scores.<sup>22</sup> "What we take away from that is that it was certainly not the 1970s reforms that made Finnish schools successful", Dr Pekkarinen highlighted.

Similarly, there is no evidence that league tables are negative for achievement in international tests. On the contrary, research suggests that league tables are one reason why England performs better in PISA than Wales, which abolished them in 2001.<sup>23</sup> Meanwhile, the evidence on the impact of school

competition on international test scores shows that the equivalents of free schools and academies in fact raise countries' performance in PISA overall.<sup>24</sup> In general, there is little rigorous research suggesting that GERM-inspired policies are bad for international test scores.<sup>25</sup>

The same point could be made regarding the idea that less work and more play are important factors behind Finland's success. For example, Professor Victor Lavy has shown that more instructional time raises PISA scores, an effect that increases with stronger school accountability.<sup>26</sup> Meanwhile, other researchers have found positive average effects of completing more homework in PISA and TIMSS.<sup>27</sup> In other words, the idea that less school- and homework contributed to Finland's peak pupil performance in international tests does not receive support in the literature.

### ***“Nothing happens overnight”***

Some might argue that the total impact of a country's policies cannot be uncovered in econometric research. This could be because the overall system – in which each separate part contributes to the whole – is difficult to measure and therefore analyse.

Even if we were to accept this argument, it does not change the overall impression regarding the common policy explanations. As noted, most people link the features of today's Finnish model to the country's PISA performance in the early-to-mid 2000s. Indeed, these features are also emphasised as important lessons in the OECD's own best practice report for US policymakers.<sup>28</sup>

Yet this is an ahistorical approach.<sup>29</sup> For example, Finland was not always so decentralised. On the contrary, up until the 1990s, its

education system was centralised and controlled by the state. The national curriculum was detailed and prescriptive, and all teachers had to undergo extensive in-service training, while further being required to record what was taught hour by hour in class diaries to ensure they delivered the mandatory content. There was also an active school inspectorate, and all textbooks had to be approved by the NBE.<sup>30</sup>

Meanwhile, until 1985, pupils' marks attained at the end of compulsory education were cohort-referenced, and school average marks were generally calibrated using sample-based standardised tests. While criterion-referenced assessment was implemented in 1985, the national curriculum continued to be prescriptive in terms of goals and content.<sup>31</sup>

Of course, this also hints at the fact that politicians and bureaucrats did not trust teachers in the old system. "In Finnish discourse, there was generally very little trust of teachers until the 1990s", education sociology professor Hannu Simola of the University of Helsinki argued.

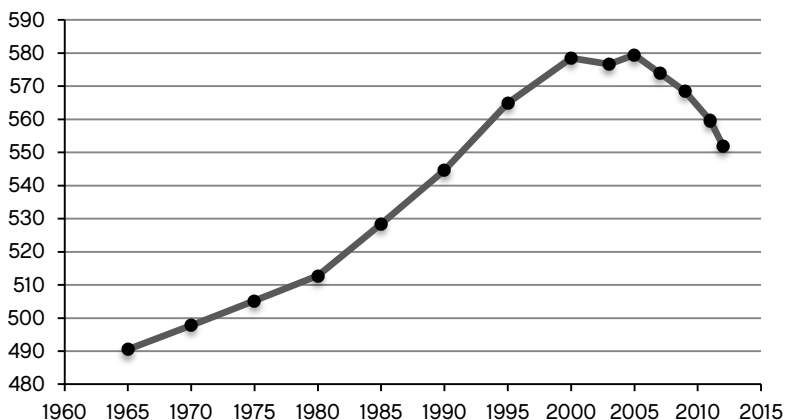
Indeed, in one study Professor Simola analysed thousands of pages of state documents between the 1860s and the early 1990s – and found only one instance since the implementation of the comprehensive school reform where teachers were not seen as roadblocks to the development of schooling.<sup>32</sup> This indicates that teachers were not trusted historically.

So the old system spelled "centralisation", partly to consolidate the comprehensive school reform that was being gradually rolled out in the 1970s. "There were doubts that everybody would accept the comprehensive system, and a suspicion whether it would be implemented across the country", Pär Stenbäck,

Minister of Education from 1979 to 1982, said. “When you implement a reform, it’s important to be consistent in the beginning.”

Decentralisation began in 1985, when local autonomy to some extent increased, and was completed in the early-to-mid 1990s, when the system was further liberalised, school autonomy significantly increased, and school inspections as well as the national textbook approval process abolished entirely.<sup>33</sup> Indeed, as Dr Sahlberg has put it: “In the early 1990s, the era of a trust-based school culture formally started in Finland.”<sup>34</sup>

**Chart 1: Finnish lower-secondary pupil performance in international assessments over time**



How, then, did Finland perform before and after decentralisation was completed? Until now it has been difficult to reliably compare countries’ performance over time. But Dr Nadir Altinok and colleagues have recently standardised lower-secondary school performance from micro data in all different types of international assessments in mathematics and science, while reading scores

to some extent also form part of the analysis, which makes it possible to compare overall results from 1965 onwards.<sup>35</sup>

And it appears as if Finland's rise accelerated primarily during the old centralised system. While results increased by approximately the equivalent of 23 TIMSS points between 1965 and 1980, they rose a further 32 points in the 1980s. They also increased a further 34 points in the 1990s, but started to level off in the latter part of the decade, and ultimately started to decline in the mid-2000s. In fact, given the age at test, the strongest gains took place when pupils mostly attended school before the old system was entirely abolished – and the peak occurs soon after it was entirely abolished.

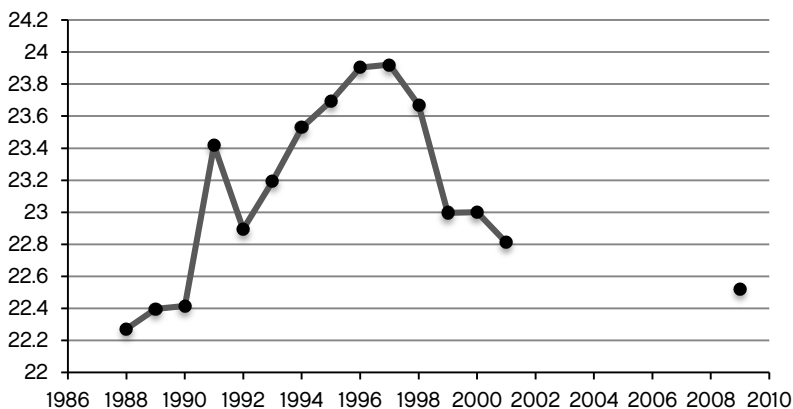
But the standardised data are not actually necessary to show that Finnish education improved before the current system was put in place. For example, between 1970 and 1983, Finland's science performance among ten-year old pupils increased by the equivalent of 48 to 59 TIMSS points, depending on the adjustment made, a larger gain than any other country enjoyed. In 1983, Finland consequently tied first place in science with Japan and South Korea. Among 14-year olds, Finland increased its science scores by the equivalent of 11 to 22 points between 1970 and 1983, placing the country only statistically significantly lower than Hungary, Japan, and the Netherlands among 26 education systems in total in the latter year.<sup>36</sup>

Similarly, in 1991, at the end of the centralised system, Finland's nine- and 14-year olds out-competed all other countries in reading.<sup>37</sup> In fact, Finnish pupils achieved top positions in a similar test already in 1970, ending up in third place in both age groups.<sup>38</sup> And in mathematics, Finland's lower-secondary scores increased more in absolute terms between the mid-1960s and the early 1980s

than in all other nine countries that participated on both occasions, apart from the Netherlands, although Finland only emerged as a top performer in the first PISA results in 2000.<sup>39</sup>

Other data support the general trajectory of rise and decline in international surveys. Average test scores of Finnish 18- to 20-year old male military conscripts increased by approximately the equivalent of 24 PISA points between 1988 and 1997, whereas they declined between 1997 and 2009 by about 21 PISA points.<sup>40</sup> In other words, performance improved while male youngsters attended primary- and lower-secondary school before the old system was entirely abolished and began falling when they became more exposed to the new one.

**Chart 2: Average male army test scores in Finland over time**



So the available evidence indicates that the Finnish education journey towards stardom began to accelerate during the old centralised system – which suggests that the reforms in the late 1980s and early 1990s were not the cause of the transformation.

Of course, it was always improbable that these reforms even had much to do with the first results in PISA, simply because it often



takes time before effects of such reforms are visible. “The results in the first PISA tests were more due to the old system and its traditions”, Professor Jari Lavonen at the University of Helsinki argued. “Nothing happens overnight.” Similarly, Sirkku Kupiainen, a researcher at the same university, said: “The results, as far as they were in fact due to the education system, had more to do with the decades-old centralised arrangements.”

This is also evidence to challenge the idea that changes in teacher education policy are linked to the transformation. Teacher education was reformed in the mid-to-late 1970s, when it was moved to universities from teacher colleges, which had mostly involved practical training for two to three years. In 1979, primary school teachers joined the master’s club. For secondary school teachers, who were already required to have master’s degrees in the subject they teach prior to the reform, the only difference was that they now had to do their (expanded) pedagogical studies and training in connection with the new university faculties.<sup>41</sup>

But none of these changes is likely to have been crucial for Finland’s improvements, which accelerated before any teacher candidates going through the new system had entered the labour market, let alone formed a substantial part of it. The in-service training may or may not have changed things, but this is separate from the pre-service master’s level, university-based training in pedagogical faculties, which internationally is upheld as a reason behind Finland’s improvements.

Indeed, given how long it takes to change the entire teacher force by letting candidates undergo the new system, it is similarly improbable that changes to teacher education are a good explanation for the first PISA results. “There’s been a lack of understanding of the timeline here”, education professor Jarkko

Hautamäki of the University of Helsinki argued. “[The changes in] teacher education can’t be an explanatory factor behind our performance in the early 2000s.” If anything, in fact, the retirement of teachers who were trained under the old regime coincides with the country’s performance stagnation and eventual decline.<sup>42</sup>

The historical trajectory therefore indicates that Finland’s journey from low performer to high performer was not caused by most of the education policies that have been emphasised during the PISA heydays. Since there are no test score data available prior to the 1960s, we cannot be sure exactly when the country’s rise began, but it accelerated primarily under the old centralised arrangements. While this is far from proof that the old system lies behind the improvement stage, it is enough to refute the idea that the current one does.

## 4. THE IRON CAGE OF HISTORY

So the true causes of Finland's rise in international tests are unlikely to be found by looking at the current education system's characteristics. Instead, the data presented so far indicate that we must go further back in time to find explanations. And this is where the story gets even more interesting.

***“It’s still a little heroic to become a teacher”***

Let us begin with the high status enjoyed by teachers, reflected both by today’s competitive entrance to teacher education and by general attitudes in the population. In a Nordic survey carried out in 2000, before the first PISA results were released, only 20 per cent of the Finnish population agreed that the teacher profession had low status, compared with 40 to 80 per cent in the other Nordic countries. Similarly, Finnish people also pronounced the highest trust for instruction in primary- and lower-secondary school.<sup>43</sup>

It is plausible that high teacher status may have induced more intelligent individuals to enter the teaching profession, which in turn would link it with higher performance. Indeed, new research shows that Finnish teachers’ numeracy and literacy scores are

higher than in any other country for which scores are available. These scores, in turn, are found to have a positive impact on pupil performance in PISA.<sup>44</sup> In other words, smarter teachers make smarter pupils.

But there are historical reasons for the high teacher status among the population, which have little to do with education policy. Indeed, Finnish teachers have always had high status. “For a long time, priests, doctors, and teachers were the three educated groups in the villages, and teachers have consequently always been appreciated”, Ms Kupiainen highlighted. Similarly, Mr Pitkälä argued: “Teachers had high societal status already in the 1930s and 1940s.” And according to a Finnish research team: “[The] teacher profession has always been respected in Finland”.<sup>45</sup>

Perhaps reflecting this status, Finland had the highest number of primary school teachers with an upper-secondary school diploma of all countries prior to World War II, according to history professor Aimo Halila.<sup>46</sup> So Finnish teachers appear to have been comparatively highly educated for quite some time.

In fact, the high educational levels and status have their roots in the construction of the nation *per se*. According to education professor Patrik Scheinin of the University of Helsinki, becoming a teacher had national romantic connotations in an early stage of the nation-building process, dating back to the 19th century. “And some of that shimmer is still there – it’s still a little heroic to become a teacher”, he said.

An important reason behind this heroic image was that teachers were part and parcel of the Fennoman nationalist movement’s strategy. Finland’s status as an autonomous region of the Russian Empire in the mid-19th century, with territorial continuity and

institutions inherited from Swedish rule from 1249 to 1809, produced a peculiar situation: it was essentially a state before it became a nation. And for the Swedish-speaking Fennoman élites, who believed in Hegel's idea of the nation state as the end goal of history, this was a problem that had to be solved before independence could be achieved.<sup>47</sup>

Indeed, one of the most important goals of the movement in the 19th century was to create an essentially non-existing Finnish-speaking national culture, and education was an important tool in this endeavour. But since Swedish was the language of politics and culture, of the élite and the educated, it was necessary to generate Finnish-speaking teachers who in turn could educate the rural masses and inculcate a national consciousness.<sup>48</sup> "Raising the educational level of the whole population was a means to strengthen, or even find, the identity of the nation", said Olli-Pekka Heinonen, Minister of Education from 1994 to 1999 and now State Secretary.<sup>49</sup>

This became even more important during the policy of Russification, in place almost continuously between 1899 and 1917, which aimed to limit Finland's autonomous status within the Russian Empire. "The school became a passive resistance movement against Russian influence", Mr Stenbäck argued. "The emphasis on education has formed part of a defence of national identity." This naturally also further increased the commitment to education once independence was achieved.

And if this was not enough, the tragic 1918 civil war between the socialist "Reds", supported by the Russian Soviet Republic, and the conservative "Whites", supported by the German Empire, further strengthened this commitment. In the three-month long war, 37,000 people were killed out of a three-million strong

population; the nationalist institution of schooling was seen as a way to ensure that such a tragedy would not tear apart the country ever again.<sup>50</sup>

It is therefore unsurprising that some historians consider the principal achievement of early Finnish schooling to be the ideological and patriotic spirit it helped instil in children.<sup>51</sup> But the Finns put a lot of faith in teachers specifically, not just via education in schools. This was necessary partly because schooling provision in pre-independence Finland was highly unequal between regions, and it was especially poor in the rural areas where the great majority of Finnish speakers lived. In the early 1900s, only 34 per cent of children in rural areas attended primary school, and just 25 per cent of the overall population were educated to this level.<sup>52</sup> In many other countries, compulsory state schooling was important in the nation-building processes, but this did not exist in Finland at the time. Whereas the Scandinavian countries all introduced compulsory primary education between 1814 and 1848, Finland was on par with Thailand in 1921. And even after the law was implemented, it took until the 1940s before it was fully functional and covered all children in the country.<sup>53</sup> Indeed, as late as 1937, 13 per cent of children still did not attend primary school.<sup>54</sup>

In this situation, it was crucial that teachers could reach people outside schools as well. Consequently, these were not just seen as children's educators, but as enlighteners of the entire Finnish nation. As highlighted in work by education professor Hannele Niemi: "Teachers were called 'candles of the nation' and very often they educated whole villages and people in local regions by organizing choirs, theatre performances and parental education in addition to their normal school work."<sup>55</sup> They also initiated and participated in political and civic organisations in

their communities.<sup>56</sup> In other words, teachers *per se* played an important role in the Finnish nationalist project, inside and outside schools, both prior and after independence.

Unsurprisingly, the nationalist role of teachers was further fortified by Finland's efforts during World War II. In the Finnish Winter War of 1939 to 1940, the USSR was fended off only after the cessation of 11 per cent of Finland's territory and the evacuation of 12 per cent of its population from those areas. This was in turn the prelude to the Continuation War from 1941 to 1944, in which Finland both recaptured the lost territories and captured East Karelia from the Soviets, in what essentially was a joint operation with Germany as part of Operation Barbarossa, which eventually made the UK declare war on Finland. After Soviet advancements, the war was concluded in September 1944 with the Moscow Armistice, which not only reversed Finland's gains but also handed over more of its territory to the USSR. Moreover, the armistice forced the Finns to expel the Germans from their country. Cooperation therefore turned into conflict and the seven-month long Lapland War, which led to Germany's ousting in April 1945.

According to Finnish researchers, the immense external threat posed by the USSR during the war years ensured that the "nationalist educational spirit" in teacher training colleges was strengthened further: "Remarkably evinced by the archives and by the former student teachers' practically-oriented narratives, the education covered student teachers' mind and soul, physical shape, and leisure activities which all, because of the wars, were linked to the nationalist goals set for the Finnish educational system and teacher training."<sup>57</sup> So the wars appear to have increased the already existing nationalist connotations of teacher education further.

The Cold War also probably had a unique influence on the education system. After World War II, Finland had to placate its historical antagonist by remaining independent and having unusually strong relations with the USSR; “Finlandisation” even became an international term describing a powerful country’s ability to influence a smaller country’s policies.<sup>58</sup> This was certainly the case in education. In fact, Finland went as far as to allow the USSR veto power over the learning material in schools and teacher training institutions. There was a commission set up to go through textbooks and remove or revise those that did not meet the Soviet apparatchiks’ taste. In this new, delicate situation, patriotic education gave way to civic education, with the goal to produce nationalist solidarity to rebuild the country. This also meant that teachers’ jobs continued to involve more than school teaching; requirements stipulated that they also provided activities in their localities to aid the socialisation process.<sup>59</sup> In a historical perspective, therefore, teachers have been the Finnish nation’s backbone and protector.

Betting on teachers as the vanguard of the nation meant that they had to be nothing but extraordinary, whatever the costs. Indeed, Finland’s teacher education policy in the early-to-mid 20th century aimed to produce exemplary citizens as role models who could fulfil their nationalist mission, relying heavily on Herbart-Zillerism as the pedagogical basis. Borrowed from Germany in the 1800s by Uno Cygnaeus, the Finnish education system’s forefather, and advanced by Mikael Soinen, education professor and Minister of Education from 1919 to 1922, the philosophy emphasised the development of character in a strict top-down fashion, which fitted well with the needs of the Finnish nationalists.<sup>60</sup> And in order to produce



model citizens fit for purpose, they needed strict entrance requirements and codes of conduct for those who were chosen for the coveted places in teacher training:

Individuals seeking to study at the teacher training colleges in Finland participated in an entrance test that lasted several days. Only the finest candidates were selected as prospective teachers. The test included medical examinations, interviews and exams on teaching... After acceptance into the teaching college, students were allowed to carry on with their studies only if they maintained successful study habits and acted irreproachably. Students' behaviour was carefully monitored, not only at the college but also during free time. For example, going to a dance club or smoking was strongly forbidden for these prospective model citizens. Likewise, students were expected to adopt discreet clothing styles and follow strict dating rules. Anyone not meeting those requirements was expelled.<sup>61</sup>

While many of these draconian rules were gradually relaxed following World War II, some remained in force for decades afterwards.<sup>62</sup> In essence, therefore, Finnish nationalism helped mobilise a well-disciplined army of educators, who in turn played a crucial role for the success of the nation-building project. It is probably a not unimportant detail that the teachers dominating the labour force when Finland's performance in international tests accelerated were educated under this strict regime.

While it is possible that the elevation of all teacher training to university and master's level has contributed on the margin – or helped to keep the profession's status high during societal and

educational changes – teachers were generally respected, trusted, and enjoyed high status well before then. This is due to historical processes that have little to do with the form of their current education.

***“The teacher profession may not be as popular among the Finland Swedes”***

Further supporting this idea is the natural experiment provided by the Swedish-speaking minority in Finland, which has declined from about 14 per cent of the population in 1880 to five per cent today.<sup>63</sup> The minority, a remnant from the Swedish Empire, made up the country’s élite in 19th century Finland and still does to a large extent.<sup>64</sup> For example, despite its small share of the population, 24 per cent of board members at the 50 largest companies listed on the Helsinki Stock Exchange were Swedish speaking in 2011.<sup>65</sup> Also, in 2000, the average investment wealth among Finland Swedes was three times higher, and the investor to inhabitant ratio was 35 per cent higher, than among the Finnish-speaking population.<sup>66</sup> Unsurprisingly, therefore, the former group’s overall wealth levels have also been substantially higher.<sup>67</sup> The Finland Swedes tend to be more highly educated, while living and working longer than ethnic Finns on average. The former are also generally healthier and have lower divorce and unemployment rates.<sup>68</sup>

While Finland Swedes were crucial for the rise of the Fennomans, others created the Svecoman counter-movement, which promoted the idea of a country containing two nationalities with distinct cultures and languages. The strife between the movements’ successors continued after independence, despite the confirmation of Swedish and Finnish as equal national languages, and the affirmation of the nationalities’ equal cultural

and social rights, in the Constitution of 1919 and the Language Act of 1922.<sup>69</sup> This also ensured a separate Swedish-speaking education system and that both Swedish and Finnish are compulsory school subjects in Finland to this day. Apart from these victories, the Svecomans and their heirs' efforts produced a more unified Finland-Swedish identity across rural and urban areas, as well as the Swedish People's Party of Finland, which today carries about five per cent of the national vote and regularly participates in coalition governments.

Unlike the Finnish nationalists, the Finland Swedes did not need to produce a new nation and culture via education, but could instead lean heavily on their heritage from Sweden, one of the longest-standing nations in history. Indeed, Axel Lille, leading Svecoman and the first chairman of the Swedish People's Party of Finland, argued: "The Swedish nationality has the privilege to own an older and higher standing culture and via its language stand in immediate spiritual connection with the entire Scandinavian north".<sup>70</sup> The Svecomans were well aware of the fact that their heritage from an established identity was an advantage.

The mission of the minority was instead unsurprisingly focused on producing a political framework that could preserve its culture and language, in the face of a strong Finnish national movement. Of course, educational institutions have played an important role for the Finland Swedes, too; they have had a separate schooling system precisely to protect their culture and language.<sup>71</sup> But protecting an old culture among pupils is different from creating a new one among both pupils and parents. In contrast to the proactive educational nationalism of the Fennomans and their successors, the Svecoman countermovement and its heirs were defensive and

conservative. It is not expected that teachers would have the same critical role, inside and outside schools, in this type of movement – which in turn leads to the prediction of lower teacher status.

Of course, cultural spill-over between the nationalities should be anticipated, especially since Swedish speakers were crucial also for the creation of the Finnish nation and because inter-marriages increased throughout the past century.<sup>72</sup> Furthermore, both groups have been unified by immense external challenges such as the threat of Russian influence, World War II, and the Cold War, which are likely to have strengthened the role of teachers also in Swedish Finland.

Indeed, it is not surprising that Finland's participation in World War II and the post-war relations with the USSR, unique among genuinely democratic countries, effectively put on hold any internal strife between Finnish nationalists and Finland Swedes, while laying the ground for consensus in Finnish politics and education policy.<sup>73</sup> It took until the post-Cold War period for the strife to re-emerge, exemplified by the rise of the Finns Party, formerly known as the True Finns, a populist political party that among other things wants to remove Swedish as a compulsory subject in Finnish-speaking schools.<sup>74</sup> The strife was dormant, but it did not disappear entirely.

And, similarly, it is not clear that the common causes and mixing of the two nationalities have been enough to eradicate potential cultural differences in terms of attitudes toward the teaching profession.<sup>75</sup> Indeed, the data tell another story. From 2000 to 2009, 40 per cent of applicants were accepted to Swedish-speaking teacher education on average, considerably higher than the 10 per cent of applicants who were accepted to Finnish-

speaking teacher education in the same period.<sup>76</sup> In other words, the Finnish education system appears to have combined strong competition for entrance to teacher education among ethnic Finns with lower competition for entrance to teacher education among Finland Swedes.<sup>77</sup>

This is in turn reflected in the PISA index of qualified teacher shortage, which is based on headteachers' perceptions of potential factors hindering instruction. Indeed, Swedish-speaking schools have on average scored significantly worse than their Finnish-speaking counterparts in this respect throughout the 2000s.<sup>78</sup> Furthermore, an analysis of PISA 2009 data displayed that the perception of qualified teacher shortage exists across all Swedish-speaking areas in the country.<sup>79</sup>

All this is indirect evidence that the teacher profession has been viewed less favourably in the Swedish-speaking community in general. "The teacher profession may not be as popular among the Finland Swedes", NBE Director General Pitkälä said. The difference was also highlighted by the headteacher of a Swedish-speaking school. "Teaching is to some extent more of a profession of last resort among Finland Swedes, compared with the Finnish-speaking population", he argued. Similarly, Corinna Tammenmaa, former chairman of the central parental organisation in Swedish Finland, has claimed: "There's more status in the Finnish-speaking teacher profession".<sup>80</sup> Overall, therefore, the stature of teaching appears to have been lower in Swedish Finland than in Finnish Finland.<sup>81</sup>

This may at least be a part explanation for why pupils in Swedish-speaking schools have historically performed worse than those in Finnish-speaking schools in both domestic and international tests, despite the fact that the former on average come from more privileged backgrounds.

For example, in PISA 2009, in which the minority was oversampled to increase reliability in the comparisons, Swedish-speaking schools performed on average 14 points lower in mathematical literacy, 27 points lower in reading literacy, and 28 points lower in scientific literacy. Since at the same time Finland-Swedish pupils on average scored higher on the index of economic, social, and cultural status, a broad pupil background measure, these differences appear significant.<sup>82</sup>

Interestingly, Finnish-speaking pupils have declined more than their Swedish-speaking compatriots since then, closing the gap in mathematical literacy in PISA 2012 and decreasing it by 37 per cent in reading literacy. In scientific literacy, however, the difference remained the same.<sup>83</sup> National evaluations also display that the gap in mathematics disappeared around the same time, while Finnish-speaking pupils still performed better in reading, natural sciences, civics, and history.<sup>84</sup> Again, however, the general difference in pupil background might predict that Finland Swedes should perform better.<sup>85</sup>

So the different attitude towards teachers, reflected in the less competitive teacher education, is one important candidate for why Finland-Swedish pupils have performed worse than Finnish-speaking pupils.<sup>86</sup> It would not be fair to characterise teacher status among the Finland-Swedish population as low, but it appears to be lower than among the Finnish-speaking population. This is consistent with the historical differences between the two groups in terms of the importance of teachers for nation-building purposes.

***Sisu: “determination”, “inner strength”, “perseverance” during times of adversity***

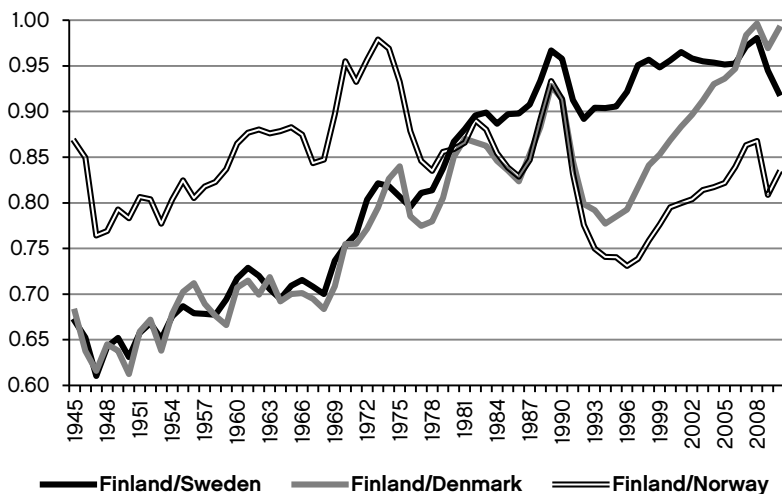
While historical and political factors are likely to have laid the groundwork for high educational achievement, they could only do so much in the economic context in which Finland was situated. Indeed, as highlighted by Professors Hannu Simola and Risto Rinne, the country's industrialisation and subsequent rollout of mass education occurred comparatively late. In 1945, almost 60 per cent of the Finnish labour force worked in agriculture and forestry; the same figure in Denmark, Norway, and Sweden was barely 30 per cent.<sup>87</sup>

These figures hint at the fact that Finland has historically been poorer than the Scandinavian countries. Indeed, in 1950, Finland's per capita GDP was 80 per cent of Norway's, and only 60 per cent of Sweden's and Denmark's. In the mid-20th century, therefore, Finland was the poor man of the region with a smaller industrial and service sector than in the other countries.<sup>88</sup>

Yet, once started, Finland's economic transformation was rapid. Mechanisation of agriculture and forestry in the post-war period eliminated jobs in rural regions and led to an urbanisation wave, known as the Great Migration. Reaching its peak in the 1960s and early 1970s, this massive relocation resulted in seismic demographic shifts from rural areas to the urban south.<sup>89</sup> A simultaneous increase in labour emigration to Sweden also helped to absorb migration pressures in the peripheral regions.<sup>90</sup> Consequently, agricultural employment plummeted. While it took Norway and Sweden about 80 and 50 years respectively to reduce the shares of their agrarian labour forces from 50 per cent to 15 per cent, it took Finland only 20.<sup>91</sup>

This is also demonstrated by Finland's economic growth path. Catch-up with the Scandinavian countries began slowly after World War II, but then surged in the mid-to-late 1960s, in conjunction with the intensification of the Great Migration. While the economies were close to convergence in the late 1980s, the 1990s economic crisis again led to divergence since it hit Finland the hardest. In the 1990s and early 2000s, however, the country was again catching up with its neighbours and reached the level of Denmark and Sweden right before the recent global financial turnaround. Finland had in fact almost closed the gap with Norway already by 1973, but its catch-up was disrupted due to the latter's North Sea oil discoveries, after which divergence and convergence continued over the following decades.

**Chart 3: Relative GDP per capita in Finland compared to the Scandinavian countries**



The creation of the welfare state in Finland is also a more recent phenomenon than in the Scandinavian countries. Between 1955 and 1975, public transfers as a share of GDP increased from six to seven per cent to 14 to 15 per cent in the



Scandinavian countries, whereas it only increased from four per cent to 10 per cent in Finland. By 1990, the figure had increased to 18 to 20 per cent in Scandinavia and 16 per cent in Finland. Similarly, on an index regarding benefit generosity, Finland achieved 65 to 74 per cent of the Scandinavian countries' levels in 1980. In 1990, the figure was 81 to 95 per cent. The trajectory of Finland's welfare state therefore also lagged that of Scandinavia.<sup>92</sup>

To a certain extent, Finland's improvements in international education tests are therefore likely to reflect the country's rapid economic modernisation. Initially, rising income tends to be accompanied by a social attitude of tenacity.<sup>93</sup> In the case of Finland, a history of occupation, war, and poverty had already given rise to a unique word for such attitudes: *sisu*. The word does not properly translate into other languages, but it roughly means "determination", "inner strength", "resoluteness", or "perseverance" during times of adversity.<sup>94</sup> In the late 19th and early 20th centuries, when the modern definition of the word was coined amidst nationalist fervour, it came to capture an important part of the Finnish character, further increasing in importance during World War II.<sup>95</sup>

Scandinavia has historically also been characterised by a strong work ethic and norms of responsibility.<sup>96</sup> Yet the cultural significance of *sisu* appears to stand out in this respect, and this is also supported by data. For example, in 2000, the share of people who emphasised that "determination, perseverance" is an important quality for children to learn at home amounted to 51 per cent in Finland, compared with between 29 to 33 per cent in the Scandinavian countries. In fact, Finland's figure increased by 12 percentage points (or by 31 per cent) during the 1990s, making it the only Nordic country in which the share

rose in this period.<sup>97</sup> The special notion of *sisu* in combination with the fact that Finland was hit hardest by the economic crisis of the 1990s is a plausible mechanism behind this change.

### ***Richer – and more educated***

The late economic catch-up and development of a welfare state, as well as the more severe economic turndown in the 1990s, therefore meant that determinative social norms remained stronger for longer in Finland compared with Scandinavia. Indeed, there is evidence indicating that the likelihood of parents instilling such norms in their children follows a hump-shaped curve as a function of income and government welfare spending, as it first increases and later decreases.<sup>98</sup> Cultural transmission of norms from parents to children suggests that behavioural effects of changing economic and institutional factors operate with a lag.<sup>99</sup>

Assuming that changing social norms are also reflected in levels of effort in the education system, this results in the prediction of an inverted U-curve for educational achievement as a function of wealth and welfare. “When nations rise economically, appreciation for education tends to rise as well, but later it decreases”, Ms Kupiainen argued. This is probably one reason behind the on-going convergence between low-performing (developing) and high-performing (developed) countries in international test performance.<sup>100</sup> Part of Finland’s rise may therefore be described as a “wealth effect” that catapulted the country upwards in international tests in the late 20th century, seemingly from high latent performance levels that were probably at least partly due to the historical factors discussed earlier.

Naturally, Finland's different economic trajectory is also reflected in levels of mass education. Indeed, the number of people with secondary education started to increase only around 1950, when just 25 per cent of pupils continued on after primary school and fewer than 10 per cent entered upper-secondary school. And it took until the 1960s before tertiary education began expanding properly, with enrolment trebling over the decade from low levels.<sup>101</sup>

All this meant that Finland until quite recently lagged her Scandinavian neighbours in terms of mass education levels. In 2001, only 51 per cent of Finnish 55 to 64 year olds had completed at least upper-secondary education. This was lower than in the Scandinavian countries, where the figures were 65 to 72 per cent.<sup>102</sup>

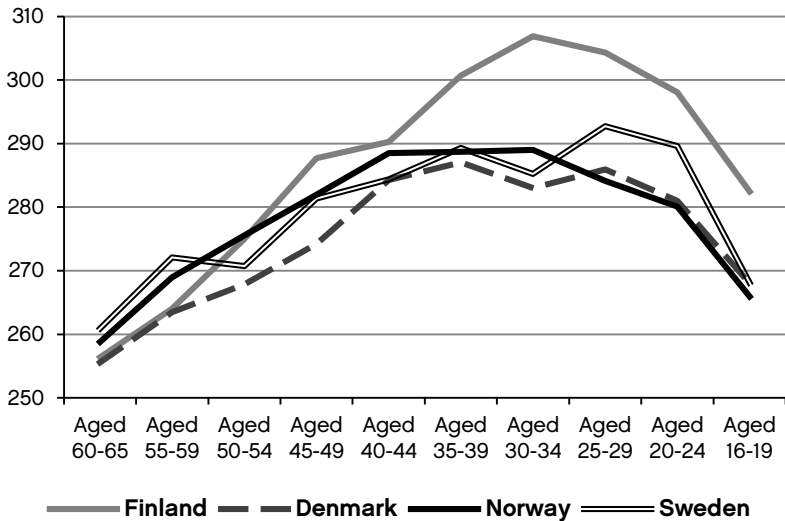
Most important, Finland clearly stands out in terms of the inter-generational changes in this respect. In 2001, 70 per cent of 45 to 54 year olds had completed upper-secondary education. This was still eight to 12 percentage points less than among the Scandinavian countries, but only half of the difference compared with the earlier generation. And Finland continued to accelerate its educational expansion. Indeed, among 35 to 44 year olds, the country had caught up with its Scandinavian neighbours by 2001.<sup>103</sup>

It would be surprising if Finland's rise in educational achievement had nothing to do with the fact that parents became increasingly educated as the years went by. "The parents of the PISA generation are those who very much profited from the educational expansion", said Ms Kupiainen. "This is probably a factor that explains the results." The positive association between increases in countries' average years of maternal education and improvements in international tests over time is consistent with this argument.<sup>104</sup> In other words, Finland's rise in international tests was probably also

to a certain extent due to catch-up from low parental education levels, again seemingly from a high latent level of performance.

There is some evidence to suggest that these catch-up effects in wealth and mass educational levels are part of the story. In PIAAC 2012, an international assessment in numeracy and literacy focusing on the entire population, average performance in Finland follows that of the Scandinavian countries among the older cohorts.<sup>105</sup> Indeed, older Finns performed surprisingly similarly to their neighbours, despite the fact that they were less educated on average. Yet Finnish performance peaks among people born between 1978 and 1987, which is different from the Scandinavian countries where inter-cohort gains began flattening out among people born a decade or two earlier.

**Chart 4: Average PIAAC 2012 scores across cohorts in Finland and Scandinavia**



So Finland's late catch-up in terms of economic output and mass education levels, compared with the Scandinavian

countries, is followed by the late inter-generational peak in PIAAC scores – but with a lag of a couple of decades. And this is precisely what is to be expected if the wealth effect and the following expansion of mass education partly explain the improvements.

The wealth effect hypothesis receives further support in the form of differential trends among the Scandinavian countries in conjunction with the economic crisis of the early 1990s. Sweden experienced the deepest turndown after Finland, and suddenly saw an inter-generational improvement in achievement among pupils born in the mid-1980s, while Denmark experienced a lighter economic fall and only saw a slight uptick. However, Norway, in which oil revenues cushioned the economic downturn, saw its scores falling continuously across generations.

The differential trends in performance are also predicted by the trajectories of benefit generosity. Sweden experienced the strongest retrenchment in this respect between its peak in the 1980s and the early 2000s, twice as large as in Denmark (and 87 per cent larger than in Finland), in absolute terms, while there was no change in Norway.<sup>106</sup> These data support the notion that educational cultures that have been diluted by the perception that “prosperity is forever” may be awoken by deteriorating economic circumstances and altered welfare state arrangements.

In terms of its modernisation trajectory, therefore, Finland appears more similar to some of the East Asian economies than her Nordic neighbours – it is not a coincidence that the country was called the “Japan of the North” in the 1980s. And it is likely that the similarities are part of the explanation behind its improving educational achievement levels.

***“Finnish people are quite silent. They prefer doing rather than talking”***

Finland's historically late, but rapid, industrialisation and economic catch-up also prompted a special development within Finnish society, which probably further aided the retention of the social attitude for tenacity. As Professor Simola argued in 2005: “The transition from an agricultural to an industrial society, and further to a post-industrial society, took place within such a short period that one could almost say these societies currently co-exist in a very special way.”<sup>107</sup> Again, this is more similar to the late industrialisers of East Asia than to Finland's Scandinavian neighbours.

This special development appears to have affected the outlook of the Finnish people further – which in turn is also likely to have underpinned the education system. “Finland has been, and maybe still is, more Tsarist than other Nordic countries”, said Ms Kupiainen. Similarly, Professor Simola has written about an “authoritarian, obedient, and collectivist mentality” that has traditionally dominated Finnish culture.<sup>108</sup> “We do have an eastern flavour”, he claimed. Does this mean there have been cultural similarities between Finland and East Asia affecting schooling outcomes? “Exactly so”, he said.

This is also displayed by the fact that Finland has a more introverted culture compared with its Scandinavian neighbours. “Finnish people are quite silent”, Professor Lavonen highlighted. “They prefer doing rather than talking.” Indeed, a study analysing differences in extraversion across countries a couple of decades ago found Finns to score the lowest in Europe in this respect, and similar to Japan, South Korea, and Hong Kong. On the other hand, Norway and Iceland, the only other Nordic countries in the study, scored among the highest in Europe.<sup>109</sup> Other research analysing

videotaped mother-child interactions in the early 2000s found that Finns (and Estonians) were less talkative than Swedes.<sup>110</sup> So perhaps it was not just rapid economic growth that made Finland earn the epithet “Japan of the North”.

And perhaps the persistence of this special mentality has been aided by the Finnish population’s cultural homogeneity, which it also shares with several East Asian countries. Indeed, Finland had little immigration until the late 20th century. In 1990, first and second generation immigrants composed 0.8 per cent of the population; in 2000, the figure was still just two per cent.<sup>111</sup> Of course, since immigrant pupils generally perform worse than natives in international tests in most countries – by 34 points on average in mathematical literacy in OECD countries PISA 2012 – the homogeneous population is likely to be an indirect factor facilitating its rise more generally.<sup>112</sup> In addition, however, by decreasing outside cultural influences, this homogeneity has probably also aided the preservation of a special Finnish mentality in the face of other rapid societal transformations.

This mentality has also been reflected in low levels of pupil influence regarding how Finnish schools are run. In fact, all school democracy experiments were halted with the comprehensive school reform. These experiments had “scarred” the country’s teachers, who fiercely resisted any move in that direction. Despite the newfound autonomy in the early-to-mid 1990s, it is therefore not surprising that little movement towards school democracy occurred and Finnish schools remained rather hierarchical institutions in a comparative perspective.<sup>113</sup>

Indeed, in the 2009 International Civic and Citizenship Study, only 15 per cent of Finnish 14-year old pupils reported that they take part in decision-making about how their schools are run, the

lowest figure among all 38 participating countries. And it was considerably lower than in Western European nations. For example, the equivalent figures were 44 to 58 per cent in the Scandinavian countries and 55 per cent in England.<sup>114</sup> Supporting these data, a UNICEF report highlighted:

Finnish elementary schools have problems especially with regard to the right to participate. Children's voices are seldom heard when, for example, contents of education or methods are discussed at schools. Children also play no part in deciding on schedules, length of schooldays and formation of school year periods or issues related to the equipment at school. This may be the reason for the emotional gap which exists between the adults and children at Finnish elementary schools, which is often exhibited as an extremely negative attitude towards teachers.<sup>115</sup>

However, the negative attitudes are also likely due to the fact that the authoritarian mentality is reflected in teacher-pupil relationships *per se*. Interviews by a research team in the late 1990s indicated that whereas Scandinavian teachers commonly emphasised intimate relationships with pupils and parents, Finnish teachers instead highlighted their positions as adult role models and the keepers of classroom order.<sup>116</sup> In short, they saw themselves as authorities to a greater extent than their colleagues in neighbouring countries, in line with their historic nationalist mission and Herbart-Zillerist educational philosophy.

And many practitioners in Helsinki agreed that this is the right way to conduct business also today. A deputy headteacher, who had worked in Sweden, said: "In Sweden, teachers tend to be much closer to pupils than in Finland. We're more careful about



maintaining a certain distance.” The headteacher of the school added: “It’s not the teacher’s duty to feel sorry for pupils.”

In such a school environment, perhaps it is not surprising that Finnish-speaking lower-secondary pupils in 1970, when the country’s results were improving, expressed a remarkable feeling of inferiority toward their teachers. Indeed, fully 73 per cent of pupils reported that they “felt little” before the teacher. At the time of the transformation of the Finnish education system, pupils therefore appear to have viewed their instructors as authorities. Similarly, in 1991, only 53 per cent of pupils reported that teachers listened to what they had to say.<sup>117</sup> In fact, according to Finnish researchers: “Learning and teaching obedience and inferiority have been a central feature of the Finnish school system and teacher training during its whole history.”<sup>118</sup>

And this is not surprising given the original ambitions of the system’s forefather back in the 1800s. In line with Herbart-Zillerist educational philosophy, the main objective was to instil in children a strong work ethic and an obedient character: “[Uno Cygnaeus’s] goal was to develop the whole personality of the child. According to his educational programme, the primary task of [schools] was to educate children to work hard and seriously, then to follow strict discipline and behave obediently.”<sup>119</sup> These ideas clearly came to reflect pupil-teacher relationships and the overall educational culture for a long time.

So historically, Finnish schools have been comparatively hierarchical institutions, reflecting the culture of obedience and authority that for long persisted in Finnish society to a greater extent than in other Nordic countries – in spite of the radical transformation that occurred in outside society. Rapid

modernisation and increasing educational levels were thereby combined with retaining authority in culture and education.

This special combination may also be part of the explanation of why Finland's educational performance accelerated upwards. Indeed, a growing body of American research has found positive effects on test scores of the so-called "No Excuse" paradigm, an educational model that is predicated on an authoritative culture.<sup>120</sup> Increasingly educated parents who retain both *sisu* and an authoritarian mentality are likely to reinforce this type of school culture.

Intriguingly, there appear to be some differences between Finnish- and Swedish-speaking schools in this respect, which could also help explain their differential performances. According to a teacher in a Swedish-speaking school: "Finnish schools are a bit more conservative and authoritative in their approach. Everything is more like it was when we went to school in the 1970s in terms of authority and tradition." Her colleagues agreed. "The Finnish-speaking schools are more bureaucratic – we have a softer approach", another teacher, who had taught in such a school before her current position, highlighted.

If this is true, we should also expect different school climates. Indeed, pupils in Finland-Swedish schools have reported better pupil-teacher relations than pupils in Finnish-speaking schools. Similarly, Swedish-speaking schools score on a par with Scandinavian ones in terms of pupil happiness, considerably higher than the Finnish-speaking schools – which have some of the lowest levels in the world.<sup>121</sup> Data from the early 1990s also reveal that pupils in Finland-Swedish schools had better relations with their teachers than pupils in Finnish-speaking schools and that the former enjoyed going to school more than the latter,

suggesting these differences are not a new phenomenon.<sup>122</sup> It is therefore not surprising that Finnish researchers agree that Swedish- and Finnish-speaking schools have had different climates:

In all, the findings suggest that the quality of school life in the Swedish-speaking schools in Finland is more positive than in the Finnish-speaking schools. The culture of the Swedish-speaking schools seems to have many characteristics similar to the other Nordic schools. Particularly, relations between teachers and students proved warmer and more trustful in the Swedish-speaking school system in the same manner as in the Nordic schools.<sup>123</sup>

This supports the idea that there are cultural differences between Finland-Swedish and Finnish-speaking schools, which may have affected performance. The latter appear to have had a more authoritative culture than the former. And, again, this makes sense given the differential needs of the minority countermovement, which responded to the rise of the Finnish nation and the latter's emphasis on teachers as its creator and carrier.

***“Whole classes following line by line what is written in the textbook, at a pace determined by the teacher. Rows and rows of children all doing the same thing in the same way...”***

The social, historical, and cultural forces discussed above are further inextricably linked to a feature rarely highlighted in the international discussion: just as Finnish school culture has generally been hierarchical, Finnish teaching has been traditional.

The definition of “traditional” used here is that of the old-school notion of a more “behaviourist” learning environment,

characterised by dominance of authoritative teachers in the classroom. Regardless of the specific activities in which pupils engage, the key characteristic of this educational style is that the mode of instruction is teacher driven, which is in line with Herbart-Zillerist educational philosophy.<sup>124</sup>

In contrast, progressive teaching styles are characterised by more pupil-driven instruction, including individual and group work. Such methods are related to various forms of “constructivism” which, in simplified terms, holds that knowledge is constructed by pupils, not transmitted down from teachers. This theory therefore stipulates that pupils must engage in more self-directed learning – and the teacher, instead of being the “sage on the stage”, should become a “guide on the side”.<sup>125</sup>

Ideas of pupil-led teaching methods have followed a cyclical historical development, dating back to Jean-Jacques Rousseau.<sup>126</sup> They come and go with different names but are essentially unchanged in practice – with examples including “discovery-based learning”, “open investigation”, and “enquiry-oriented teaching”.

“They’re basically the same thing, at least how teachers implement them in the classroom. Pupils do more things by themselves”, Professor Lavonen said. He believes this is a flawed interpretation of constructivism, yet it is what often is realised in classrooms.

In Finland, the evidence suggests that more traditional teaching methods continued to dominate classrooms throughout the 20th century. In the mid-to-late 1980s, researchers analysed videotaped lesson material, and concluded that the classroom dynamic in the country did not appear to have changed much in

the previous 50 years, with teachers talking more than two-thirds of the time and pupils giving short answers to teachers' questions.<sup>127</sup> The harsh verdict was that Finnish classrooms were "wasteland[s] not only of intelligence but also of emotions".<sup>128</sup> Regardless, the sage on the stage appeared to have been alive and kicking in 1980s Finland.

And her domination seemed to continue. In 1996, four years before the first PISA study, a British research group from the University of East Anglia visited 50 Finnish compulsory schools and reported:

Whole classes following line by line what is written in the textbook, at a pace determined by the teacher. Rows and rows of children all doing the same thing in the same way whether it be art, mathematics or geography. We have moved from school to school and seen almost identical lessons, you could have swapped the teachers over and the children would never have noticed the difference. ... [W]e did not see much evidence of, for example, student-centred learning or independent learning.<sup>129</sup>

While selected in part because of their innovative spirit, these schools were far from innovative in terms of what was going on in the classroom. On the contrary, they appeared incredibly uniform to the outside observers.

Fast forward to 2003, when a Finnish research team asked approximately 3,600 15-year old pupils in 61 randomly selected schools about the teaching methods used in science classrooms. They found that "science lessons seem to be rather traditional.

Direct teaching, solving basic problems, reading textbooks, and conducting practical work are often used".<sup>130</sup>

Similarly, in the mid-2000s, a researcher videotaped mathematics lessons with ten different randomly selected teachers in Finland, reporting that "Finnish teachers are rather traditional and pedagogically conservative in the classroom ... [and] conduct their classes in fairly uniform ways".<sup>131</sup> Another investigation of four Finnish mathematics teachers in the early-to-mid 2000s also found evidence that they tended to rely on teacher-centred methods.<sup>132</sup> Given the methodology, and the small sample sizes, these findings can hardly be generalised, but they provide supportive evidence of earlier accounts.

Interestingly, while the general climate seems to have been warmer in Swedish-speaking schools, the traditional methods appear to have dominated these for long, too. "Historically, instruction has been very teacher led, both in Swedish- and Finnish-speaking schools", a headteacher at a Finland-Swedish school argued. Indeed, a survey of mathematics teachers in Swedish-speaking lower-secondary schools in the late 1990s found that 85 per cent of them often used teacher-centred methods, compared with just 25 per cent who often used problem solving in small groups.<sup>133</sup> So there is suggestive evidence that also Finland-Swedish schools were pedagogically conservative in the late 1990s. At least in this sense, Herbart-Zillerism apparently left a lasting mark also in the minority's schools.

In other words, Finnish pedagogical methods remained traditional in approach throughout the era of educational improvements, in sharp contrast to the constructivist and progressive ideal. They also appear to have been uniform across teachers and schools – irrespective of the famous *de jure*

autonomy they have enjoyed. Just as in the case of school democracy, the move towards freedom and autonomy in the 1990s did not immediately lead to the pedagogical diversity one might have expected, given current international accounts of the Finnish model.

But maybe this is not that surprising given the central control that existed prior to the early 1990s, not to mention the strict rules of teacher education in place up until the mid-to-late 20th century – it is as if the shadow of the old centralised system, and of Herbart-Zillerist pedagogy, continued to affect the state of affairs. “It’s an internalised form of centralisation”, Ms Kupiainen argued.

Why is this important? Because the research evidence suggests that the traditional methods used in Finland during its rise in international surveys are good for producing high test scores. This further supports the idea that the country’s preservation of a culture of authority, while going through rapid societal changes, is a part explanation for the country’s improving performance during the 20th century.

For example, in education professor John Hattie’s analysis of hundreds of meta-studies of effective practices, active, guided instruction is shown to be more than three times as effective as facilitating, unguided teaching that is associated with constructivist practices.<sup>134</sup> While the methodology in many of the included studies might be questionable, relatively strong econometric research has recently backed them up, finding that structured teaching is preferable for raising test scores.<sup>135</sup>

The evidence from Quebec is perhaps the most conspicuous. In the early 2000s, the Canadian province embarked on a universal reform to introduce constructivist, pupil-driven teaching methods

*en masse*. The results were disastrous. Economist Catherine Haeck and colleagues evaluated the reform and found that it decreased mathematics results among low-, middle-, and high-achieving pupils considerably within only a few years time, in both domestic and international tests, and that these negative effects increased the longer pupils were exposed to the methods. Moreover, the reform increased hyperactivity and anxiety among pupils, while at best having no effects in other behavioural domains.<sup>136</sup>

So the characterisation of Finnish classrooms as emotional and intellectual “wastelands” in the late 1980s seems unfair; authoritative teaching methods appear preferable, at least for succeeding in the traditional goal of raising cognitive achievement.

And interestingly, Finland was for long a Nordic outlier in this respect, with the other countries moving towards pupil-driven methods since the 1990s. The most eye-catching example here is Sweden. One study shows that the share of instructional time devoted to individual work in Swedish schools increased only slightly from 22 per cent in the 1960s to 26 per cent in the 1980s, but then increased to 41 per cent around 2000.<sup>137</sup> Meanwhile, another study shows that the share of pupils reporting to do individual work several times per day was 25 per cent in both 1992 and 1995 – but then suddenly jumped to 50 per cent in 2003.<sup>138</sup> Something extreme clearly happened in Sweden in the mid-to-late 1990s, most probably due to the 1994 national curriculum that emphasised pupil-led methods, which decreased teacher-led instruction.<sup>139</sup>

While Sweden is the most conspicuous case, the country was not alone in moving towards less structured teaching; pupil-driven



methods appear to have increased in the other Nordic, non-Finnish classrooms during and since the 1990s as well.<sup>140</sup>

This points to one thing: Finland was alone in its pedagogical conservatism among Nordic countries as the 20th century came to an end. Just as in the case of its hierarchical schooling structure, this could indeed be seen as a remnant of an old society, left behind in the rapid race towards post-industrialisation – reflecting a unique mix of old and new in Finnish society.

## **5. THE TIMES THEY ARE A-CHANGIN'**

The above analysis suggests that Finland's rise was to a large extent shaped by socio-economic changes in combination with the retention of high teacher status and a traditional culture. The emphasis on education and the historic role of teachers in the Finnish nationalist strategy, making strict selection and training necessary, as well as the preservation of an authoritative schooling culture, especially in respect to teaching methods, ensured a high latent level of achievement, which was realised once the country started to rise economically and mass education properly began.

But what about the decline? Some have suggested that increased immigration may be a part explanation. "One reason for our fall in PISA is probably immigration", said NBE Director General Pitkälä. Immigrants to Finland certainly perform worse than natives in PISA: depending on subject, there was a 98 to 126 point disadvantage among first-generation, and a 64 to 81 point disadvantage among second-generation, immigrant pupils compared with native pupils in PISA 2012.<sup>141</sup>

But while immigrant pupils perform worse than native pupils, they are unlikely to be a primary explanation for the fall itself, since immigration levels have not been large enough. Between 2006 and 2012, the share of pupils with an immigrant background increased from 1.5 per cent to three per cent in Finland. This is too low to have a statistically significant direct impact on the overall changes. Indeed, native pupils fell only two to three points fewer than the average including immigrant pupils during those years.<sup>142</sup>

While there could technically be negative effects of immigrants on native pupils, the empirical evidence suggests that these are mild so far in Finland. Research indicates that the increase in the share of immigrant pupils between 2006 and 2012 may have decreased natives' PISA results by 1.7 points.<sup>143</sup> In other words, only about six to nine per cent of the fall since PISA 2006 could plausibly be attributed to negative effects of immigration on native pupils.

However, just as the lack of immigration may have been a factor aiding the persistence of a traditional social and educational culture in Finland, increased immigration may also be a marginal catalyst for changes in this culture.

Indeed, it is important to note that the cultural and societal underpinnings of the education system discussed earlier are beginning to crumble; experts agree that Finnish society is changing in ways that are unlikely to be beneficial for performance in cognitive tests. "The fall is in a way a reflection of the fact that the whole mentality has been changing", Ms Kupiainen argued. "Young people who have been growing up in the current prosperity don't necessarily have the same values [as previous generations]". In other words, the wealth effect may have reached beyond the peak of the inverted U-curve.

And there is evidence to support this argument. For example, one study found that attitudes deemed to support learning fell, while attitudes deemed to be detrimental for learning increased, among 15-year old pupils between 2001 and 2012.<sup>144</sup> “The early results in PISA reflected the acceptance of the institution of schooling, which has now changed”, Ms Kupiainen said.

Similarly, while Finnish children have historically read a lot in their free time, probably because of the long-standing emphasis on education, this is now in decline. As highlighted by Professor Jouni Välijärvi of the University of Jyväskylä: “In the past ten years, there’s been a dramatic decrease in time spent and interest in reading.” Indeed, between 2000 and 2009, the share of Finnish 15-year olds who read more than 30 minutes per day decreased from 48 per cent to 34 per cent. This was a stronger decrease than in any other Nordic country – although Denmark is a close second – and from levels that were higher in 2000. This means that a convergence has occurred: the difference between Finland and the Nordic country in which 15-year olds report to read the least was more than halved from 19 percentage points to 9 percentage points between 2000 and 2009.<sup>145</sup> As all PISA domains require a lot of reading – since they all measure different forms of literacy – this is likely to be a cultural factor contributing to lower performance in those tests.

The Finland-Swedish pupils again offer support for the argument, since they have read less and also displayed less intrinsic motivation for reading than Finnish-speaking pupils.<sup>146</sup> Similarly, the former do less homework than the latter, further displaying cultural differences that probably can explain part of the differences in achievement between the groups.<sup>147</sup>

Intriguingly, there is also suggestive evidence that the Finland-Swedish international decline began prior to the Finnish-speaking

one, although it is only possible to reliably compare reading results in this respect. In a 1991 international reading test, Finland-Swedish lower-secondary school pupils performed exactly on par with pupils in Sweden, roughly the equivalent of 14 TIMSS points behind Finnish-speaking pupils.<sup>148</sup> In 2003, the former similarly scored 14 PISA points lower than the latter. By 2009, however, whereas Finland-Swedish pupils had fallen 19 points, Finnish-speaking pupils had only fallen six points, rendering an absolute gap of 27 points. The difference decreased to 17 points in 2012 because Finnish-speaking pupils also began falling faster.<sup>149</sup> It therefore appears as if, on average, the more well-off Swedish-speaking pupils started to fall behind in reading comprehension before Finnish-speaking pupils – which is to be expected if the wealth effect hypothesis is correct.

In fact, improvements in technology, especially the rise of social media, were among the favourite explanations for the decline among interviewed Finnish experts and practitioners. There is now more competition for pupils' attention, the argument goes, which in turn has decreased pupils' focus on schoolwork and related activities. Finnish children simply do not engage with education like they used to. "Technology is changing the reality of young people – it affects their relation to school", Professor Välijärvi said.

Furthermore, the special Finnish mentality appears to be changing as well. According to Professor Simola, obedience – historically a cardinal trait of Finnish pupils – is in decline. "Our pupils have been obedient, but that's changing quickly", he argued. And he was not alone in emphasising this. Teachers in Helsinki also highlighted the fact that children were gradually becoming less obedient and more unruly in comparison to the situation 10 to 15 years ago.

And there is indirect support of such an attitudinal change via parents. Between 2000 and 2009, the share of Finnish parents aged 35 or older who emphasised that obedience is an important quality for children to learn at home decreased by about 12 percentage points (or by 37 per cent).<sup>150</sup> It therefore seems as if parents are decreasingly viewing obedience as a desirable trait, which may accordingly affect children's behaviour in schools.

Moreover, parents are allegedly becoming more critical of schools and teachers and are taking liberties that were previously unheard of. "It used to be the case that if parents came to school complaining, something very, very bad had happened", said Professor Välijärvi. "Nowadays, there's much more of that, partly because people are more highly educated than earlier. This also means they're more critical."

Naturally, grades are a common cause of concern for parents. And as the culture is becoming less obedient and more individualistic, parental pressure on teachers to give pupils higher grades is increasing. "It's a trend", an outspoken teacher claimed. "If I wanted to maintain a false picture of the Finnish education system, I wouldn't admit that it exists. But I have to. It has now become part of our school environment that headteachers tell us to take good notes and save all exam reports for this reason." In other words, parents' obedience before teachers' authority is also decreasing in today's Finland.

Although it is difficult to assess the magnitude, Finnish culture appears to be going through a process that most advanced economies have gone through already. The pressures of post-industrial society are removing many of the bedrocks on which Finnish performance was founded, just as they were uprooted

from most Western countries earlier in history. “We’re entering the individualised culture now, and that’s the major reason for the fall in achievement”, Professor Hautamäki argued.

***“Teacher methods aren’t as traditional today. At the same time, our school results appear to have reached their peak and started to fall”***

Have teaching practices changed as well? While teaching methods seemed rather traditional in the mid-to-late 1990s and early 2000s, it is difficult to know for sure when they had their peak. In the lessons observed during this author’s school visits in September 2014, many teachers were still using rather traditional methods and remained authorities in their classrooms. Indeed, in some cases, the instruction resembled university lectures more than lower-secondary school lessons. The silence was often palpable, with the teacher doing most of the talking and children dutifully taking notes with their textbooks open. Teachers set tasks, and pupils did what they were told.

While there was some interaction in the classrooms, it was mostly between teachers and pupils rather than between pupils themselves. “Questioning instruction – that’s the constructivism I want to advance”, said one teacher who explicitly warned about the dangers of pupil-led learning. “Replying to questions gives pupils a chance to reflect over their knowledge”, he explained and continued: “But you don’t want to create chaos. Pupils live in a big chaotic society already.” The warning about chaos and about letting go completely was repeated throughout the conversation. “Most importantly, there must be a structure”, he emphasised. “You can never let go of the structure.”

Yet this is not the whole story. In many lessons, there was certainly more pupil-led instruction and less authority in the classrooms, and

the level of noise varied considerably as well. In fact, pupils were not even always supervised. For example, wandering around one school, a group of 12-year olds studying mathematics unsupervised in the hallway were stumbled upon. “Pupils often work independently in this way”, an older pupil acting as this author’s guide said. “The problem, as you can see, is that they start playing with their mobiles instead of doing their work.”

Asked whether that happens a lot, he replied without hesitation: “Almost always. Teachers know it happens, but they can’t do anything about it. There are simply too many pupils to be able to control them all.” The other guides agreed.

But the leadership did not think this was a problem. “We trust children to work when they’re outside the classroom”, the deputy headteacher of the school said later the same day when hearing about this event. Incidentally, at that very moment, another group of pupils working in this way were happened upon, which was an opportunity to demonstrate that this trust was well-founded. Yet, although the pupils quickly tried to hide it as they were being approached, it seemed clear that they were indeed playing with their mobiles rather than doing schoolwork.

Overall, therefore, this author’s own anecdotal observations displayed a different picture from the much larger number of British observations in 1996. Unlike the British research team’s experience, it did not take long to find more pupil-led methods in (and outside) the classrooms.<sup>151</sup> Indeed, this was something practitioners also were keen to highlight. “In some classrooms, you’ll find Korea, but in others you’ll find Sweden”, one headteacher argued.



Is this a sign that Finnish teaching has become less traditional in general? According to experts, it is indeed. “Teacher methods aren’t as traditional today”, Professor Scheinin said. “At the same time, our school results appear to have reached their peak and started to fall. So it fits well with the research evidence from Quebec. Too well, almost – unpleasantly well.”

As an evaluator of a progressive school, Professor Scheinin has first-hand experience of this issue in Finland. In that school, children were set mathematics tasks at the beginning of the week, during which they were supposed to work independently or in groups before reporting solutions at the end of it. What were the results?

“Sure, the pupils did a lot of good things – they became very independent and so on”, said Professor Scheinin. “But they were awful at mathematics. I mean shockingly poor – pretty much the worst in the country. Since then, I’ve been cautious in saying ‘out with the old and in with the new’ in regard to pedagogical methods.”

Most other experts and practitioners agreed with the assessment that teacher methods have changed in a constructivist direction. “There are no data to show when the slope turned, but most people would agree that there’s been a gradual move towards non-teacher-led instruction in the past 10 to 20 years”, Ms Kupiainen argued.

While there is no hard evidence on when the shift occurred, the idea that teaching-dominated instruction has decreased in the past two decades receives indirect support in the data. Between 1994 and 2010, the average share of 11-, 13-, and 15-year old Finnish-speaking pupils who explicitly agree that teachers encourage

them to express their opinions in the classroom increased from 36 per cent to 54 per cent, while the share who explicitly disagree fell from 31 per cent to 17 per cent.<sup>152</sup> This indicates that pupils became more active in the classrooms from the mid-1990s onwards, which is to be expected if teaching methods have become less traditional.

So it appears as if the Herbart-Zillerist educational philosophy that served the country so well under its nation-building process, and for long cast its shadow over teaching methods, has begun to recede.

Of course, given the behaviour of the education establishment, this is far from surprising. “If you listen to the Finnish education debate currently, many are saying that traditional methods are wrong”, Professor Scheinin said. “This thinking goes all the way up to the ministry.”

Indeed, in a speech in Washington DC in 2010, Dr Sahlberg highlighted that the priority for Finland in terms of its education system was to increase opportunities for individual learning. “In other words, [we’re] trying to make studying and learning even more personalised”, he then proclaimed. “This will eventually lead to a situation where traditional teaching will decrease”.<sup>153</sup> More recently, he has also explicitly argued in favour of less classroom-based teaching as a tool to turn around Finland’s negative performance trend, advocating “a shift from common curriculum-based teaching to a system based on individual learning paths”.<sup>154</sup>

Such goals are also becoming increasingly reflected in official policy documents. Indeed, progressive methods are being more strongly emphasised in the new national curriculum that takes effect in 2016, for example by stipulating that pupils should have

more influence over teaching.<sup>155</sup> “More focus on individual learning is important”, NBE Director General Pitkälä argued. “Parts of the teacher force are quite behaviourist. We’re trying to make them more constructivist, but it isn’t easy.”

In fact, they have been trying for a while. Finnish education policy took a progressive turn in the early 1990s, apparently partly inspired by previous developments in England:

[R]eforms were to a considerable extent ‘ideas-driven’ by progressive educators who had gained prominence at national level in organisations such as the National Board of Education. This new generation of education policy makers had been influenced by constructivist theories of learning and the experience of progressive primary practice in countries such as England.<sup>156</sup>

Similarly, Finnish policy came to increasingly reflect progressive pedagogical theory and practice in the US, as developed earlier in the 20<sup>th</sup> century.<sup>157</sup> The influence of the new ideas was indicated by the NBE’s school experiments of various individualising practices, including Swedish-style “own work”, and the 1994 national curriculum, which emphasised constructivist approaches.<sup>158</sup> As Dr Sahlberg has highlighted: “The 1994 National Curriculum included a requirement that all schools design their own curricula in a way that would enhance teaching and learning according to constructivist educational ideas.”<sup>159</sup> Overall, therefore, his and Professor John Berry’s assessment in 2003 appears valid: “Finnish education policy and national curriculum guidelines encourage teachers to seek alternatives to traditional teacher-centred pedagogies.”<sup>160</sup>

Moreover, constructivist ideas grew stronger in both teacher education and professional development training during the same period.<sup>161</sup> This was also highlighted by the headteacher of one of the most reputable schools in Helsinki. “New ideas came into teacher education in the early 1990s, or even in the late 1980s, when we began talking about constructivism”, he said.

While changes in professional development training may to some extent have affected pedagogy also among older teachers, one would expect more significant shifts in classroom practices as they retire.<sup>162</sup> “Teachers educated in the 1990s have learned the new way to teach”, the headteacher, who favoured this development, claimed. “So after 2000, it has changed quite a lot.”

Since it takes time to replace the entire teacher force, this suggests that instruction will change further in this direction, especially considering that student teacher cohorts seemingly become increasingly influenced by the ideas of pupil-led learning. “There’s currently a strong coaching attitude towards teaching among teacher students”, Ms Kupiainen argued.

Overall, therefore, Finland’s teachers appear to have joined their colleagues worldwide on the journey towards pupil-led learning since the country’s peak educational performance, although it is impossible to conclusively show by how much teacher methods have changed. Nevertheless, given the research evidence, the fact that they have changed at all suggests this may be a reason why the country has begun to fall. The increasing diversity in pedagogical methods envisioned with the 1994 national curriculum now seems to be materialising – which studies indicate may have unintended consequences for pupil performance.

This development might not be that surprising given the almost uniform trends towards pupil-led methods in the Western world. More surprising, however, is that Finnish teachers for long resisted the new zeitgeist among education experts and highlighted by policymakers.

We can only speculate about the reasons, but it is plausible that they are connected to the shadow of the old centralised system, the persistent authoritative culture, teachers' historic nationalist mission, and their strict training – which produced non-conformist, highly competent, and stubborn professionals who refused to implement the establishment's ideas in practice, and in the late 20th century had the autonomy to do so.

***“I didn't enjoy school. One should enjoy school. Therefore, the traditional methods must go”***

Of course, it is also important to note the link between cultural changes and decreasing authority in schools and teaching; authoritative methods are not viewed as possible in, or fit for, a post-industrial society in which pupils are becoming less servile and obedient.

“The pedagogical methods are changing for the simple reason that you can't control the classroom with the old methods anymore”, Professor Simola argued. “If the teacher can teach *ex cathedra*, it's certainly very effective. It has been possible to do so in Finland historically, but not anymore.” Similarly, Ms Kupiainen said: “When the world was more authoritarian in general, pupils accepted authoritarian teachers more easily.”

However, it is difficult to separate the inevitable from the desirable. Most interviewed experts and practitioners, even those who were more sceptical of the new methods, also highlighted

that teaching must change, often because of the dissonance between what, and how things, are taught in schools and the changing world outside of education.

“We must realise that the old school is dead”, said an openly radical teacher passionately. “We need to individualise learning and use methods that are visible outside school. It’s the flipped classroom idea. You turn around the classroom by teaching less – but learning more.”

The teacher was not alone. In fact, almost every interviewee agreed that things had to change in order to keep children interested in school, and ensure that they continue to learn. In this view, an individualised culture requires less authority and more individualised teacher methods, which may indeed explain the gradual rise of such methods overall. “In a way, constructivist methods have probably emerged to match what goes on in schools with the outside society”, Ms Kupiainen said.

It is also plausible that teachers and policymakers are increasingly affected by the cultural changes themselves, and are more likely to think that today’s youth should not have to endure the same authoritarian schooling environment as they did. “The logic is: ‘I didn’t enjoy school. One should enjoy school. Therefore, the traditional methods must go’”, said Professor Scheinin in regard to the general Finnish education debate.

Perhaps this is also why the authoritarian schooling climate appears to have become warmer in general in the past decades. Indeed, between 1994 and 2010, the average share of 11-, 13-, and 15-year old Finnish-speaking pupils who explicitly agree that teachers are interested in their lives increased from 18 per cent to 32 per cent, while the share who explicitly disagree decreased

from 39 per cent to 24 per cent.<sup>163</sup> One study also finds that 14-year old pupils' relations with their teachers improved somewhat overall between 1991 and 1995.<sup>164</sup> It therefore seems like the icy Finnish schooling climate has been thawing somewhat in the past decades – a process that is likely to speed up further in the future as “children’s wishes and visions have been taken into account in shaping the ... reform of the National Core Curricula”.<sup>165</sup> The new curriculum’s stipulation that teachers should choose working methods in consultation with pupils serves as an example in this respect.<sup>166</sup>

So it is difficult to know whether societal changes are forcing teacher practices and the school environment to change – or whether the former merely justify the latter. Either way, both society and school practices appear to have changed concurrently in ways that might be harmful for pupil achievement, mirroring a pattern observed in other Western countries in general and perhaps Nordic countries in particular.

## 6. LESSONS FROM FINLAND?

Ever since the first PISA results gave star status to the Finnish education system, policymakers and pundits have scrambled to understand what policy lessons should be drawn. Perhaps more than anything else, Finland has been seen as a role model for opponents of market- and accountability-based school reform, while also being frequently admired for its high teacher status and reputable teacher training system.

But as the country's performance has begun to slip, these accounts seem decreasingly persuasive. Indeed, as this monograph has shown, the most popular policy-related explanations of Finland's rise to prominence do not stand up to scrutiny. The evidence does not support them, and, above all, it should be clear that the improvements began before most of the highlighted policies were even introduced.

If societal changes and historical processes are indeed crucial for Finland's rise and its subsequent decline, we should be hesitant before attempting to draw out specific policy lessons. For example, emphasising high-quality teachers with high social status is of little value for policymakers in other countries unless they are told how



this is supposed to be achieved with the tools at their disposal. And while the status and quality of teachers are both remarkably high in Finland, this appears to have been caused by a unique mix of socio-historical processes rather than education policy. In fact, this applies to most explanations for changes in Finnish pupil achievement explored in this monograph.

So what, if anything, can other countries learn from studying Finland's performance trajectory? Overall, the strongest policy lesson is the danger of throwing out authority in schools, and especially getting rid of knowledge-based, teacher-dominated instruction. In England, as documented in recent publications, pupil-led methods and a less authoritative schooling culture have been on the rise for decades, reflecting everything from teacher education to Ofsted orthodoxy.<sup>167</sup> In fact, ironically, it was partly this development that once inspired the progressive turn in Finnish education policy in the 1990s, which is currently being realised in school and classroom practices.

However, as this monograph has highlighted, the story from Finland backs up the increasing amount of evidence, which suggests that pupil-led methods, and less structured schooling environments in general, are harmful for cognitive achievement. Finnish teachers were, for many decades, traditional in their approach, reinforcing a hierarchical educational culture. While difficult to entirely disentangle from the effects of societal changes in general, the move towards less structured methods and authoritative school practices is likely to have had a causal effect, in and of itself, on the recent Finnish decline.

It has been suggested elsewhere that post-industrialisation renders teacher-dominated pedagogy and other authoritative aspects of schooling irrelevant, because teaching methods and

school organisation in general must follow the trajectory of society. Today's society is less about authority and obedience – and more about freedom and independence. Therefore, the argument goes, we must adopt the latter in schools.

Yet as Hannah Arendt pointed out 60 years ago, this is a fallacy.<sup>168</sup> Schools are not supposed to be microcosms of the outside world. They are meant to be institutions that prepare pupils for that world. Pupils are not grown-up citizens and they should not be treated as such. So while society is moving in a direction towards less authority and more independence, this does not mean that education must follow suit.

Indeed, it could be argued that it becomes even more important that schools retain some authoritative structures to ensure that pupils accept the institution of schooling. If this is the case, the shift in methods may actually have contributed to declining acceptance of authority in schools rather than vice versa.

To see why, consider the classic tension between individuals' yearning for freedom and civilisation's need for compliance, identified by Sigmund Freud in *Civilisation and its Discontents*.<sup>169</sup> This tension, according to Freud, is dealt with by individuals' internalisation of society's rules and authorities, which in turn produces guilt – and lingering feelings of discontent – as a self-regulatory mechanism to ensure that order is upheld.

Schools are fundamentally socialising institutions and teachers have historically acted as authorities laying down the rules for pupil behaviour. But if teachers take a back seat, there is no authority to internalise – which should be reflected in more unruly behaviour and less acceptance of teachers' traditional role. After all, if adults do not behave as authorities, why would children view them as such?

On the positive side, less authority and more freedom should also predict less discontent. Perhaps it is therefore not surprising that decreasingly authoritative methods and declining achievement in Finland have been accompanied by an improving school climate. This idea also receives some support from recent research, which finds that progressive teaching is good for producing social capital, for example by improving pupils' beliefs in cooperation with teachers.<sup>170</sup> Another study shows that such methods may also be good for improving pupils' reasoning skills.<sup>171</sup> While more research is needed in these areas before drawing any strong conclusions, this points to a potential trade-off between different teaching methods that is important to acknowledge.

But the point that progressive teaching methods appear harmful for cognitive achievement remains. Rather than getting swept away by the (beneficial) onward march of freedom in society, it is probably better that schools keep calm and avoid forgetting what works most effectively in this respect.

Overall, however, the difficulties in identifying causal factors behind Finland's changing educational performance in the 20th and the 21st centuries cannot be overestimated. This includes the conclusions in this monograph. The paucity of direct evidence must be accepted; and we should not seek certainty. However, the evidence presented here is enough to falsify many common explanations and lessons – while at the same time providing a new starting point from where we should continue to look.

## ENDNOTES

- <sup>1</sup> Unless explicitly noted otherwise, the quotes in this monograph are from interviews carried out during the author's visit in and around Helsinki in September 2014.
- <sup>2</sup> OECD, "PISA 2012 technical report", Report, OECD, Paris, 2014; OECD, "PISA 2006 technical report", Report, OECD, Paris, 2009. Since the assessment framework is revised significantly once the subjects have been main domains for the first time, by introducing more and different types of questions, it is not possible to compare average results, and results over time, in the entire competence areas until then.
- <sup>3</sup> OECD and UNESCO, "Literacy skills for the world of tomorrow: further results from PISA 2000", Report, OECD and UNESCO, Paris, 2003; OECD, "Learning for tomorrow's world: first results from PISA 2003", Report, OECD, Paris, 2004; OECD, "PISA 2006 science competencies for tomorrow's world", Report, OECD, Paris, 2007; OECD, "PISA 2012 technical report"; OECD, "PISA 2006 technical report". There were no changes in reading literacy across any cycle until 2006, and no change in mathematical literacy between 2003 and 2006. There was an improvement in one of two comparable mathematical literacy sub-scales between 2000 and 2003, and on the overall scientific literacy scale as it was developed for PISA

2000 and 2003. There was no statistically significant improvement in scientific literacy on this scale between 2003 and 2006. Since the test design was not balanced until 2003, the changes in scores between 2000 and 2003 required more complicated linking procedures than afterwards, so they should be interpreted more carefully.

- 4 OECD, "PISA 2006 science competencies for tomorrow's world"; OECD, "PISA 2012 results: what students know and can do", Report, OECD, Paris, 2013.
- 5 Finnbay, "Golden days where Finland's education a success are over", 3 December 2013.
- 6 Ina V.S. Mullis, Michael O. Martin, Pierre Foy, and Alka Arora, "TIMSS 2011 international results in mathematics", Report, TIMSS & PIRLS International Study Center, Boston College, Chestnut Hill, MA, 2012; Michael O. Martin, Ina V.S. Mullis, Pierre Foy, and Gabrielle M. Stanco, "TIMSS 2011 international results in science", Report, TIMSS & PIRLS International Study Center, Boston College, Chestnut Hill, MA, 2012.
- 7 For subject-specific assessments, see Raili Hildén and Juhani Rautopuro, "Ruotsin kielen A-oppimäärän oppimistulokset perusopetuksen päättövaiheessa 2013", Report 2014:1, National Board of Education, Helsinki, 2014; Kati Hirvonen, "Onko laskutaito laskussa? Matematiikan oppimistulokset peruskoulun päättövaiheessa 2011", Report 2012:4, National Board of Education, Helsinki, 2012; Pirkko Kärnä, Riikka Hakonen, and Jorma Kuusela, "Luonnontieteellinen osaaminen perusopetuksen 9. Luokalla 2011", Report 2012:2, National Board of Education, Helsinki, 2012; Outi Toropainen, "Utvärdering av läroämnet Finska i den grundläggande utbildningen: inlärningsresultat i finska enligt A-lärokursen och den modersmålsinriktade lärokursen i årskurs 9 våren 2009", Report 2010:1, National Board of Education, Helsinki, 2010; Eva Tuokko, "Miten ruotsia osataan peruskoulussa? Perusopetuksen päättövaiheen ruotsin kielen B-oppimäärän oppimistulosten kansallinen arviointi 2008", Report 2/2009, National Board of Education, Helsinki, 2009.

- 8 Jarkko Hautamäki, Sirkku Kupiainen, Jukka Marjanen, Mari-Pauliina Vainikainen, and Risto Hotulainen, "Oppimaan oppiminen peruskoulun päättövaiheessa: Tilanne vuonna 2012 ja muutos vuodesta 2001", Department of Teacher of Education Research Report no. 347, Faculty of Behavioural Sciences, University of Helsinki, 2013.
- 9 See Mullis, Martin, Foy, and Arora, "TIMSS 2011 international results in mathematics"; Martin, Mullis, Foy, and Stanco, "TIMSS 2011 international results in science"; OECD, "PISA 2012 results: what students know and can do".
- 10 See, for example, Anu Partanen, "What Americans keep ignoring about Finland's school success", The Atlantic, 29 December 2011; Pasi Sahlberg, Finnish lessons 2.0: what can the world learn from educational change in Finland? New York: Teachers College Press, 2015; Pasi Sahlberg "Why Finland's schools are top-notch", CNN International, 6 October 2014; Jukka Sarjala, "Equality and cooperation: Finland's path to excellence", American Educator, Spring (2013): 32–36.
- 11 Sari Pekkala Kerr, Tuomas Pekkarinen, and Roope Uusitalo, "School tracking and development of cognitive skills", Journal of Labor Economics 31, no. 3 (2013): 577–602.
- 12 Joel Kivirauma and Kari Ruoho, "Excellence through special education? Lessons from the Finnish school reform", Review of Education 53 (2007): 283–302; Charles Sabel, AnnaLee Saxenian, Reijo Miettinen, Peer Hull Kristensen, and Jarkko Hautamäki, "Individualized service provision in the new welfare state: lessons from special education in Finland", Sitra Studies 62, The Finnish Innovation Fund, Helsinki, 2011. Since classification of pupils who receive special education varies between countries, it is difficult to make reliable comparisons, but Kivirauma and Ruoho show that Denmark and Iceland had similar, albeit slightly lower, shares of special education pupils as Finland (20 per cent) in 1990.

- <sup>13</sup> See, for example, Lea Kuusilehto-Awale and Tapio Lahtero, “Finnish case of basic education for all – with quality learning outcomes”, *Journal of Education and Research* 4, no. 1 (2014): 6–23; Sahlberg, *Finnish lessons 2.0: what can the world learn from educational change in Finland?*
- <sup>14</sup> See, for example, Samuel E. Abrams, “The children must play”, *The New Republic*, 28 January 2011; John Crace, “Heaven and Helsinki”, *The Guardian*, 16 September 2003; Partanen, “What Americans keep ignoring about Finland’s school success”, *The Atlantic*, 29 December 2011; Diane Ravitch, “Ravitch: Why Finland’s schools are great (by doing what we don’t)”, *The Washington Post*, 13 October 2011; Sahlberg, *Finnish lessons 2.0: what can the world learn from educational change in Finland?*
- <sup>15</sup> Pasi Sahlberg, “Education policies for raising student learning: the Finnish approach”, *Journal of Education Policy* 22, no. 2 (2007): 147–171; Sahlberg, *Finnish lessons 2.0: what can the world learn from educational change in Finland?*
- <sup>16</sup> See, for example, Kuusilehto-Awale and Lahtero, “Finnish case of basic education for all – with quality learning outcomes”; Pasi Sahlberg, “The secret to Finland’s success: educating teachers”, *Research Brief*, Stanford Center for Opportunity Policy in Education, Stanford University, 2010.
- <sup>17</sup> See, for example, Abrams, “The children must play”; Sahlberg, *Finnish lessons 2.0: what can the world learn from educational change in Finland?*; Sahlberg, “Why Finland’s schools are top-notch”.
- <sup>18</sup> See, for example, Sahlberg, *Finnish lessons 2.0: what can the world learn from educational change in Finland?*; Sahlberg, “Minimalism in educational reform”, Opening address at the 2014 Frankfurt book fair.
- <sup>19</sup> Pete Henshaw, “The five lessons we can learn from Finland”, Report from Pasi Sahlberg’s House of Commons lecture on 17 May 2012, *SecEd*, 24 May 2012.

- 20 See Gabriel Heller Sahlgren and Julian Le Grand, “How to get school competition right”, *Standpoint*, June 2014: 36–37.
- 21 Ibid; Gabriel Heller Sahlgren, Philip Booth, and Henrik Jordahl, “Pisarapporten säger inget om vad som fungerar väl”, *Dagens Nyheter*, 13 January 2014.
- 22 Pekkala Kerr, Pekkarinen, and Uusitalo, “School tracking and development of cognitive skills”.
- 23 Simon Burgess, Deborah Wilson, and Jack Worth, “A natural experiment in school accountability: the impact of school performance information on pupil progress”, *Journal of Public Economics* 106 (2013): 57–67.
- 24 Martin R. West and Ludger Woessmann, “‘Every Catholic in a Catholic school’: historical resistance to state schooling, contemporary school competition, and student achievement across countries”, *Economic Journal* 120, no. 546 (2014): F229–F255.
- 25 For a review of the literature, see Eric A. Hanushek and Ludger Woessmann, “The economics of international differences in educational achievement”, NBER Working Paper no. 15949, National Bureau of Economic Research, 2010.
- 26 Victor Lavy, “Do differences in schools’ instruction time explain international achievement gaps in math, science, and reading? Evidence from developed and developing countries”, *Economic Journal* (forthcoming). The effect also increases with school autonomy in terms of hiring and firing of teachers, wage setting, and overall budget allocation. Interestingly, however, there is no positive interaction between instructional time and curricular/assessment autonomy.
- 27 Toberg Falch and Marte Rønning, “Homework assignment and student achievement in OECD countries”, Discussion Paper No. 711, Statistics Norway, 2012; Jan-Eric Gustafsson, “Causal inference in educational effectiveness research: a comparison of three methods



- to investigate effects of homework on student achievement”, *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice* 24, no. 3 (2013): 275–295; Zöe Kuehn and Pedro Landeras, “Study time and scholarly achievement in PISA”, Working Paper 2012-02, Fedea, Madrid.
- <sup>28</sup> OECD, “Strong performers and successful reformers in education: lessons from PISA for the United States”, Report, OECD, Paris, 2011.
- <sup>29</sup> Tim Oates of Cambridge Assessment has previously highlighted this in the English debate, although no data on Finland’s historical performance trajectory have hitherto been provided to back up the argument. See Tim Oates, “The ‘qualifications sledgehammer’: why assessment-led reform has dominated the education landscape”, pp. 28–45 in *Tests worth teaching to: incentivising quality in qualifications and accountability*, edited by Gabriel Heller Sahlgren. London: CMRE, 2014; Tim Oates, “Why textbooks count”, Policy Paper, Cambridge Assessment, 2014.
- <sup>30</sup> Jarkko Hautamäki, “How do Finns know? To trust or not to trust teachers’ assigned grades”, Unpublished manuscript, University of Helsinki, 2013; Hannu Simola, “The Finnish miracle of PISA: historical and sociological remarks on teaching and teacher education”, pp. 207–223 in *The Finnish education mystery: historical and sociological essays on schooling in Finland*, edited by Hannu Simola. New York: Routledge, 2015; Erja Vitikka, Leena Krokfors, and Elisa Hurmerinta, “The Finnish national core curriculum: structure and development”, pp. 83–96 in *Miracle of education: the principles and practices of teaching and learning in Finnish schools*, edited by Hannele Niemi, Auli Toom, and Arto Kallioniemi. Rotterdam: Sense Publishers, 2012.
- <sup>31</sup> Hautamäki, “How do Finns know? To trust or not to trust teachers’ assigned grades”; Viveca Lindberg and Ragnhild Löfgren, “Vad krävs för godkänt i kemi?”, pp. 114–158 in *Kemiundervisning, text och textbruk i finlandssvenska och svenska skolor – en komparativ tvärvetenskaplig studie*, edited by Inger Eriksson, Stockholm:

Stockholm University Press, 2011; Finnish National Board of Education, “Elevbedömning under gångna årtionden”, Website, Helsinki, 2010; Simola, “The Finnish miracle of PISA: historical and sociological remarks on teaching and teacher education”. Information about the cohort-referenced grading system has also been confirmed in personal email correspondence with Jarkko Hautamäki. There were no nation-wide national tests even in the centralised era, but instead a range of measures designed to increase comparability of grades. These measures included the sample-based tests and certain standards provided to schools, which, however, were not mandatory.

- 32 Hannu Simola, “Paljon vartijat. Suomalainen kansanopettaja valtiollisessa kouludiskurssissa 1860-luvulta 1990-luvulle”, Research report no. 137, University of Helsinki, 1995. See discussion in Hannu Simola and Risto Rinne “Education politics and contingency: beliefs, status, and trust behind the Finnish PISA miracle”, pp. 225–244 in PISA under examination: changing knowledge, changing tests, and changing schools, edited by Miguel E. Pereyra, Hans-Georg Kotthoff, and Robert Cowen. Rotterdam: Sense Publishers, 2011.
- 33 Hautamäki, “How do Finns know? To trust or not to trust teachers’ assigned grades”; Oates, “Why textbooks count”; Sabel, Saxenian, Miettinen, Kristensen, and Hautamäki, “Individualized service provision in the new welfare state: lessons from special education in Finland”; Erja Vitikka, Leena Krokfors, and Elisa Hurmerinta, “The Finnish national core curriculum: structure and development”.
- 34 Sahlberg, “Education policies for raising student learning: the Finnish approach”, p. 156.
- 35 Nadir Altinok, Claude Diebolt, and Jean-Luc Demeulemeester, “A new international database on education quality: 1965–2010”, Applied Economics 46, no. 11 (2014): 1212–1247. The database can be accessed at: <http://www.beta-umr7522.fr/Datasets?lang=fr>. The author of this monograph updated Finland’s results to also include TIMSS 2011 and PISA 2012, based on the methodology described by Dr Altinok in personal email correspondence.

- <sup>36</sup> J. P. Keeves, "Learning science in a changing world. Cross-national studies of science achievement: 1970 to 1984", Report, International Association for the Evaluation of Educational Achievement (IEA), The Hague, 1992.
- <sup>37</sup> Warwick B. Elley, "How in the world do students read? IEA study of reading literacy", Report, International Association for the Evaluation of Educational Achievement (IEA), The Hague, 1992.
- <sup>38</sup> Gilbert R. Austin and Neville T. Postlethwaite, "Cognitive results based on different ages of entry to school", *Journal of Educational Psychology* 66, no. 6 (1974): 857–863.
- <sup>39</sup> David F. Robitaille, "Achievement comparisons between the first and second IEA studies of mathematics", *Educational Studies in Mathematics* 21, no. 5 (1990): 395–414.
- <sup>40</sup> Edward Dutton and Richard Lynn, "A negative Flynn effect in Finland, 1997–2009", *Intelligence* 41, no. 6 (2014): 817–820.
- <sup>41</sup> This was confirmed in private conversations with academics at the University of Helsinki in September 2014, including Jarkko Hautamäki, Sirkku Kupiainen, and Jari Lavonen. See also: Hannele Niemi and Ritva Jakku-Sihvonen, "Teacher education curriculum of secondary school teachers", Unpublished manuscript, Department of Education, University of Helsinki.
- <sup>42</sup> In 2002, 38 per cent of teachers in primary- and lower-secondary education were 39 years old or younger. These teachers graduated from upper-secondary school in the early 1980s onwards and have therefore gone through the new teacher-training regime. However, the majority of the remaining 62 per cent were most likely educated under the old system. Interestingly, it therefore appears as is Finland's performance decline correlates with a significant retirement of teachers who were trained under the old regime; over 20,000 of about 66,000 Finnish teachers in total were set to retire between 2000 and 2010. See OECD, "Attracting, developing and retaining effective teachers: country background report for Finland", Report, OECD, Paris, 2003.

- 43 Nordisk Ministerråd, "Nordisk skolbarometer. Attityder till skolan år 2000", Report, TemaNord, Copenhagen, 2001.
- 44 Eric A. Hanushek, Marc Piopiunik, and Simon Wiederhold, "The value of smarter teachers: international evidence on teacher cognitive skills and student performance", NBER Working Paper no. 202727, Cambridge, MA, 2014.
- 45 Satu Uusiautti, Merja Paksuniemi, and Kaarina Määttä, "Changes in teacher profession in Finland during the war years 1939–1945", *Review of European Studies* 5, no. 1 (2013): 88–98, p. 93.
- 46 Aimo Halila, *Suomen kansakoululaitoksen historia. IV osa: Oppivelvollisuuskoulu vuosina 1921–1939*, Helsinki: WSOY, 1950, p. 296. See Hannu Simola, "Educational science, the state, and teachers: forming the corporate regulation of teacher education in Finland", pp. 69–94 in *The Finnish education mystery: historical and sociological essays on schooling in Finland*, edited by Hannu Simola. New York: Routledge, 2015.
- 47 See Max Engman, "Finns and Swedes in Finland", pp. 179–216, in *Ethnicity and nation building in the Nordic World*, edited by Sven Tägil. Hong Kong: Southern Illinois University Press, 1995; Jouni Häkli, "Finland", pp. 597–608 in *Nations and nationalism: a global historical overview*, edited by Guntram H. Herb and David H. Kaplan. Santa Barbara: ABC-CLIO Inc.
- 48 For a discussion, see Jouni Häkli, "Finland"; Päivi Rantala, "Chapters' of progress – the case of the village idiot", pp. 33–48 in *Progress or perish: Northern perspectives on social change*, edited by Aini Linjakumpu and Sandra Wallenius-Korkalo. Burlington, VT: Ashate Publishing, 2010; Jussi Välimaa, "Private and public intellectuals in Finland", pp. 185–208 in *The social role of higher education: comparative perspectives*, edited by Ken Kempner and William G. Tierney. New York: Garland Publishing, 1996.
- 49 In fact, because of variations in orthography and syntax as well as gaps in basic vocabulary, Finnish was not a sufficiently advanced

written language for the needs of developed social life until the second half of the 19<sup>th</sup> century – the watershed between early and modern Finnish is considered to be 1870. This naturally also means that little literature was published in Finnish in the earlier part of the century. Indeed, only 425 titles in Finnish were published in the period 1809–1855. See Engman, “Finns and Swedes in Finland”, pp. 188–189.

- <sup>50</sup> Pauli Arola, “Aiming to create good citizens: the debates of the Finnish parliament concerning citizenship education in our schools, 1917 to 1924”, *Theoria et Praxis* 1, no. 1 (2004): 131-134; Merja Paksuniemi, Satu Uusiautti, and Kaarina Määttä, “Teacher education in Finland during the war years, 1939–45”, *War & Society* 5, no. 1 (2014): 12–25; Uusiautti, Paksuniemi, and Määttä, “Changes in teacher profession in Finland during the war years 1939–1945”.
- <sup>51</sup> See Timo Myllyntaus, “Education in the making of modern Finland”, pp. 153–171 in *Education and economic development since the industrial revolution*, edited by Gabriel Tortella. Valencia: Generalitat Valenciana, 1990.
- <sup>52</sup> *Ibid.*, p. 160; Yrjö-Paavo Häyrynen and Jarkko Hautamäki, *Människans bildbarhet och utbildningspolitiken – en utbildningshistorisk, inlärningspsykologisk och samhällspolitisk analys*. Stockholm: Wahlström & Widstrand, 1976, p. 98. See also: Toni Saarivirta, *Why not the best schools? The Finland report*. Camberwell: ACER Press, 2008.
- <sup>53</sup> Simola and Rinne, “Education politics and contingency: beliefs, status, and trust behind the Finnish PISA miracle”.
- <sup>54</sup> Myllyntaus, “Education in the making of modern Finland”, p. 160.
- <sup>55</sup> Hannele Niemi, “The societal factors contributing to education and schooling in Finland”, pp. 19–38 in *Miracle of education: the principles and practices of teaching and learning in Finnish schools*, edited by Hannele Niemi, Auli Toom, and Arto Kallioniemi. Rotterdam: Sense Publishers, 2012, p. 21.

- <sup>56</sup> Välimaa, “Private and public intellectuals in Finland”.
- <sup>57</sup> Uusiautti, Paksuniemi, and Määttä, “Changes in teacher profession in Finland during the war years 1939–1945”, p. 93.
- <sup>58</sup> See CIA, “Finlandization in action: Helsinki’s experience with Moscow”, Intelligence Report no. 0059/72, Washington DC, 1972.
- <sup>59</sup> Uusiautti, Paksuniemi, and Määttä, “Changes in teacher profession in Finland during the war years 1939–1945”.
- <sup>60</sup> Myllyntaus, “Education in the making of modern Finland”; Kaarina Määttä and Merja Paksuniemi, “At the roots of the pedagogy of Finnish teacher training: practicum as a core of teacher training in teacher college of Tornio in the 1920s” *International Journal of Education Administration and Policy Studies* 3, no. 8 (2011): 121–128; Paksuniemi, Uusiautti, and Määttä, “Teacher education in Finland during the war years, 1939–45”; Uusiautti, Paksuniemi, and Määttä, “Changes in teacher profession in Finland during the war years 1939–1945”.
- <sup>61</sup> Merja Paksuniemi, “Teacher education in Finland: what are Finnish teachers made of?”, Blog post, 25 November 2013, Edutopia.
- <sup>62</sup> Merja Paksuniemi, Kaarina Määttä, and Satu Uusiautti, “Discipline, decency, and teetotalism at early-1900’s teacher training colleges in northern Finland”, *Case Studies Journal* no. 1 (2013): 1-14; Uusiautti, Paksuniemi, and Määttä, “Changes in teacher profession in Finland during the war years 1939–1945”.
- <sup>63</sup> Fjalar Finnäs, “Finlandssvenskarna 2012: en statistisk rapport”, Report, Folktinget, Helsinki, 2013.
- <sup>64</sup> Of course, the majority of Finland Swedes were farmers, workers, and fishermen and never part of the élite. Yet the important point is that the élite that did exist was historically composed of Swedish speakers. Furthermore, ordinary people in towns were mainly Swedish speaking before urbanisation, and once migration to the towns started, they came to occupy higher positions – such as

craftsmen, foremen, and clerks – to a higher extent than Finnish speakers. Indeed, since the beginning of the 1900s, the most important difference between the groups is that Finland Swedes have been overrepresented in the middle classes. Interestingly, in coastal areas, where most Finland Swedes live, they also appear more similar genetically to Swedes in Sweden than ethnic Finns. See Erik Allardt, “Bilingualism in Finland: the position of Swedish as a minority language”, pp. 79–96 in *Language policy and national unity*, edited by William R. Beer and James E. Jacob. Totowa, NJ: Rowman & Allanheld, 1985; Engman, “Finns and Swedes in Finland”; Maria von Kraemer, “Finländarnas gener härstammar från flera håll”, Svenska Yle, 23 October 2010.

- <sup>65</sup> Peter Sjöholm, “HS: Många finlandssvenskar i börsstyrelserna”, Svenska Yle, 29 August 2011.
- <sup>66</sup> Jussi Karhunen and Matti Keloharju, “Shareownership in Finland 2000”, *Finnish Journal of Business Economics* 50 (2001): 188–226.
- <sup>67</sup> Jan Saarela, “Wealth in two ethnic groups: the role of internal migration background”, *Finnish Yearbook of Population Research* 42 (2006): 43–64.
- <sup>68</sup> Fjalar Finnäs, “Social integration, heterogeneity, and divorce: the case of the Swedish-speaking population in Finland”, *Acta Sociologica* 40, no. 3 (1997): 263–277; “Finlandssvenskarna 2012: en statistisk rapport”; Seppo Koskinen and Tuija Martelin, “Why is mortality low among the Swedish-speaking minority in Finland?”, *Yearbook of Population Research in Finland* 39 (2003): 15–31; Jan Saarela and Fjalar Finnäs, “Can the low unemployment rate of Swedish speakers in Finland be attributed to structural factors?”, *Journal of Socio-Economics* 35, no. 3 (2006): 498–513.
- <sup>69</sup> Engman, “Finns and Swedes in Finland”; Susan R. Larson, “Dynamics of change: motivations for Finnish speakers’ choice of a Finland-Swedish education for their children”, PhD dissertation, Graduate school of education, University of Berkeley, CA, 2008; Juhani

Paasivarta, Finland and Europe: the period of autonomy & the international crises 1808–1914. Minneapolis: University of Minnesota Press, 1981; Pasi Saukkonen, “The Finnish paradox: language and politics in Finland”, Online Working Paper No. 5, RECODE, Helsinki, 2012; Eric Solsten and Sandra W. Meditz, Finland: a country study. Washington, DC: GPO, 1988.

- <sup>70</sup> Axel Lille, “Vår framtid”, in Svenskt i Finland: ställning och strävanden. Helsinki: Svenska Studenters Partidelegation, 1914, p. 191.
- <sup>71</sup> See Allardt, “Bilingualism in Finland: the position of Swedish as a minority language”.
- <sup>72</sup> For example, see: Larson, “Dynamics of change: motivations for Finnish speakers’ choice of a Finland-Swedish education for their children”.
- <sup>73</sup> Allardt, “Bilingualism in Finland: the position of Swedish as a minority language”; Sahlberg, Finnish Lessons 2.0: what can the world learn from educational change in Finland?
- <sup>74</sup> See, for example, Spiegel Online, “[Finland’s language war: nationalists seek end to mandatory Swedish lessons](#)”, Spiegel Online, 26 August 2013.
- <sup>75</sup> It is debated whether Finland Swedes today remain a separate nationality or whether they are better referred to as an ethnic group. In a legal sense, however, the Finland Swedes do indeed constitute a separate nationality and not an ethnic minority because of their equal linguistic, cultural, and social status with Finnish speakers, as confirmed in the Constitution and the Language Act. Interestingly, and further indicating their separate identity, Finland Swedes have historically preferred the term “Finlander” (*finländare*) when referring to all Finnish citizens regardless of language, and the terms “Finland Swede” (*finlandssvensk*) and “Finn” (*finne*) when referring to people from the two different groups. See Anne-Marie Ivars, “Swedish in Finland in the 19<sup>th</sup> century”, pp. 1476–1482 in The Nordic languages: an international handbook of the history of the North Germanic



languages. Volume 2. Berlin: de Gruyter, 2005; Karmela Liebkind, Marika Tandefelt, and Tom Moring, "Introduction: why a special issue on the Swedish-speaking Finns", *International Journal of Sociology of Languages* (2007), no. 187-188: 1–11, 2007; Tore Modeen, "The cultural rights of the Swedish ethnic group in Finland", *Europa Ethnica*, 56, no. 3-4: 135–145, 1999. Matti Similä, "Immigrants and minorities in Finland: problems and challenges", pp. 97–112 in *Immigration in Europe: issues, policies, and case studies*, edited by David Turton and Julia González. Bilbao: Deusto University Press; Svenskfinland.fi, "Who are the Finland-Swedes?", Website, Luckan, 2010.

- <sup>76</sup> Johan Svenlin, "Klart lägre tröskel att bli lärare på svenska", *Hufvudstadsbladet*, 11 June 2011. Interestingly, the sole Swedish-speaking male teacher college in Nykarleby, which was accompanied by the female teacher college in Ekenäs, had an average acceptance rate of 55 per cent in the period from 1945 to 1957. However, this cannot be compared with today's figures since the old streamed education system ensured that much fewer people were eligible to apply. See Erik Birck, *Nykarleby stads historia del III. Nykarleby: Nykarleby stads förlag*, 1988.
- <sup>77</sup> The fact that Finland-Swedish teacher training has only been available at Åbo Akademi University's campus in Vaasa may also have contributed to lower application rates, but is unlikely to be the full story. Indeed, the average acceptance rate to teacher education at the University of Lapland, situated in a similarly sized (but more remote) city/region, was only 17 per cent in 2000-2009. This is despite the fact that the latter has had to compete with institutions in less remote locations, while the former has had no competition at all from other institutions in Finland. Further suggestive evidence that the location of teacher training is not a fully satisfactory explanation is that there were 45 applicants (of whom nine had the necessary pre-requisites) for 20 places in a special outsourced teacher education course for unqualified teachers at the University of Helsinki in 2014. Requirements for the course were lowered

significantly for entry in 2015, but there were still only 49 applicants, 27 of whom fulfilled the new requirements and were therefore accepted. See Joni Kyheröinen, "Bara hälften av klasslärarplatserna fylldes", Svenska Yle, 8 October 2014; Svenlin, "Klart lägre tröskel att bli lärare på svenska"; Åsa Thodén, "Grönt ljus för klasslärarutbildning i Helsingfors", Hufvudstadsbladet, 5 March 2015.

- <sup>78</sup> OECD, "Learning for tomorrow's world: first results from PISA 2003"; OECD, "PISA 2006. Volume 2: data", Report, OECD, 2007; Sataya Brink, Kari Nissinen, and Jouni Vettenranta, "Equity and excellence: evidence for policy formulation to reduce the difference in PISA performance between Swedish speaking and Finnish speaking students in Finland", Report no. 47, Finnish Institute of Educational Research, University of Jyväskylä, 2013.
- <sup>79</sup> Brink, Nissinen, and Vettenranta, "Equity and excellence: evidence for policy formulation to reduce the difference in PISA performance between Swedish speaking and Finnish speaking students in Finland". Similarly, the authors show that the absolute share of certified teachers is about 10 percentage points lower in Swedish-speaking schools.
- <sup>80</sup> Quoted in Peter Sjöholm, Johan Gullmets, and Eva Koskinen, "Enklare väg till katedern på svenska", Svenska Yle, 3 December 2013.
- <sup>81</sup> There are significant differences in terms of what the two different groups seek to study more generally. In 2003–2005, the average share of graduates from Finland-Swedish upper-secondary schools who applied to study economics, humanities, social sciences, and law at university was 58 per cent; the figure among graduates from Finnish-speaking upper-secondary schools was 38 per cent. See Erik Geber and Catharina Lojander-Visapää, "De svenska gymnasierna i Finland: en lägesanalys", Report, National Board of Education, Helsinki, 2007.
- <sup>82</sup> Heidi Harju-Luukkainen and Kari Nissinen, "15-åriga elevers resultatnivå i PISA 2009-undersökningen", Report, Finnish Institute for Educational Research, University of Jyväskylä, 2011. See also: Brink,

Nissinen, and Vettenranta, "Equity and excellence: evidence for policy formulation to reduce the difference in PISA performance between Swedish speaking and Finnish speaking students in Finland"; Viking Brunell and Pirjo Linnakylä, "Swedish speakers' literacy in the Finnish society", *Journal of Reading* 37, no. 5 (1994): 368–375; Jouni Välijärvi, Pirjo Linnakylä, Pekka Kupari, Pasi Reinikainen, and Inga Arffman, "De finländska framgångarna i PISA – några orsaker: PISA 2000", Report, Institute for Educational Research, University of Jyväskylä, 2003; Jouni Välijärvi, Pekka Kupari, Pirjo Linnakylä, Pasi Reinikainen, Sari Sulkunen, Jukka Törnros, and Inga Arffman, "The Finnish success in PISA – and some reasons behind it: PISA 2003", Report, Institute for Educational Research, University of Jyväskylä, 2007.

- <sup>83</sup> Heidi Harju-Luukkainen, Kari Nissinen, Sofia Stolt, and Jouni Vettenranta, "PISA 2012: resultatnivån i de svenskspråkiga skolorna i Finland", Finnish Institute for Educational Research, University of Jyväskylä, 2014.
- <sup>84</sup> Jan Hellgren, "Modersmål och litteratur i årskurs 9: en utvärdering av inlärningsresultat i modersmål och litteratur i årskurs 9 våren 2010", Report 2011:1, National Board of Education, Helsinki, 2011; Hirvonen, "Onko laskutaito laskussa? Matematiikan oppimistulokset peruskoulun päättövaiheessa 2011"; Kärnä, Hakonen, and Kuusela, "Luonnontieteellinen osaaminen perusopetuksen 9. Luokalla 2011"; Najat Oukraim-Soivio and Jorma Kuusela, "Historian ja yhteiskuntaopin oppimistulokset perusopetuksen päättövaiheessa 2011", Report 2012:3, National Board of Education, Helsinki, 2012; Juhani Rautopuro (ed.), "Hyödyllinen pakkolasku: matematiikan oppimistulokset peruskoulun päättövaiheessa 2012", Report 2013:3, National Board of Education, Helsinki, 2013.
- <sup>85</sup> Swedish-speaking pupils perform better in English, German, and French than their Finnish-speaking compatriots, but this is not surprising since Swedish is much more similar to those languages compared with Finnish. See Marita Härmälä, Mari Huhtanen, Chris Silverström, Raili Hildén, Juhani, Rautopuro, and Mika Puukko,

“Inlärningsresultaten i främmande språk i de svenskspråkiga skolorna 2013”, Report 2014:6, National Board of Education, Helsinki, 2014.

- <sup>86</sup> Apart from this and other potential reasons discussed later in this monograph, some have also argued that a higher degree of bilingualism in Finland-Swedish schools is an explanatory factor for the lower performance. However, excluding all bilingual pupils in these schools in PISA 2009 merely adds three points to their overall score in both scientific and reading literacy, while reducing the score in mathematical literacy by one point. These differences are too small to be statistically meaningful. Another hypothesis is that there is lower competition to upper-secondary education in Swedish Finland compared to Finnish Finland, which supposedly decreases efforts among Finland-Swedish pupils. Although it is difficult to prove or disprove this explanation, Swedish-speaking and Finnish-speaking upper-secondary schools had identical average initial grades among pupils who enrolled in 2009, which is suggestive evidence against it. Furthermore, Finland-Swedish pupils currently appear to improve at a faster rate between ages nine and 15 than Finnish-speaking pupils in mathematics. If lower competition to upper-secondary school has historically been an important explanation for lower performance, one would expect the opposite to be true. See Harju-Luukkainen and Nissinen, “15-åriga elever resultatnivå i PISA 2009-undersökningen”; Jari Metsämuuronen, “Perusopetuksen matematiikan oppimistulosten pitkäjäsenarviointi vuosina 2005–2012”, Report 2013:4, National Board of Education, Helsinki, 2013; Michael Uljens, “Om studentexamensproven 2012 och inträdespoäng till finska och svenska gymnasier i Finland”, Unpublished manuscript, Åbo Akademi University, Vaasa.
- <sup>87</sup> Simola and Rinne, “Education politics and contingency: beliefs, status, and trust behind the Finnish PISA miracle”.
- <sup>88</sup> Historical data on GDP per capita were obtained from the Maddison Project (<http://www.ggd.net/maddison/maddison-project/data.htm>).

See Jutta Bolt and Jan Luiten van Zanden, "The first update of the Maddison Project: re-estimating growth before 1820. Maddison Project Working Paper 4, 2013.

- <sup>89</sup> Solsten and Meditz, Finland: a country study.
- <sup>90</sup> Olli Kultalahti, "Internal migration and specialising labour markets in Finland", Finnish Yearbook of Population Research 37 (2001): 103–125.
- <sup>91</sup> Simola and Rinne, "Education politics and contingency: beliefs, status, and trust behind the Finnish PISA miracle".
- <sup>92</sup> Data obtained from Markus Samanni, Jan Teorell, Staffan Kumlin, Stefan Dahlberg, Bo Rothstein, Sören Holmberg, and Richard Svensson, "The QoG social policy dataset, version 4Apr12", The Quality of Government Institute, University of Gothenburg, 2012. Variables used: fr\_ss and sc\_bgi. See Robert J. Franzese, "Political participation, income distribution, and public transfers in developed democracies", Working Paper, Department of Political Science, University of Michigan, Ann Arbor, 2001; Linda Scruggs and James P. Allan, "The material consequences of welfare states: benefit generosity and absolute poverty in 16 OECD countries" Comparative Political Studies 39, no. 7 (2006): 880–904.
- <sup>93</sup> For individual-level evidence of this income effect, see Assar Lindbeck and Sten Nybeck, "Raising children to work hard: altruism, work norms, and social insurance", Quarterly Journal of Economics 121, no. 4 (2006): 1473–1503.
- <sup>94</sup> See Phil Cousineau, *The painted word: a treasure chest of remarkable words and their origins*. Berkley, CA: Cleis Press, 2012; Tuomas Tepora, "'Sisu': the Finnish for 'stiff upper lip'", Blog post, Queen Mary University of London, 30 October 2012.
- <sup>95</sup> Tepora, "'Sisu': the Finnish for 'stiff upper lip?'"
- <sup>96</sup> See Nima Sanandaji, "The surprising ingredients of Swedish success – free markets and social cohesion", IEA Discussion Paper no. 41,

Institute of Economic Affairs, London, 2012.

- <sup>97</sup> Figures are calculated from data provided in the European Values Study longitudinal data file 1981–2008, Data file version 2.0.0, Gesis Data Archive, Cologne. Since there are no data available for Norway in 2000, the average of the country's figures in 1990 and 2008, between which there was no change at all, are assigned to 2000.
- <sup>98</sup> Lindbeck and Nybeck, "Raising children to work hard: altruism, work norms, and social insurance"; Sanandaji, "The surprising ingredients of Swedish success – free markets and social cohesion".
- <sup>99</sup> Ibid.; Jean-Baptiste Michau, "Unemployment insurance and cultural transmission: theory and application to European unemployment", *Journal of the European Economic Assoc.* 11, no. 6 (2013); 1320–1347.
- <sup>100</sup> Gerhard Meisenberg and Michael A. Woodley, "Are cognitive differences between countries diminishing? Evidence from TIMSS and PISA", *Intelligence* 41, no. 6 (2013): 808–816. Similarly, the author of this monograph analysed the relationship between countries' initial GDP per capita and their annualised change in PISA mathematical literacy, reading literacy, and scientific literacy performance in the periods 2003–2012, 2000–2012, and 2006–2012 respectively. The estimates indeed display a negative relationship between initial GDP per capita and annualised change in mathematical literacy (coefficient: -0.0002, robust s.e.: 0.00004) reading literacy (coefficient: -0.0001, robust s.e.: 0.00004), and scientific literacy (coefficient: -0.0001, robust s.e.: 0.00004). Using the log of GDP per capita, to take into account diminishing returns, yielded almost exactly the same estimates.
- <sup>101</sup> Statistics Finland, "[Education in Finland: more education for more people](#)", Website, 12 November 2007.
- <sup>102</sup> OECD, "Education at a glance: OECD indicators 2002", Report, OECD, Paris, 2002.
- <sup>103</sup> Ibid.

- <sup>104</sup> Meisenberg and Woodley, “Are cognitive differences between countries diminishing? Evidence from TIMSS and PISA”.
- <sup>105</sup> OECD, “OECD skills outlook 2013: first results from the survey of adult skills”, Report, OECD, 2013.
- <sup>106</sup> Data obtained from Samanni, Teorell, Kumlin, Dahlberg, Rothstein, Holmberg, and Richard Svensson, “The QoG social policy dataset, version 4Apr12”. Variable used: sc\_bgi.
- <sup>107</sup> Simola, “The Finnish miracle of PISA: historical and sociological remarks on teaching and teacher education”, p. 210.
- <sup>108</sup> *Ibid.*, p. 209.
- <sup>109</sup> Richard Lynn and Terence Martin, “National differences for thirty-seven nations in extraversion, neuroticism, psychoticism, and economic, demographic and other correlates”, *Personality and Individual Differences* 19, no. 3 (1995): 403–406.
- <sup>110</sup> Tia Tulviste, Luule Mizera, Boel de Geer, and Marja-Terttu Tryggvason, “A silent Finn, a silent Finno-Ugric, or a silent Nordic? A comparative study of Estonian, Finnish, and Swedish mother-adolescent interactions”, *Applied Psycholinguistics* 24, no. 2 (2003): 249–265.
- <sup>111</sup> Data obtained from Statistics Finland’s database “[Population according to origin and background country by area 1990–2013](#)”.
- <sup>112</sup> See OECD, “PISA 2012 results: excellence through diversity”, Report, OECD, Paris, 2013.
- <sup>113</sup> Matti Rautiainen and Pekka Räihä, “Education for democracy: a paper promise? The democratic deficit in Finnish educational culture”, *Journal of Social Science Education* 11, no. 2 (2012): 8–23.
- <sup>114</sup> Wolfram Schulz, John Ainley, Julian Fraillon, David Kerr, and Bruno Losito, “ICCS 2009 international report: civic knowledge, attitudes, and engagement among lower-secondary school students in 38 countries”, Report, International Association for the Evaluation of Educational Achievement (IEA), The Hague, 2010.

- <sup>115</sup> Päivi Harinen and Juha Halme, "Hyvä, paha koulu: Kouluhyvinvointia hakemassa", Report, UNICEF, Helsinki, 2012, p. 7.
- <sup>116</sup> Kirsti Klette, Ingrid Carlgren, Jens Rasmussen, and Hannu Simola (eds.), "Restructuring Nordic teachers: analyses of interviews with Danish, Finnish, Swedish, and Norwegian teachers", Report no. 3, Institute of Educational Research, University of Oslo, 2002.
- <sup>117</sup> Pirjo Linnakylä and Viking Brunell, "Quality of life in the Finnish- and Swedish-speaking schools in Finland", pp. 203–222 in Reading literacy in an international perspective: collected papers from the IEA reading literacy study, edited by Marilyn Binkley, Keith Rust, and Trevor Williams. Washington, DC: US Department of Education, 1996.
- <sup>118</sup> Määttä and Paksuniemi, "At the roots of the pedagogy of Finnish teacher training: practicum as a core of teacher training in teacher college of Tornio in the 1920s".
- <sup>119</sup> Myllyntaus, "Education in the making of modern Finland", p. 160.
- <sup>120</sup> Atila Abdulkadiroğlu, Joshua D. Angrist, Peter D. Hull, and Parag A. Pathak, "Charters without lotteries: testing takeovers in New Orleans and Boston", NBER Working Paper no. 20792, National Bureau of Economic Research, Cambridge, MA, 2014; Joshua D. Angrist, Parag A. Pathak, and Christopher R. Walters, "Explaining charter school effectiveness", *American Economic Journal: Applied Economics* 5, no. 4 (2013): 1–27; Vilsa E. Curto and Roland G. Fryer Jr. "Schools for the poor: evidence from SEED", *Journal of Labor Economics* 32, no. 1 (2014): 65–93; Roland G. Fryer Jr., "Injecting charter school best practices into traditional public schools: evidence from field experiments", *Quarterly Journal of Economics* 129, no. 3 (2014): 1355–1407.
- <sup>121</sup> Viking Brunell, "Klimat och resultat i den finlandssvenska grundskolan – en fördjupad analys av PISA 2003", Rapport, Svenska kulturfonden, 2003; Harju-Luukkainen and Nissinen, "15-åriga elevers resultatnivå i PISA 2009-undersökningen"; Harju-Luukkainen, Nissinen, Stolt, and Vettenranta, "PISA 2012: resultatnivån i de svenskspråkiga skolorna i Finland".



- <sup>122</sup> Linnakylä and Brunell, "Quality of life in the Finnish- and Swedish-speaking schools in Finland".
- <sup>123</sup> *Ibid.*, p. 214.
- <sup>124</sup> Määttä and Paksuniemi, "At the roots of the pedagogy of Finnish teacher training: practicum as a core of teacher training in teacher college of Tornio in the 1920s", p. 126.
- <sup>125</sup> Alison King, "From sage on the stage to guide on the side", *College Teaching* 41, no. 1 (1993): 30–35.
- <sup>126</sup> Jean-Jacques Rousseau, *Emile, or on education*. London and Toronto: J.M. Dent & Sons Ltd, 1921.
- <sup>127</sup> Matti Leiwo, Jorma Kuusinen, Päivi Nykänen, Minna-Ritta Pöyhönen, "Kielellinen vuoro vaikutus opetuksessa ja oppimisessä II: peruskoulun luokkakeskustelun määrällisiä ja laadullisia piirteitä", Report no. 3, Institute for Educational Research, University of Jyväskylä, 1987. See Ingrid Carlgren, Kirsti Klette, Sigurjón Mýrdal, Karsten Schnack, and Hannu Simola, "Changes in Nordic teaching practices: from individualised teaching to the teaching of individuals", *Scandinavian Journal of Educational Research* 50, no. 3 (2006): 301–326.
- <sup>128</sup> Quoted in Carlgren, Klette, Mýrdal, Schnack, and Simola, "Changes in Nordic teaching practices: from individualised teaching to the teaching of individuals", p. 314.
- <sup>129</sup> Nigel Norris, Rita Asplund, Barry MacDonald, John Schostak, and Barbara Zamorski, "An independent evaluation of comprehensive curriculum reform in Finland", Report, National Board of Education, Helsinki, 1996, p. 29 and p. 85.
- <sup>130</sup> Kalle Juuti, Jari Lavonen, Anna Uitto, Reijo Byman, Veijo Meisalo, "Science teaching methods preferred by grade 9 students in Finland", *International Journal of Science and Mathematics Education* 8, no. 4 (2010): 611–632, p. 619.
- <sup>131</sup> Lasse Savola, "Structures of Finnish and Icelandic Mathematics

Lessons”, pp. 519–538 in *The first sourcebook on Nordic research in mathematics education*, edited by Bharath Sriraman, Christer Bergsten, Simon Goodchild Guðbjörg Pálsdóttir, Bettina Dahl, and Lenni Haapasalo. Charlotte, NC: Information Age, 2010. The quote is from pp. 30–31 in the draft chapter.

- <sup>132</sup> Paul Andrews, “Finnish mathematics teaching from a reform perspective: a video-based case-study analysis”, *Comparative Education Review* 57, no. 2 (2013): 189–211.
- <sup>133</sup> Ann-Sofi Røj-Lindberg, “Active learning of mathematics”, pp. 159–168 in *Te rito o te h matauranga: experiential learning for the third millennium, vol. 2*, edited by Nina Benton and Richard Benton. Auckland: James Henare Maori Research Centre for the International Consortium for Experiential Learning, 2001.
- <sup>134</sup> John Hattie, *Visible learning: a synthesis of over 800 meta-analyses relating to achievement*. New York: Routledge, 2009; John Hattie and Gregory Yates, *Visible learning and the science of how we learn*. New York: Routledge, 2014.
- <sup>135</sup> Jan Bietenback, “Teacher practices and cognitive skills”, *Labour Economics* 30 (2014): 143–153; Victor Lavy, “What makes an effective teacher? Quasi-experimental evidence”, NBER Working Paper no. 16885, National Bureau of Economic Research, Cambridge, MA, 2011; Stephen Machin and Sandra McNally, “The literacy hour”, *Journal of Public Economics* 92, no. 5–6 (2008): 1441–1462; Guido Schwerdt and Amelie C. Wuppermann, “Is traditional teaching all that bad? A within-student between-subject approach”, *Economics of Education Review* 30, no. 2 (2011): 365–379.
- <sup>136</sup> Catherine Haeck, Pierre Lefebvre, Phillip Merrigan, “The distributional impacts of a universal school reform on mathematical achievements: a natural experiment from Canada”, *Economics of Education Review* 41 (2014): 137–160.
- <sup>137</sup> Kjell Granström, “Arbetsformer och dynamik i klassrummet”, pp. 223–245 in *Kobran, nallen och majjen: tradition och förnyelse i*

svensk skola och skolforskning, edited by Staffan Selander.  
Myndigheten för skolutveckling: Stockholm, 2004.

- <sup>138</sup> Skolverket, "Nationella utvärderingen av grundskolan 2003: sammanfattande huvudrapport", Report, National Board of Education, Stockholm, 2004.
- <sup>139</sup> Anders Björklund, Peter Fredriksson, Jan-Eric Gustafsson, and Björn Öckert, "Den svenska utbildningspolitiska arbetsmarknadseffeter: vad säger forskningen?", Report 2010:13, Institute for Evaluation of Labour Market and Education Policy, Uppsala, 2010; Carlgren, Klette, Mýrdal, Schnack, and Simola, "Changes in Nordic teaching practices: from individualised teaching to the teaching of individuals".
- <sup>140</sup> Ibid.; Savola, "Structures of Finnish and Icelandic Mathematics Lessons".
- <sup>141</sup> Data provided by Jouni Välijärvi in personal email correspondence.
- <sup>142</sup> See the National Center for Education Statistics (<http://nces.ed.gov/surveys/pisa/idepisa/>).
- <sup>143</sup> Giorgio Brunello and Lorenzo Rocco, "The effect of immigration on the school performance of natives: cross country evidence using PISA test scores", *Economics of Education Review*, 32 (2013): 234–246. The effect is calculated by using the estimates from the web appendix, which include both first- and second-generation immigrants. The marginal effect is 0.202 and the average score among natives in 2006 was 555. This gives us:  $((0.202*1.5)/100)*555 = 1.68$ .
- <sup>144</sup> Hautamäki, Kupiainen, Marjanen, Vainikainen, and Risto Hotulainen, "Oppimaan oppiminen peruskoulun päättövaiheessa: Tilanne vuonna 2012 ja muutos vuodesta 2001".
- <sup>145</sup> Data retrieved from the PISA Database 2000 (<http://pisa2000.acer.edu.au/>) and 2009 (<https://pisa2009.acer.edu.au/>).
- <sup>146</sup> Brunell, "Klimat och resultat i den finlandssvenska grundskolan – en fördjupad analys av PISA 2003"; Harju-Luukkainen and Nissinen, "15-åriga elevers resultatnivå i PISA 2009-undersökningen".

- <sup>147</sup> Maria Gestrin-Hagner, "Finlandssvenska elever struntar i läxorna", Hufvudstadsbladet, 25 March 2011; Kärnä, Hakonen, and Kuusela "Svenskt sammandrag av rapporten 'Luonnontieteellinen osaaminen perusopetuksen 9. Luokalla 2011'".
- <sup>148</sup> Viking Brunell and Pirjo Linnakylä, "Swedish speakers' literacy in the Finnish society", *Journal of Reading* 37, no. 5 (1994): 368–375; Warwick B. Elley, "How in the world do students read? IEA study of reading literacy", Report, International Association for the Evaluation of Educational Achievement (IEA), The Hague, 1992. Finland-Swedish pupils were tested in a parallel national study in Finland, and were therefore not assigned an international scale score. However, since they performed exactly on par with Swedish students in terms of average percentage correct answers, the author of this monograph assigned them the same international scale score as well for the purpose of comparison.
- <sup>149</sup> Harju-Luukkainen and Nissinen, "15-åriga elevers resultatnivå i PISA 2009-undersökningen"; Harju-Luukkainen, Nissinen, Stolt, and Vettenranta, "PISA 2012: resultatnivån i de svenskspråkiga skolorna i Finland"; OECD, "Learning for tomorrow's world: first results from PISA 2003". In PISA 2000, Finland-Swedish pupils performed 35 points lower in reading literacy than Finnish-speaking pupils (and 3 points lower than Swedish pupils), but these comparisons are unreliable given the small sample of Finland-Swedish schools/pupils who participated (see Välijärvi, Linnakylä, Kupari, Reinikainen, and Arffman, "De finländska framgångarna i PISA – några orsaker: PISA 2000"). In PISA 2003, however, Finland-Swedish schools were oversampled to increase reliability in the comparisons.
- <sup>150</sup> Figures are calculated from data provided in the European Values Study longitudinal data file 1981–2008, Data file version 2.0.0, Gesis Data Archive, Cologne. The figures are essentially the same when calculating the average among all parents or for the entire population.
- <sup>151</sup> Recently, a Swedish journalist also noted that Finnish classrooms today appear considerably less hierarchical and traditional than how they are often portrayed in Sweden. See Maria Sundén Jelmini,

"Få läxor, korta dagar – och ändå i världstopp", Svenska Dagbladet, 12 March 2015.

- 152 Katariina Kämppi, Raili Välismaa, Kristiina Ojala, Jorma Tynjälä, Ilona Haapasalo, Jari Vilberg, and Lasse Kannas, "Koulukokemusten kansainvälistä vertailua 2010 sekä muutokset Suomessa ja Pohjoismaissa 1994-2010. WHO-Koululaistutkimus (HBSC-Study)", Report 2012:8, National Board of Education, Helsinki, 2012.
- 153 Pasi Sahlberg, "Key drivers of educational performance in Finland", Keynote speech, International Symposium of the Council of Chiefs of State School Officers, Washington, DC, 27 April, 2010.
- 154 Sahlberg, Finnish lessons 2.0: what can the world learn from educational change in Finland?, p. 198.
- 155 Indeed, the new national curriculum uses a language that clearly displays its constructivist origins. For example, the new document reads: "The foundations of the curriculum have been developed from a view of learning in which the pupil has an active role. The pupil should learn how to set up goals and solve problems both independently and together with others.... The teacher should choose working methods in consultation with pupils, and guide them especially in the use of new methods in order to make them more independent and goal oriented in their ways of working" (Finnish National Board of Education, "Grunderna för läroplanen för den grundläggande utbildningen 2014", Policy document, Helsinki, 2014, p. 14 and p. 30). Such explicit statements on methods, especially regarding pupil influence, do not appear to be included in the 2004 national curriculum (Finnish National Board of Education, "Grunderna för läroplanen för den grundläggande utbildningen 2004", Policy document, Helsinki, 2004).
- 156 Graham Vulliamy and Maija-Liisa Nikki, "The comparative context for educational reform in England and Finland", Paper presented at the British Educational Research Association's symposium on "A comparative analysis of curriculum change in English and Finnish primary schools: the York-Finnish project", York, 1997, p. 3.

- <sup>157</sup> Sahlberg, Finnish lessons 2.0: what can the world learn from educational change in Finland?
- <sup>158</sup> Carlgren, Klette, Mýrdal, Schnack, and Simola, “Changes in Nordic teaching practices: from individualised teaching to the teaching of individuals”; Pasi Sahlberg and John Berry, *Small group learning in mathematics: teachers’ and pupils’ ideas about groupwork in school*. Turku: Finnish Educational Research Association, 2003.
- <sup>159</sup> Sahlberg, Finnish lessons 2.0: what can the world learn from educational change in Finland?, p. 168.
- <sup>160</sup> Sahlberg and Berry, *Small group learning in mathematics: teachers’ and pupils’ ideas about groupwork in school*, p. 26.
- <sup>161</sup> Sahlberg, Finnish lessons 2.0: what can the world learn from educational change in Finland?
- <sup>162</sup> This is especially true since the type of professional development offered to teachers in the decentralised era differs significantly between schools and municipalities. See Sahlberg, Finnish lessons 2.0: what can the world learn from educational change in Finland?
- <sup>163</sup> Kämppi, Välimaa, Ojala, Tynjälä, Haapasalo, Vilberg, and Kannas, “Koulukokemusten kansainvälistä vertailua 2010 sekä muutokset Suomessa ja Pohjoismaissa 1994–2010. WHO-Koululaistutkimus (HBSC-Study)”. Also, PISA data tell a similar story. For example, between 2000 and 2012, the share of 15-year olds agreeing that pupils get along well with most teachers increased from 64 per cent to 79 per cent. Other similar measures also improved in the same period. Nevertheless, subtle changes in the phrasing of the questions make these comparisons less reliable. See the PISA Database 2000 (<http://pisa2000.acer.edu.au/>) and 2009 (<https://pisa2009.acer.edu.au/>).
- <sup>164</sup> Antero Malin and Pirjo Linnakylä, “Multilevel modelling in repeated measures of the quality of Finnish school life”, *Scandinavian Journal of Educational Research* 45, no. 2 (2001): 145–166.

- <sup>165</sup> Harinen and Halme, “Hyvä, paha koulu: Kouluhyvinvointia hakemassa”, p. 7.
- <sup>166</sup> Finnish National Board of Education, “Grunderna för läroplanen för den grundläggande utbildningen 2014”.
- <sup>167</sup> Daisy Christodoulou, *Seven myths about education*, London: Routledge, 2014; Robert Peal, *Progressively worse: the burden of bad ideas in British schools*. London: Civitas, 2014.
- <sup>168</sup> Hannah Arendt, “The crisis in education”, pp. 173–196 in *Between past and future* by Hannah Arendt. New York: Viking Press, 1961. The essay was first published in 1954.
- <sup>169</sup> Sigmund Freud, *Civilization and its discontents*. New York: Jonathan Cape and Harrison Smith, 1930.
- <sup>170</sup> Yann Algan, Pierre Cahuc, and Andrei Shleifer, “Teaching practices and social capital”, *American Economic Journal: Applied Economics* 5, no. 3 (2013): 189–210.
- <sup>171</sup> Bietenback, “Teacher practices and cognitive skills”.



## ABOUT THE CENTRE FOR POLICY STUDIES

- One of the UK's leading think tanks, independent from all political parties and pressure groups.
- Founded by Margaret Thatcher and Sir Keith Joseph in 1974 to encourage vigorous support for the free market, liberty and a strong nation.
- Promotes policies for lower tax, smaller government, competitive markets, greater freedom and responsibility for individuals, business and civil society.
- Relies for funding entirely from individual and corporate supports.
- Chairman: Lord Saatchi

*The aim of the Centre for Policy Studies is to develop and promote policies that provide freedom and encouragement for individuals to pursue the aspirations they have for themselves and their families, within the security and obligations of a stable and law-abiding nation. The views expressed in our publications are, however, the sole responsibility of the authors. Contributions are chosen for their value in informing public debate and should not be taken as representing a corporate view of the CPS or of its Directors. The CPS values its independence and does not carry on activities with the intention of affecting public support for any registered political party or for candidates at election, or to influence voters in a referendum.*





## **BECOME AN ASSOCIATE OF THE CENTRE FOR POLICY STUDIES**

The Centre for Policy Studies is one of Britain's best-known and most respected think tanks. Independent from all political parties and pressure groups, it consistently advocates a distinctive case for smaller, less intrusive government, with greater freedom and responsibility for individuals, families, business and the voluntary sector.

Through our Associate Membership scheme, we welcome supporters who take an interest in our work. Associate Membership is available for £100 a year. Becoming an Associate will entitle you to:

- all major CPS reports produced in a 12-month period
- invitations to lectures and conferences
- advance notice by e-mail of our publications, briefing papers and invitations to special events

For more details, please write or telephone to:

Jenny Nicholson, Deputy Director of Fundraising

Centre for Policy Studies

57 Tufton Street, London SW1P 3QL

Tel: 020 7222 4488

Email: [jenny@cps.org.uk](mailto:jenny@cps.org.uk)

Website: [www.cps.org.uk](http://www.cps.org.uk)

Since Finland's top ranking in the first international PISA league tables in 2001, policymakers from around the world have tried to learn from the unexpected and extraordinary success of its education system.

Why did Finland's pupils do so well? Popular explanations include the country's focus on equity, the high standard of teacher training, a comparatively low workload, and the lack of market reforms and school accountability. But research does not support any of these conclusions. In fact, Finland's rise began well before most of these policies were able to take effect – and its recent decline started soon after they took hold.

Instead, Finland's success appears to be the result of deep-rooted historical, socio-economic and cultural factors, combined with a resistance to the rising global tide of progressive teaching methods. Its current fall can in turn be linked to cultural changes and recent reforms which may have undermined the causes of its achievements. The findings of this monograph shed new light on Finland's educational performance and provide important lessons for policymakers.

Price £10.00

