

Eduardo Andere M.

# Teachers' Perspectives on Finnish School Education

Creating Learning Environments

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*Dedication*

*To teachers, principals, professionals,  
students and experts in Finland who kindly  
opened up Suomi for me*

# Preface

After the release of the results of PISA in 2001, the world suddenly noticed the amazing success of Finland, which topped the international charts in reading, mathematics, and science. The world then wanted to know what accounted for the improvement in education in this small European nation. Until now, one book, Pasi Sahlberg's *Finnish Lessons*, told the story of the historical and political transformation of the Finnish school system.

However, we now have Eduardo Andere's insightful account of what was happening inside Finnish classrooms. Andere has spent the past decade traveling the world in search of the best school system, what he has called "the Shangri-la" of education. He visited 18 high-performing nations and studied what they were doing. After careful review, he chose Finland as the best example of schooling for the twenty-first century. Finland has not only high test scores on PISA but is also one of the world's most equitable school systems. It has aimed to make every school a good school and to avoid the extremes of affluence and poverty that are so often reflected in schools.

Andere spent time in schools and classrooms, trying to understand and report the perspectives of principals and teachers. He is not as interested in describing the formal system and policies as he is in understanding what makes it tick, as seen and experienced by practitioners. This gives his book a unique value.

Like Sahlberg, Andere recognizes that a key feature of education in Finland can be summed up in three words: Trust in teachers. This means that highly trained and qualified teachers are the decision makers in their schools. There is no bureaucratic monitoring, no need for standardized tests to assess students or to hold teachers "accountable." Teachers are responsible, and the government does not need to use external testing to measure their quality.

This feature—trust in teachers—creates a teachers' culture. One teacher said to Andere, "We have a good attitude, respect our teaching work and take it seriously. We are passionate about teaching." In other words, teacher professionalism and teacher autonomy go together, not just as words, but as reality.

The Finnish government has determined to make all schools good schools. Parents can choose the school their child attends knowing that it will be a good school. The Finnish government has also dedicated itself to making their schools beautiful.

Some of the best architects have designed schools, and Finns are proud of their beautiful schools. Schools are often recognized as the most prominent buildings in villages, towns, and cities. This reflects the high cultural priority that Finns attach to schooling their children well.

Learning is student-centered. Children in the early years are not prepared to take tests; play is emphasized in preschool and in the earliest grades, not academic learning. Cooperative learning is emphasized even in high school.

Also notable is what Finland does not have, in contrast to the USA and some other nations: There are no vouchers, Virtually no publicly-funded private schools, and no “Teach for Finland.” There is no competition among schools for test scores because students do not take standardized tests.

As one often finds in every nation, the schools reflect the cultural values of the society. In Finland, according to principals and teachers, school and home together emphasize sociability, honesty, trust, and kindness. Finnish schools want their students to feel secure as learners and not to feel the artificial stress induced by standardized testing.

As Eduardo Andere reports in this book, they seem to have reached their goals. Their students perform well on international tests, where there are no stakes attached, even though they never encounter such tests in their daily school life. Finland indeed offers an attractive model for the world of the twenty-first century: Not dog-eat-dog competition and survival of the fittest, but a school system where the needs of developing children are recognized and addressed by well-prepared teachers and principals.

September 2013  
New York, NY

Diane Ravitch

## **Preface and Acknowledgements: What I Learned and Whom I Learned It from**

Jouni Välijärvi, prestigious professor and researcher at the University of Jyväskylä, is the person who opened the doors of Finland for the first time back in March 2004. Jouni responded to my requests for support in order to locate high performing schools all around Finland. Now I know that trust is a great value of the Finnish culture, and Jouni, after reading my first proposal, trusted me. In addition, Jouni organized detailed agendas for my frequent visits to schools. With Jouni, I learned about the dichotomy of life for Finnish people where on weekdays they live in modern houses or apartment buildings and on weekends or vacation they travel to their bucolic Summer cottages with minimum modern facilities and both lots of forests and lakes and nature around them. Finnish people have a very poetic and respectful relationship with nature and the environment.

Maarit Rossi, not only opened the doors of her school and the secrets of the Finnish school education but also invited me, on different occasions, to her dream house on the shores of a calm sea in Southern Finland. Maarit and her husband Jukka Rossi, have been my hosts and today, are close friends. With them, in numerous times, we have shared stories of education and life. At the shore by her house, we fished, walked on a frozen sea, and were witnesses to the magnificent sunsets of Finland. Maarit Rossi is co-author of a nine-book series for teaching and learning mathematics at the lower secondary level. When I saw her work several years ago, I told her “this is a PISA-like approach”. She then decided to take their work to the Web under the name of Paths to Math.

Irmeli Halinen, an official at the National Education Council of Finland, and despite her busy work schedule, has awarded several interviews and has also facilitated me access to schools and readings about education policy and success. Irmeli, as it happened with Jouni and Maarit, clarified constant doubts and answered many questions. With Irmeli, I learned that Finnish authorities have a big respect for autonomy of municipalities, principals, and teachers in the daily life of schools. I also learned about the philosophy behind the famous Finnish curriculums and their most recent reforms and additions.

Hannele Niemi, distinguished professor and researcher of the University of Helsinki also has been a guide and mentor in my constant inquiries on education in Finland. With her, I sustained several interviews in Helsinki and exchanged comments on the school education of her beautiful country. Her husband Seppo Niemi and



former school rehtori, kindly read and commented on a much earlier Spanish written manuscript of school education in Finland; my gratitude to Seppo for his time and suggestions. With Hannele and Seppo, I learned that there is not only social integration in schools, but also in neighborhoods. On her beautiful home surroundings Hannele and Seppo pointed out that many people from different professional or work backgrounds, live on the same block, most of them built by hand from scratch by the owners. Hannele and Seppo built their homey house with their own hands. Here, I learned the importance of a comprehensive school education where children from a very early age take wood and metal workshop classes in the school and are surrounded by a family learning environment where parents and older siblings are frequently building houses, rooms, and furniture or fixing electricity and water installations.

Elisa Heimovaara of the University of Jyväskylä awarded me two long interviews and provided me with lots of reading materials, both statistical and bibliographic, that allowed me to get a deeper understanding of education in Finland, and more specifically about the famous process for the selection and training of teachers. Elisa also elaborated some agendas of visits with various experts, principals, and teachers linked with the prestigious University of Jyväskylä. I learned with Elisa about the transition towards a certification and compatibility in higher education studies in Europe, the so-called “Bologna Process”. In essence the initial training of teachers remained the same but the program is now clearly divided in two sections: undergraduate and graduate. Teachers-to-be are carefully selected on a very demanding admission process and then are highly trained in theory and practice for nearly 5 years of full-time university studies.

My gratitude also goes to Paula Alatalo, a young and energetic principal of a comprehensive school and chief of the municipal education services, at the time, in the municipality of Enontekiö. She opened up her school for a full day of meetings, observations, and interviews. Since my visit, she has remained in communication with me to clarify doubts and improve my knowledge of education in northern Finland and Lapland. From Paula Alatalo and her family, I learned that Finnish people stay working for many years after retirement. Her father-in-law, a 75-year-old man, and former teacher, is not only a luthier of exquisite violins and cellos, but also a proud owner of a huge forest where he can cut four or five pine trees in less than one hour, carry them on a snow motorcycle, and pile them as logs to use at home or sell in the market. Both he and his son, a luthier too, have built their own house. Here, I also learned, as with many other Finnish friends, that the sauna tradition is a cultural habit in their daily life.

Martti Hellström, director and educational and pedagogical leader, has met with me on three occasions in three different full-day visits to his famous Aurora Koulu. From Martti Hellström, I learned the total commitment and motivation of Finnish teachers and principals who make of their education career a life project. Martti has facilitated materials and concepts to deepen my understanding of creative learning and school and classroom learning environments, as a means to nurture the students’ cognitive and emotional skills. With their special school curriculum and timetabling, Aurora taught me the meaning of school and teacher autonomy in Finland.

Leena Sipponen is the rehtori of a wonderful and very modern school. She, her assistant principal Pirjo Holm, and many teachers, have given me access to the school at three different times, for observation, interviews, and picture taking, including of course, lunch, as happened with most of the schools I have visited in Finland. Aurinkolahti is an impressive school. It is for students with a special interest in technology. Here, I learned how teachers work in professional learning communities for a variety of school projects. They merge technology, art, and design in very innovate ways. The school is nestled by a community park and a complex of apartment buildings that blend the school and the neighborhood into a single compound.

Arja Alaraudanjoki gave me access to the Finnish school farthest to the north beyond the arctic circle and very near to the Barents Sea and Arctic Ocean. Until early 2013, we kept in touch for clarifications and explanations of deep Sami-culture schooling. Sadly, she died with her husband on a snow-motorcycle accident early this year. She was not only the principal of her school and of other nearby schools, but also chief of education services in the municipality of Utsjoki. She frequently updated me with news about the beautiful landscape of this remote part of Suomi. Here, I learned the concept of equality of education in Finland. No matter how far one is from the large metropolitan cities, how rural, small or isolated the school is, the high quality of the teachers and principals and the education services and facilities is very homogeneous. The Finnish have a very solid ground with high standards of educational services and a supportive local community. This creates, besides the school-learning environment, an encompassing sociocultural learning environment.

Asko Peuraniemi, director of a school hospital in Rovaniemi, was key along with Maarit for the organization of several agendas of visits to schools in northern Finland. Driving north from Ivalo and Inari, Asko and I shared a spectacular view of the Finnish Tundra. Asko introduced me to Arja from Utsjoki. Back in Rovaniemi where Asko's hospital school is, I learned how the Finnish education system runs a web of school hospitals to cover all areas of the country. I was able to take over a small class of around eight students most of them under a special hospital's or physician's care. Again, education services and quality, similar to any other school in Finland, is provided for all children including the ones under medical attention.

Kirsti Savikko, director of a charming elementary school in Turku, not only organized an agenda of visits to several schools in the city, but also showed me a leadership style where decisions are shared and taken with the school teachers. She managed to get the permission from the local education authorities for me to stay in an apartment for visiting teachers in the compounds of an upper secondary school during my 2009 visit to this beautiful and historic city, the former capital of Finland.

Mika Tuononen is a kind and knowledgeable expert in the Office of Statistics of Finland. Mika not only granted me two extensive interviews in two different visits, but guided me and helped me to get statistical information of diverse nature on education, schools and teachers. I learned about the best ways to get information about Finnish education on the Office's site and through Internet. With his introduction, I was able to talk to two more experts who shared important time series datasets about schools and the economic wellbeing of Finland from the early 1900s.

Thanks also to Tanja Talvensalo, a teacher and preschool and primary education expert who shared with me knowledge of preschool class connection between pupils and their teachers. I was impressed by her point of view of teaching as learning, and the way Finnish preschool teachers understand the value of early education, more in terms of developing social and emotional skills than on the acquisition of formal cognitive knowledge as many schools or education systems around the world insist on doing.

Thanks to Marjut Tenkanen, the principal and Tilly Kajestski a special education teacher and teacher of English who opened me the doors of their magnificent, beautiful and recently built school Hösmärinpuisto Koulu. This is a school for initial, preschool and first and second grades of primary education children. It is an education palace for very young pupils. I have not seen such a beautiful school and display of facilities for the education of such young children in all my visits to schools for young children around the world. Here, I learned the value that Finnish adults place on the education of Finnish small children. Everything, from the teachers' teachings to the premises, the architectural design, the furniture, the open spaces, the naturally lighted hallways and classrooms, and the huge interior patio, are all thought for the little ones, creating a wonderful learning environment or learning cocoon.

Tuomo Lähdeniemi is a business consultant with a special interest in educational authorities and schools. He has a deep knowledge of culture, business, and schools. He knows everyone and knows how to connect the tools of information technology to the daily work of teachers and principals. Kirsty, Tuomo, and Maarit have done an appreciable circle of friendship that has helped me to know the secrets of the beautiful Finnish culture. My gratitude also to Jaana Puranen, Ulla Muraja, and her husband Asko Muralla, who got me interviews in their schools and welcomed me to their wonderful households in Kuusamo and Hetta.

Ms. Ulla Väistö and Ms. Anne Lammila, former and current ambassadors of Finland in Mexico have been very supportive of my research, not only by helping me with contacts, and a prologue written by the former ambassador to a previous publication, but also by promoting my work in Mexico and other Spanish speaking countries.

My thanks also to all directors and teachers, experts, and education professionals in Finland who have participated in interviews or responded to my constant doubts about their schools and education system. Among them, my gratitude to Riitta Parviainen, Pekka Kupari, Jukka Kuittinen, Ismo Falck, Raili Pajari, Jannu Kononen, Harry Reinikainen, Raimo Poutiainen, Jukka Tanska, Anja-Liisa Alanko, Kari Pitkänen, Lasse Keisalo, Jorma Kauppinen, Raimo Vuorinen, Pirjo Linnakylä, Heidi Kohi, Jorma Lempinen, Tiina Nevanpää, Jukka Alava, Ari Huovinen, Reijo Laukkanen, Raimo Nurminen, Olli Savela, Heikki K. Lyytinen, Hannu Simola, Helena Rasku-Puttonen, Taina Lehtonen, Pekka Luoma, Ilkka Roininen, Ulla Hynönen, Sari Keinonen, Jukka Husu, Bertel Wahlström, Hannele Mustonen, Eeva Huittinen, Esa Pasma, Pekka Luoma, Päivi Ristolainen-Husu, Leena Tuuri, Hely Parkkinen, Risto Väyrynen, Meri Numio, Ritta-Maija, Liisa Pöykkö, Jyri Piironen, Pia Aaltonen, Kuösti Kurtakko, Pasi Sahlberg, Pentti Moilanen, Ilpo Tervonen, Irja-Kaisa

Lakkala, Jari Ikola, Jyrki Huusko, Päivi Hakala, Pirkaa Aalto, Tarmo Laithen, Vesa Valkila, Taina Kravik, Hannu Naumanen, Marjut Vaattovaara, Juha Kantola, Seija Nykänen, Rantsu Juha, Sirpa Valén, and Ari Pokka.

I have not included all the teachers, principals, students, or experts I have interviewed in my seven visits to Finland; if I did the list would be much longer. However, that is why I have dedicated this book to all the people I interviewed and met. My deep apologies if I missed a specific mention to persons that I should have named. My apologies in advance for involuntary misspellings of personal names and places.

My deep appreciation also go to Walter and Anita Roggeman from Flandes Belgium, who have sheltered me on my way to or from Finland to answer comparative questions between Flanders and Finland, with very different systems of education and teachers training programs and yet high students' performance in both countries. Walter, an experienced principal and education, has patiently answered numerous questions about education in Flanders.

I want to thank Dr. Mary Brabeck, Dean of the Steinhardt School of Culture, Education and Human Development of the University of New York, who has opened the doors of her institution on several occasions, as a visitor researcher, to facilitate my research and drafting of two long manuscripts and articles. Professor Diane Ravitch from the same university has been an intellectual mentor in the search of answers in the field of education and comparative education.

A very special and crucial person and friend in this endeavor is Isobel S. McGregor, a retired Scottish inspector from the former HM Inspectorate of Education, today Education Scotland. She is now a consultant for the OECD, the Scottish government, and many others governments around the world. Isobel S. McGregor read the entire manuscript and helped me to clarify ideas and concepts in a comparative framework. From Isobel, and Scotland, I learned the policy shift from a pedagogy of teaching to a pedagogy of learning and the importance of formative and qualitative evaluation in the improvement of students' performance and teachers' work.

Elisa Guerra and Ms. Jana Schroeder helped me with translations and copy editing of previous versions of the final manuscript. Last but not least, I want to thank, of course, Springer and more specifically my editor Bernadette Ohmer, and the peer reviewers for their comments and analysis of my work.

# Prologue

Teachers perspectives on Finnish school education  
The joy of discovery!

Visitors' questions tell you most about the special characteristics of schools in your own country." Eduardo Andere's first visit to Finland in March-April 2004 further confirmed this empirical notion I had adopted through numerous previous visitors. Coming from outside, Eduardo perceived things that people grown into the Finnish system can no longer see or would not regard as anything special. It was also typical of him that after the school visits and interviews he soon had twice as many new questions.

Since that first meeting, we have had several opportunities to deepen our mutual understanding of Finnish schools and schools in other parts of the world. Our many discussions while admiring the lakefront scenery at my family's summer place, at the kitchen table with good food, during car trips to schools, and amidst the chaos in my office have offered me best possible lessons about the characteristics of different education systems and the unique features of Finnish schools. Eduardo has always been characterized by his openness and frankness to see and experience the daily life in schools just as it is, without prejudice and strong personal preconceptions, which have guided the perceptions and conclusions of many other visitors. This frankness and realism of his is also bound to get across to the readers of this book.

It is not easy to genuinely accompany with teachers and students in their daily life at school and at the same time monitor it as an unbiased external observer. It is possible, but requires from the researcher a lot of practice and experience, and also well-developed social competencies and advanced interaction skills. The author of this book has got all these. The advantage of the book is that as an outsider, the author is not carrying with him all that personal and historical experience that often prevents a native author to recognize the particular and critical features of his or her own system. On the other hand, because of his outstanding and long research work in schools, he is experienced enough to deeply understand and analyze the pedagogical culture and practices of the Finnish schools as an insider.

There are hardly many educational researchers in the world who have visited and obtained data from as many schools, or familiarized themselves personally with as many education systems as Eduardo Andere has done. His observations and con-

clusions have therefore a particularly sound and reliable basis when it comes to comparison of the functioning of different schools and cultural differences across education systems. Yet, he is not snowed under with his extensive data nor makes the mistake of drawing overly generalized conclusions from the data. Every school, teacher, and student is unique, but also communicates something relevant about their operation environment and the cultural background of their school system.

I am fascinated with Eduardo Andere's approach and efforts to develop a description of Finnish education, founding it on authentic comments. On the other hand, he applies numeric data diversely in order to place the Finnish education system within an international frame. In doing so, he succeeds in analyzing a national system simultaneously as an external observer and as an empathetic companion setting himself into teachers' daily life. The comments by students, teachers, administrators, and researchers are authentic and leave interpretations mainly for the reader to make. On the other hand, the author Eduardo Andere has carefully selected from his data such comments that reflect the most essential features of Finnish education.

The author does not underline the special characteristics of Finnish schools, but the selected texts indicate the particular focus of his attention. In fact, his choices are very revealing. They give the reader a strong personal view on factors that explain the good results of Finnish schools, even if the text is not pointing at them expressly. This type of presenting research results is very demanding. It was enabled only owing to the author's extensive personal familiarization with different countries and their school activities. His description of Finnish schools is credible and generalizable to the whole school system even when the discussion is taking place at the level of individual schools and the views of their teachers'.

For a nonnative speaker, Eduardo Andere's text is captivating due to its fluency and readability. Although being easy to read, the book does call for the reader to concentrate and take genuine interest so as to gain a deeper understanding about the functioning of Finnish schools. The author carefully avoids giving too ready answers to questions, which involve complex backgrounds and are bound to Finnish societal structures, history, and relationship to nature. This leaves the joy of discovery to the reader and offers an experience of gaining a deeper understanding. School can be developed into a better place for children and youth, but succeeding in this calls for a clear vision of the purpose of schooling, plenty of hard work, and above all, striving for genuine interaction with the students for their own good and for their better future.

February 2013  
Jyväskylä

Jouni Välijärvi

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# Chapter 1

## Introduction

### Setting the Stage

Finland is a remarkable country! And it has become the benchmark for good quality in school education in the twenty-first century. For some years now, prestigious professors and researchers from around the world have consistently used Finland as an example of high quality, high equity, and high efficiency in basic education. Diane Ravitch, Linda Darling-Hammond, and Andy Hargreaves from the USA have visited and praised Finland as an example of quality education. Hannele Niemi, Pasi Salhberg, and Jouni Valijärvi, among many others from Finland, have produced papers and books that testify to this success story and explain some of the reasons behind it. Organizations such McKinsey & Company and Pearson have produced school reports that highlight the high performance and high efficiency of Finland as a strong model for school education in the twenty-first century. Numberless op-ed columns as well as investigative newspaper reports from around the world also point to Finland as a success story.

In late 2001 when results from the Programme for International Student Assessment (PISA) 2000 test were published, Finland surprised the world with what Professor Andy Hargreaves from Boston College described as an unexpected success. Little known to the outside world prior to that time, Finland's education system had shown its muscle in all three of the main areas tested: reading, mathematics, and science.

In 2003, 2006, and 2009, Finland continued to achieve very high results in the PISA tests, topping the list of Organization for Economic Cooperation and Development (OECD) member countries and wrestling a tie with or even surpassing Asian tigers such as South Korea, Hong Kong, Japan, and, later on, Singapore, which has shown consistently high results in international tests both in Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) and now in PISA. Not only is it the case that Finland's 15–16-year-olds perform at a high and at equal levels but this also appears to happen with apparently little student effort (in terms of time spent in studying as perceived by students), only moderate expenditures, and one less year of formal schooling than in most other countries around the world.

Schools in Finland are inviting, attractive, well organized, very tidy, unassuming, and unpretentious from the viewpoint of information and communication technologies (ICTs) and other facilities such as fancy laboratories' highly technical scientific equipment like electron microscope or astronomical observatories that one may find in schools in Singapore, South Korea, or England, for instance. For decades, the main teaching device used by teachers has been—and continues to be—an overhead projector, although a more modern and versatile version is now a digital camera device attached to a light-emitting diode (LED) projector or white board system. Furthermore, teachers' salaries in Finland are not higher than those in other countries. Teachers and principals in countries like South Korea, Luxembourg, and Switzerland receive much higher salaries.

Thus, it comes as no surprise that Finland has attracted a lot of attention. Hundreds and even thousands of visitors flock to Finnish schools and the modern offices of the Finnish National Board of Education Opetushallitus (OPH) in search of answers to explain the high outcomes with only modest inputs. Finland is also exporting school education services to the world. Other countries trying to mimic this amazing success story have borrowed teachers, curriculum, books, and materials. And even other schools around the world portray in their brochures, displays, or promotion materials the use of an educational Finnish model.

And interest in Finland keeps growing, as countries from around the world are turning to school education and education policies to overcome the perceived challenges of a perceived unstoppable globalization and to service the needs for a different kind of citizenship: more knowledge based, ecologically driven, and multi-culturally aware.

## A Bit of History

In 1870, Finland's per capita gross domestic product (GDP) was equivalent to a third of the UK's per capita GDP,<sup>1</sup> two-thirds of Sweden's, and less than half of this sum for the USA. In 1970, these proportions had increased to 85, 75, and 63 %, and in 2005, 94, 96 and 74 %, respectively.<sup>2</sup>

Finland was not exactly a very poor country a century ago, although there are accounts of severe poverty crises during the seventeenth century and three historic famines in the 1690s, 1830s, and 1860s (Kirby 2006, pp. 42, 47–49, 112).

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<sup>1</sup> Which countries in the twenty-first century have a per capita GDP similar to a third of the UK's? The UK's GDP in 2005 was US\$ 32,690, using the purchasing power parity method (World Bank Development Indicators 2007, pp. 14–16). Countries in 2005 with a third of that can illustrate Finland's relative situation to the UK in 1870. Some of these are Botswana, Chile, Costa Rica, Malaysia, Mexico, the Russian Federation, and Uruguay. None of these countries are exactly very poor if we compare them to the world's poorest countries. And indeed Finland was not very poor in 1870.

<sup>2</sup> Statistics Finland 2008. Historical series of national accounts, based on: Riitta Hjerpe, *The Finnish Economy 1860–1985, Growth and Structural Change*. Bank of Finland Publications, Studies on Finland's Economic Growth XIII, Helsinki, 1989.

Interviewing a group of four people, one principal (a historian himself) and three assistant principals, in a training school for teachers (please refer to section “Jyväskylä’s Schools” in Chap. 5), I asked them: “How poor was Finland in reality?” Their answer:

We have never been really very poor. We were poor about 80 or 90 years ago. But we were no longer poor by the 1960s and 1970s, although the process was very gradual given the heavy economic load imposed by war debts with the Russians after WWII. It was a heavy load paid in kind with metal, cellulose and forest products. If we remember correctly, the debt would have amounted to 300 million dollars in gold.

Finland has not always been egalitarian, nor has it been the welfare society we know today. In the centuries and decades prior to its independence in 1917, society was divided. On one side, there were elitist Swedish families and high-society Finnish families close to the circles of those governing the country, some of whom were Swedish and others Russian. And on the other side, rural families dealt with harsh blows caused by corruption and poverty (Kirby 2006, pp. 51, 113).

In the nineteenth and early twentieth centuries, Finland was—as many countries find themselves today—a developing country. It is often said that Finland entered the industrialization process late. Until very recently, it could be characterized as a primarily rural society (Aho et al. 2006, p. 26) and a “country dominated by agriculture” (Simola 2002, p. 209). Thus, Finland appears to fall under the category of “late industrialization” (OECD 1982, p. 12). When it did become industrialized, Finland accelerated its development through foreign loans. Its growth contrasts dramatically with the Latin American version of “late industrialization,” with development in poor, neocolonized countries in the periphery limited by their dependent relationships with wealthy, imperialist, and powerful countries in the center.

In any case, prior to the Industrial Revolution, there were countless episodes of poverty, suffering, and profound crisis for many countries around the world. Finland was not an exception. There were times when it escaped human tragedies and other times when it was harshly impacted. In the medieval times, Finland “seems to have been less affected by the great demographic and agricultural crises of much of the rest of Europe” (Kirby 2006, p. 24), and somehow, it escaped the Black Death (Kirby 2006, p. 24) that “killed one-quarter of Europe’s population between 1346 and 1352” (Diamond 1999, p. 202). However, Finland suffered a devastating famine that killed a fourth of its population between 1695 and 1697 (Kirby 2006, pp. 42, 47) and then two more famines in the mid-nineteenth century (Kirby 2006, pp. 47, 112).

Whether it was poverty, epidemics, famine, invasions, or suffering that placed Finland at an initial disadvantage in relation to other more developed countries of the time, it has overcome all these challenges. Today, Finland stands out in the world as a strong and egalitarian welfare society, with high standards of living and a transparent good government; besides that, it is a competitive, highly educated country. In short, Finland is viewed as a success story (Hargreaves 2008; Hargreaves et al. 2007; Julin 2006, p. 1).

Now then, why is Finland’s success epitomized in its education? In reality, there are many reasons, with no single factor prevailing (Pehkonen 2008, p. 54).

A number of researchers have suggested different factors associated with the high performance of Finnish students, and they can be clustered in four categories: culture, equity, education system, and teachers. A fifth possibility might be the eclectic approach, based on a complex web of factors (Linnakylä et al. 2010) that work in an interdependent and sometimes mysterious way for the benefit of learning and education. This is quite probably the best explanation. Nevertheless, we will look at each of the four categories.

## Culture

Relevant expressions of culture in Finland begin with a positive attitude toward education, which has been viewed as an important resource for this small country throughout its entire history (Niemi and Jakku-Sihvonen 2006, p. 7). Education and teaching are highly valued by society (Ministry of Education 2002, p. 6; Välijäri 2008, p. 1), and there is strong political consensus on education policy (Ministry of Education 2008, p. 2). All of this culminates in society's appreciation (Kansanen 2003, p. 87) and trust (Aho et al. 2006, p. 132) in teachers and the teaching profession.

Based on these impressions, a likely hypothesis would be that the high social value placed on it is behind the success of Finnish education. However, Finland is not the only country with this high appreciation of education. In fact, it would be very difficult to find a nation that does not value education, at least at the rhetorical level, with the same or an even higher level of appreciation. We need only remember the famous speech by Tony Blair: "education, education, education."<sup>3</sup> Furthermore, cultural support or awareness is difficult to measure.

If we look at the hard numbers, such as expenditures, literacy results, and enrollment rates, we find Finland to be more or less on a par with other countries. Finland is not the nation with the highest educational expenditure per student as a share of the GDP or of total government spending.

And it would be impossible to argue that an education culture is more deeply rooted in Finland's history than in the history of other countries such as Russia, Sweden, France, Italy, England, and Spain.

However, without a doubt, culture is an important factor. Over the course of my interviews from 2004 to 2012, I found that students, teachers, principals, and experts frequently mentioned "culture" as the reason for Finland's education success: "People have been very interested in education since long ago"; "our parents saw education as the only way out of poverty"; "teachers are very respected in society"; "teachers, who were leaders in small villages and towns, had great influence in our history"; "even poor people had small bookshelves with books in their humble homes"; and "being able to read the Bible was a requirement for religious confirmation and marriage ceremonies as far back as the seventeenth century."

<sup>3</sup> <http://news.bbc.co.uk/2/hi/6564933.stm> (July 26, 2012).

Finland's history seems to support all these claims, but only up to a certain point. For example, there are stories of Finnish schools in the fourteenth century and of students who traveled abroad (particularly to Germany) to visit universities (Kirby 2006, p. 25), but "the Finnish periphery could not compete with richer areas of Europe in the output of verse or chronicles, not even with the Swedish heartland, where a vernacular literature was being created. 'Where Sweden was poor, Finland was poorer,' concludes Eric Christiansen, 'in educated men, in books, churches, in towns, in arts, in school'; and this disparity was to endure, colouring the relationship of the two halves of the kingdom and leaving a complex legacy of snobbish superiority on the one side, and resentful feelings of inferiority on the other" (Kirby 2006, p. 25).

If there was a strong impulse toward education in Finland, it seems to have been even stronger in Sweden and Germany, and cities like Rome, Paris, and Prague (Kirby 2006, pp. 25–26), with societies more culturally oriented and better educated than the Finnish society.

Education in Finland, in comparison with other nations, began late in its history. It started with the first alphabet, written as a book by Mikael Agricola in 1543, followed 100 years later by Catechism, promoted by Bishop Johan Gezelius, "the Elder" (Kirby 2006, p. 40):

Visitation records show disappointingly low levels of literacy, even in southwest Finland, and priests in charge of confirmation classes continued to rely on learning by heart rather than from the book. Slow, dogged persistence, aided by the stipulation of the 1686 Church Law that confirmation classes be held regularly at suitable locations around the parish, began to yield results, as parishes gradually got rid of their illiterate clerks and even began building special school rooms in which the clerk could teach the basics of reading and writing to the local children. (Kirby 2006, pp. 40–41)

Genuine transformation of education in Finland would not take place for centuries. The first school revolution occurred in the mid-nineteenth century, with the first elementary school (Simola 2002, p. 209) and the first Finnish-speaking secondary schools. The second half of the nineteenth century could be characterized as the "Enlightenment" of Finnish education, under the influence of two great thinkers and visionaries: Johan Vilhelm Snellman, philosopher, senator, and school principal (Kirby 2006, pp. 100 and 102), and the famous Reverend Uno Cygnaeus, frequently referred to as the father of compulsory education in Finland.<sup>4</sup>

The ideas and actions of the Finnish founding fathers, plus a reduction in the Church's power between 1865 and 1869, in both politics and education (Kirby 2006, p. 115), propelled a nationalist movement called "Fennomani" in favor of everything "Finnish" with a *rally* for education.

Four important events for education took place between 1850 and 1870, and all of them in a small village in the center of Finland: Jyväskylä. There, in 1858,<sup>5</sup> the first Finnish-language lower secondary school was established. Also, the first

<sup>4</sup> Professor Hannu Simola identifies Cygnaeus as the "founding father" (2002, p. 209).

<sup>5</sup> <http://www.peda.net/veraja/jklukiokoulutus/lyseonlukio/esittely/english> (July 30, 2012).

secondary school for girls was established.<sup>6</sup> In this village, Cygnaeus wrote both the first plan for the development of Finnish elementary education and an outline of teacher education at a normal school or teacher education college.

Cygnaeus visited education systems in Sweden, Denmark, Germany, and Switzerland, and these visits served as inspiration for his education plan and ideas.<sup>7</sup>

During the eighteenth and nineteenth centuries, there were scattered and isolated efforts to establish primary schools that would serve the population living in poverty in Finland (Ikonen 2004, p. 4), but these attempts were never implemented thoroughly. Formal efforts were conducted under the auspices of the Church, and on some occasions, more informally under parents' supervision (Ikonen 2004, p. 6). Results were meager (Ikonen 2004, p. 4), and this is why it is hard to determine when and where the first Finnish-speaking elementary school was established.

There are even stories of rural people opposing their children's education (Simola 2002, p. 209). Schools and compulsory education in Finland came late (Simola 2002, p. 29), and when they did appear, there is evidence that Finland borrowed the pedagogical principles developed by other education systems with more history and institutional experience (Kansanen 2003, p. 86). Thus, parallel to its "late industrialization," we can say that Finland also experienced "late school education."

Based on the above, the hypothesis that proposes a culture in favor of education as the factor behind Finland's education success is difficult to sustain as the only, key or main factor.

There is, however, an aspect of culture and the market conditions of the time that deserves more attention from researchers. This factor is suggested by a review of education policy conducted by the OECD in 1982 and summarized here:

Some OECD countries seem to have difficulty in attracting teachers to remote and sparsely populated regions. This is not the case in Finland where many teachers choose to be employed in small schools... School officials in Helsinki informed us that the high cost of housing in the metropolis coupled with disciplinary problems in some inner-city schools could also persuade teachers to prefer small schools in rural and depopulated areas. From our perspective, we were impressed by the argument that many teachers prefer, simply, the quality of life in the countryside rather than cities. (OECD 1982, p. 31)

This familiarity with rural culture and this love of life in the countryside, plus an early, active equalization of education and social policy through regional development, with emphasis on less-developed regions (OECD 1982, p. 19), together with the "popular momentum" of the eighteenth and nineteenth centuries to improve education for disadvantaged social classes (Ikonen 2004, p. 3), all help to explain Finland's education development and the small variance in results among its schools. Both the municipal and national government have worked together for many years not only to secure a balance in goal and processes but also in tandem to secure quality and equality. How? Local authorities provide high-quality education,

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<sup>6</sup> Jyväskylä University Museum, Uno Cygnaeus, <http://www.jyu.fi/tdk/museo/unoe.html> (July 30, 2012).

<sup>7</sup> Jyväskylä University Museum, Uno Cygnaeus, <http://www.jyu.fi/tdk/museo/unoe.html> (July 30, 2012).

and the national government balances any disadvantages in financial resources with a policy of positive discrimination through legislation, curriculum, funding, and teacher education.<sup>8</sup>

## Equity

Equity in education and in Finnish society is often regarded as the factor behind school success. I agree that it is certainly a relevant factor. However, equity must be considered together with other factors.

Despite the importance of the public policy mix in favor of equity in Finland, there are other countries (e.g., the other Nordic countries) that have maintained goals, policies, and habits amicable to equity for many years. Furthermore, countries like Australia, New Zealand, Flanders, England, Scotland, South Korea, Singapore, and Canada have fairly equal societies and also have the least designed and implemented educational policies for equity. Countries such as the USA, Chile, and Mexico have designed and implemented equality policies but rest on unequal or very unequal societies. Performance of the former is higher than the latter, but not as high and consistent as in Finland. Performance between the latter and Finland is even broader. Therefore, it appears to be that equity in a society is more related to performance than public policies targeting inequality. The conclusion seems to be that equity must be accompanied by other factors in order to trigger quality. At the same time, seeking quality without first ensuring equity is probably pointless.

Finland has demonstrated high and equitable educational performance outcomes across four rounds of PISA, specifically 2000–2002, 2003, 2006, and 2009–2010. However, according to PISA, other countries also have high levels of education equity, namely Denmark, Hungary, Ireland, South Korea, Mexico, Portugal, Spain, and Turkey (see, for instance, OECD 2007b, pp. 96, 98–99, 100, 102–104, 106–107). And although Finland does not always exhibit the highest levels of equity (defined as the lowest total variance in student performance as a percentage of the OECD's mean variance performance), it is the only country that remains consistently below the 90% mark in science, mathematics, and reading. Still, this argument certainly stops short of granting Finland a monopoly on equity, since other countries often show variance levels that are similar to or lower than those for Finland.

Equity is accomplished in Nordic countries through an aggressive policy for supporting children and their parents. One of these policies is maternity leave. In Finland, mothers may enjoy up to 43 weeks of maternity leave (Halinen 2008, p 3), while receiving approximately two-thirds of their salary. This leave may be combined with vacation time and, in practice, may extend to a full year. Theoretically, mothers have the right to extend their leave from work for two additional years. This rarely happens, however, since the monthly salary reductions are substantially

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<sup>8</sup> Professor Jouni Välijärvi comments about the balance of equity and quality of education despite initial financial disadvantages among municipalities.



higher than those for the first year of leave. Moreover, maternity leave may be shared with the father with paternity leave.

There is another aspect of educational equity within the framework of opportunities to learn that adds to the equal society of Finland, i.e., teachers' training and teachers' quality in the classroom. Everywhere in Finland, the high quality of teachers is very homogeneous. However, education in other countries, such as England, Germany, France, and New Zealand, with a very strong available teachers' force does not show the same consistence as Finland in high performance and low variance. Therefore, it also seems to be that the high quality and availability of teachers everywhere in an education system has to be coupled with other factors to have a more precise and complete story of success.

But what does the literature say about the influence of these equity and family support policies with regard to education? In a study of the influence of these policies on children's educational performance, Jun Xu (2008) provides further evidence to reinforce the findings of decades of educational research, specifically a strong correlation between family background and educational performance. However, the negative effects of a poor family status within a social democratic welfare state—which acts as a social equalizer—are less drastic. According to Jun Xu's study, Finland, Denmark, Iceland, Norway, and Sweden can be described as social democracies with strong social welfare and social security systems. Therefore, it appears to be that social welfare in Finland, although relevant to the study of associated factors, cannot be offered as the key element of a successful school education.

## Education System

Numerous factors may be clustered under this category: a comprehensive school education system, centralization, decentralization, educational planning, leadership, devolution of power and power sharing, curriculum (backed by learning theories and pedagogies), age of school entry, spending, innovation policies, ICTs, and education policies, to mention some of them. Many of the same experts who argue in favor of culture and equity also highlight Finland's education system as a key factor in its success.

If the list of factors related to a country's education system is seemingly endless, how can we define the specific reason that makes students "smart" or "successful" in education? Could it be the age of school entry? Or is it the curriculum? Is it the scheme to support children falling behind or with special needs? Is it the absence of national census-based assessments, or is it the matriculation exam for high school students? Could it be the institutional and education agencies? Could it be the free, but not mandatory, 1 year of preschool education? Or is it the linking of educational and social services for initial education and child care for children under the age of six? Is it the curriculum and Freinet-inspired education philosophies and collaborative constructivism? Could it be the devolution of decision making and financial

power to municipal authorities and/or the coordination or collaboration between local and national authorities? Or is it the decision that major changes in education policy be implemented from the periphery and into the metropolitan areas? In the end, we will perhaps never be able to establish the one and only factor or the one and only mix of system factors that explain consistent and equitable success.

To make matters worse, not everything named the same way, such as autonomy, decentralization, curriculum, or devolution of power, has the same meaning as we travel from one system to another or from one context to another. Education systems may be similar in the names, slogans, or labels used, but not in the essence or meaning of their education policies (Andere 2008); without the proper policy translation, comparing system factors across countries can be more misleading than helpful. Therefore, proposing that the “education system” is the key variable to explaining variance in school performance is tantamount to saying that many factors are behind school performance. And that brings us back to the hypothesis that a complex, interdependent network of factors working in a fine-tuned but indefinable manner is the best explanation for educational success. We might call this an ecological theory of school performance.

## Teachers

When policy makers and observers debate the importance of teachers, the circularity of the arguments used is always surprising. Of course, we want good teachers, good schools, and good education systems. Thus, stating “the quality of teachers is crucial” is the same as claiming “good teachers are better than bad teachers.” We do not need exhaustive studies or detailed educational models to conclude that the students of any education system will be better off with good teachers than with bad teachers. Logic and ethics are sufficient. But, what makes a good teacher? That is the question!

In Chap. 7 (Exhibit 1), I offer a Finnish taxonomy of good teachers and good teaching. There we see how complicated this can be.

Consider some examples. A good teacher might be someone with a strong academic background based on theoretical and research tools, as in the Finnish case; but a good teacher might also be a person with strong practical skills, as in the case of teachers in Flanders. A good teacher might be someone with skills in maintaining a disciplined class, like the Asian or Mexican models; or with techniques or skills for changing teaching methods every 10 min, as in the Finnish model; or with skills for a flexible, stress-free education, as in the Norwegian model. Then again, a good teacher might be someone who knows how to motivate and challenge his/her students; or someone who knows his/her subject area and knows how to engage his/her students; or someone who communicates and connects with his/her pupils while maintaining cordial relationships with colleagues and parents. The list is endless.

We simply do not precisely know what factor or set of factors is the most important or what kind of academic training is the most useful.<sup>9</sup>

In the end, the best teacher education program or the most appropriate set of skills depends on many factors, sometimes beyond the reach of education policies and teacher training. The best teacher and the best training will depend on the ever-changing interaction with students, other teachers, and parents, with school leadership and with the social or national goals of education in each nation or system.

Some students arrive at school with enough intrinsic motivation, and a challenging teacher may be the best option in this case. However, for a different class, the best teacher is the one that makes use of learning strategies to spark motivation, effort, and interest, i.e., emotional or no cognitive abilities. Furthermore, if students exhibit behavior problems, a good teacher may be someone with experience in special education and with a social support network that includes colleagues, counselors, psychologists, and experts both within and beyond the school. Under other circumstances, a good teacher may be someone who can handle discipline challenges.

This same line of thinking could be applied to education systems. What is a good education system? Is more centralization better than decentralization? Is more autonomy for schools, principals, and teachers better than less autonomy? Again, there is no valid, ubiquitous response for all cases. And there is no purely centralized or decentralized education system or purely autonomous or dependent school. Most of the systems of education show multifaceted aspects of centralization and decentralization policies, or autonomy or dependent schools, at the same time.

There are centralized systems that work well and with high efficiency, such as those in Singapore and Ireland, while others are too centralized, like the French system, with lower results, and the Mexican system, with even lower performance. Some decentralized systems work very well, as in Canada, Australia, and Switzerland. However, the results from decentralized systems are not as high, for example, in Germany, and there are other decentralized systems with average or very low results, as in the USA and Chile, respectively. If we look at the education systems in different countries, we find that the systems in Finland, South Korea, and Hong Kong have nothing in common, but their performance is very high. New Zealand has centralized and decentralized features simultaneously, and its performance is very high. Therefore, it seems clear that the system per se is not the answer either.

We find the same phenomenon when we compare schools. Their success depends on their history, context, their social, cultural, and intellectual capital, power relations, and institutions.

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<sup>9</sup> A recent report on teacher-training programs and different paths to the teaching profession in the USA found that there is no evidence as to “which program elements or accountability mechanisms are most effective [to prepare teachers or produce] effective teachers” (National Research Council 2010, p. 3). According to researchers from this project, much more research is needed to elucidate the best scheme for attracting and educating teachers. The USA provides a good example for comparing alternate routes, because there are hundreds of teacher training programs. This contrasts sharply with the scheme in Finland, where we find practically a single access path for teaching, as discussed in Chap. 3.

Thus, in comparative education, we must be careful when comparing and transferring lessons. We can apply a handy metaphor borrowed from carpentry to all these cases: What technique (for teaching) or tools (for carpentry) does one use? It “depends on the task at hand and the materials one is working with” (Bransford et al. 2000, p. 22).

## Where Do We Stand?

We are left with what I would define as an ecological view of education. We do not really understand the intricacies, interdependencies, and interactions that take place in education. If this is difficult to establish at the subnational and national levels, it is even harder in the international arena. In this case, we can also apply a comparison from Scott’s analysis (1998) regarding the attempts by governments at various stages of history to order human relationships or patterns of production under the criterion of efficiency, as he suggests from his study of the state management of forests and other large-scale projects. He maintains that due to the almost religious monitoring of the efficiency and simplification of state projects, the roots of production and productivity are destroyed. Applied to education, what this means is that education authorities, especially at the national level—as they move increasingly toward measurement, standardization, evaluation, and accountability—may hinder the development of what they are trying to achieve, i.e., education quality, creativity, innovation, and, in some cases, empowerment. Some authors have addressed the unintended negative effects of accountability reforms that may even increase educational inequality (Darling-Hammond 2004), contradict authentic learning and assessment (Casas 2003), and jeopardize the quality of curriculum teaching (Craig 2004). These concerns are based on the understanding that the only assessment that improves education is formative assessment (Black and William 1998a, 1998b).

There are no arguments based on sound theory on which to justify efficiency-oriented policies in education. By sheer argumentation and qualitative case analysis, we know that particular contexts and school policies and practices are relevant to achieving quality, but these contexts are directly connected in an intricate manner with values, resources, culture, and experiences, as well as the complex and unpredictable relationships, interactions, and expectations of all education and school agents. Thus, context-specific issues are the most relevant for understanding and explaining results. We cannot underestimate the power of contextual complexity in explaining the cognitive and affective outcomes of education and school life.

Therefore, an alternative hypothesis to explain Finland’s success is an ecological proposal, referring to the contextual and learning environments in which school education takes place.

Contexts are a product of their history. In Finland, there were two historic moments when education was given a definitive impulse. The events that took place at those times in history left the seeds for later development. The first impact was from the ideas and efforts of the founding fathers of education around the 1860s,

and, the second, from the vision of the early rulers of independent Finland in the second decade of the twentieth century—who ordered the expansion of schools and the placement of teachers in all towns, regions, and villages.

The Finnish people, like many other Protestant populations, were not illiterate in the days when “modern” schools arrived. Men and women had to prove they were able to read the Bible before marrying—a prevailing situation since the years of the European Reformation. What we can say is that Finland’s unique atmosphere is characterized by a simple lifestyle (Kirby 2006, p. 27), with extensive forests, cold and long winters, with a society rooted in agriculture, with a nobility obedient to the authority of the Swedish Crown (Kirby 2006, pp. 15–16), and with people’s deep love for nature, as evidenced by the rustic, hideaway cottages where modern Finns spend their weekends and holidays—and all of this assured that education developed as envisioned by the father founders of education in the 1860s and 1910s. Thus, the combination of history with a simple, bucolic lifestyle, sometimes archaic, sometimes obedient (Simola 2005), and sometimes based on trust, could be the bedrock of the fertile ground upon which Finnish success in education has developed.<sup>10</sup>

Learning environments, as will be explained later, do play an important role in Finnish school education. It is not only what the literature calls powerful learning environments in schools or classrooms for specific topics such as mathematics, technology, science, or reading. Social and cultural learning environments, much more difficult to measure and control, are the bedrock of a society with shared habits and values prone to education and more learning. This seems to be an important, yet less studied, area behind the Finnish school education success.

## Contents

In the spring of 2012, I began a new project. It is, in a way, a spin-off from a 2010 book I published in Spanish. I decided to undertake this new version with updated and rewritten parts of the original Spanish version following the advice of a close friend and prestigious US professor of education and education history, Diane Ravitch, whose already well-established reputation skyrocketed with the publication of her latest books *The Death and Life of the Great American School System*, and *The Reign of Error: The Hoax of the Privatization Movement and the Danger to America’s Public Schools*, and the huge success of her education blog.

One of the elements I have added to this English version is the importance of cultural and school learning environments as I mentioned before. What I particularly want to emphasize is that no single factor can be identified as the key to education success, no matter how well written or well researched the argument appears to

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<sup>10</sup> This may merit further inquiry in an emerging field of research known as “ecopsychology,” which studies the relationship between nature and human well-being, including brain, mind, and learning <http://www.liebertpub.com/products/manuscript.aspx?pid=300> (May 12, 2010).

be. Success in education is determined through a cocktail of ingredients: history, culture, teachers, and policies, with a sprinkling of powerful learning environments. As with the real drinking cocktails, once the ingredients are mixed it is impossible to separate them.

Although I had already traveled as far north as you can go in Finland and Europe in search of good education and best school practices, I began my 2012 visit by returning to northern Finland, mimicking the successful school education reform of the 1970s—which began in the north and traveled south until reaching Helsinki several years later.

So, for the seventh time in 8 years, I traveled to Finland to meet Finnish *opettajat* (teachers) and *rehtorit* (headmasters), students and parents, experts, professionals, and authorities. My goal in this book is to present school education in Finland through the minds and thoughts of these stakeholders. In this sense, this book is different from others that are mainly devoted to the policies and the workings of the system of education. Of course, there are many references to the most important policies and institutions, but they are blended with the views and explanations of teachers, principals, and experts.

Chapter 2 deals with Finland's success. It contains a bouquet of stories and theories behind education success. The chapter details the school education story of Finland; it uses outcomes mainly from PISA to set Finland as the world's top school performer. In the narrowest hallways of research with all their scientific pretensions, it is important to mention that not even the Finnish agree on the reasons for their success, but many factors can be cited as influential for success. The chapter then describes very briefly the education system, since many publications have done that before. Instead of going to the more academic review of the literature about Finnish success as was done in Chap. 1, this chapter delves into more specific and often-cited reasons behind success, mainly from the point of view of governmental experts and some principals. Among those topics, the chapter describes the following: curriculum, age of entrance to schools, comprehensive education, open school opportunities, reading and libraries, free school lunch, educational and pedagogical leadership, and welfare state and fairness. This chapter closes with a vision of society and education in light of economic, political, and social changes in the late twentieth and early twenty-first centuries.

Chapter 3 deals with teachers considered by many as one or the main factor of success in school education: Attraction to the teaching profession, training and characteristics of teachers' colleges, their special role in Finnish history, and the profession's popularity, salaries, motivation, and collaboration are some of the factors studied in relation to the high and homogeneous student performance. Finland has a remarkable teachers' force. But even here comparative analysis brings more factors into the equation for the students' impressive success albeit moderate inputs. The Finnish teacher-training program is then compared to other teacher-training programs from other countries.

Chapter 4 addresses mainly the issue of education assessment and evaluation. In a world swayed by a frenzied trend toward measurements, assessments, and accountability, the Finnish have maintained their distance from national, census-based

assessments. As clearly said by Linnakylä et al. (2010), the main idea is to develop and support schools, not control them. Finland has a unique system of evaluation as the education policy rests very much on the quality of teachers. It is often heard that the system is based on trust and cooperation; teachers have a lot of pedagogical freedom, and schools have a strong inside and outside network of support. This chapter also reviews the elimination of a powerful school inspectorate regime and the influential matriculation exam taken upon completion of upper secondary or high school as the only national assessment undertaken by the Finnish authorities. There are many lessons to be learned here that separate the Finnish policy from a tendency toward high-stakes standardization and accountability.

Chapters 5 and 6 take the reader on a tour of Finnish schools throughout the country, from child care and preschool facilities to elementary, lower secondary (junior high or middle school), and upper secondary (senior high) levels. Teachers and principals turn Finland's schools inside out to reveal the many facets of Finnish education. These accounts are based on my seven visits to Finnish schools during the period from 2004 to 2012, although more stress is given to the most recent visits. These chapters are succinct and organized to avoid repetitious comments as much as possible and present the views of the teachers, principals, and experts as faithfully as possible. The two chapters collect, through structured and open interviews, the thoughts and views of students, teachers, principals, and experts about their school system, their students' success, and the daily life inside and outside the schools. It is a direct contrast and complement to the more academic framework of school success developed in Chaps. 1–4. These two chapters let teachers and principals, from all over Finland and from all types of schools speak their mind about education, the quality of teachers and teaching, their own personal stories, and their own views of what works and does not work in school education for today's world. At the same time, these two chapters develop, with a narrative style, a menu of pedagogies, infrastructures, ethos, technologies, and leadership styles among 28 schools and 47 sections as many schools house not only one but often two, three, and four sections from preschool to upper secondary school. These chapters are witnesses to a reality about real learning and pedagogical school education in Finland: No matter how distant schools are, or how different from the rural or urban perspective, or how far away, they all seem to have the same outstanding learning opportunities, mainly based on a high-caliber teacher force and a strong network of support and collaboration inside and outside schools.

Finally, Chap. 7 reports the findings of two structured research projects in different rounds of interviews. One of those was looking at the definition of the quality of teachers and teaching. Based on closed and open-ended interviews, a taxonomy of the quality of teachers was developed into nine categories. A second research project conducted in 2012 looked at the overall social and cultural learning environment around school education from the viewpoint of teachers and principals. This is a very interesting topic that is very difficult to frame from the epistemological point of view but often cited as relevant in studies about Finnish success. Teachers and principals have strong views about the cultural values at homes and at schools that may promote the very high and consistent levels of performance of schools.

In summary, let me say that the Finnish language and culture are foreign to me, and, thus, I cannot supplant the analysis of vernacular experts and professionals. However, my bird's-eye view offers an opportunity for comparative insights from a different perspective. My interest in Finland grew after a long comparative research project of 17 high-performing countries plus Mexico and Chile. After visiting and studying the school education systems of Finland, Sweden, France, England, Scotland, Ireland, Flanders, the Czech Republic, Switzerland, Singapore, Australia, New Zealand, Hong Kong, South Korea, Japan, the USA, and Canada, in 2004 and 2005, I deliberately chose Finland as the example in search of the benchmark of basic education at the turn of the twenty-first century.

In the narratives of the teachers' and principals' interviews I share in this book, I sacrificed rigorous scientific categorization in the interest of freedom of expression through their own words, to allow my readers to hear their stories more clearly and accurately.

This book does not offer a theory of school education, nor does it outline the design of an ideal, Shangri-la model. However, it offers many elements and narratives to assist experienced readers in building their own conclusions and hypotheses. It is a book of ingredients without recipes. Ingredients travel, recipes do not!

I wish to reiterate my gratitude to each and every one of my interviewees, some of them dear friends, who have opened the doors of Finland for me since my first visit on March 28, 2004 until the last one on April 25, 2012.

I have tried to express the views and perceptions of all respondents in the most faithful and transparent possible way. In most cases, I use real given names, with only a few exceptions of fictional names used to protect the opinions of a couple of students and their teacher who decided to keep it anonymous. Despite my highest intention of fidelity and transparency, if there are any errors in interpretation, they are exclusively my responsibility, and I apologize in advance.

I hope my readers enjoy reading these pages as much as I enjoyed writing them. My ultimate goal in this work is to provide input and inspiration to teachers, administrators, students, parents, education authorities, and experts from around the world as they adapt or adopt ideas and concepts that make the most sense in their own school and societal reality.

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## Chapter 2

# Finland's Success

### PISA and the Ecological View of Education

Since the beginning of the twenty-first century, the eyes of the world have turned to Finland as the benchmark for success in basic education.

The Finnish became famous when the results from the Programme for International Student Assessment (PISA)<sup>1</sup> 2000 test applied in the Organisation for Economic Co-operation and Development (OECD)<sup>2</sup> member countries were made public. In 2000, Finland was the country with the highest results in reading. Later, in the PISA 2003 round, Finland's fame increased not so much for obtaining the highest results in mathematics—actually tying with Hong Kong and South Korea—but due to its undisputed first place in the combined results from the three areas tested (reading, mathematics, and science) and also when a fourth area (problem-solving) was added. The highest national average in mathematics in the PISA 2003 results was achieved by Flanders, Belgium, when results were compared to national entities inside countries.

Then, results from PISA 2006 and 2009, released in December 2007 and 2010 respectively, placed Finland in the number one position in science. Clearly, a pattern of Finland's success had developed. Where exactly is Finland in the world map of basic education? Tables 2.1 and 2.2 respond to this question. Table 2.1 presents the results from a sample of countries that have participated in all the PISA test rounds since its inception. Because the test results are based on random samples of

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<sup>1</sup> *Programme for International Student Assessment*. This is a program for measuring the educational performance of students between 15 years, 3 months and 16 years, 2 months of age in areas or fields associated with reading, mathematics, and science. The PISA test is applied in OECD member countries and other partner countries. The list of participating countries changes for each round, depending on countries requesting their inclusion. The PISA test is applied in random samples every three years in the same areas or fields, but in each application there are more questions or items in one of the three areas or fields. In 2000 the area of concentration was reading; in 2003, mathematics; and in 2006, science. In 2009, a new series of PISA tests was initiated with a concentration on reading. An additional area, problem-solving, was tested in 2003, but has not been included in another other round since then.

<sup>2</sup> Organisation for Economic Cooperation and Development.

**Table 2.1** Ranking of results by ranges in all the PISA rounds for reading (R), mathematics (M), and science (S) in a selection of OECD member countries, in a comparison including all the participating countries (OECD countries plus non-OECD partner countries). (PISA 2001: OECD 2001, pp. 45, 53, 79, and 88; PISA 2003: OECD 2004, pp. 92, 281, and 294; PISA 2006: OECD 2007a, pp. 58, 298, and 318; PISA 2009: OECD 2010 pp. 56, 135, and 152)

| Country       | PISA 2000 |       |       | PISA 2003 |       |       |
|---------------|-----------|-------|-------|-----------|-------|-------|
|               | R         | M     | S     | R         | M     | S     |
| Finland       | 1-1       | 4-7   | 3-4   | 1-1       | 1-4   | 1-3   |
| Korea         | 4-9       | 2-3   | 1-2   | 2-3       | 1-5   | 2-4   |
| Canada        | 2-4       | 5-8   | 4-8   | 2-5       | 5-9   | 8-12  |
| Japan         | 3-10      | 1-3   | 1-2   | 12-22     | 3-10  | 1-3   |
| New Zealand   | 2-8       | 4-8   | 4-8   | 4-7       | 9-13  | 6-11  |
| United States | 10-20     | 16-23 | 11-21 | 12-23     | 27-30 | 20-27 |
| Mexico        | 31-31     | 31-31 | 31-31 | 37-38     | 37-37 | 37-37 |
| Country       | PISA 2006 |       |       | PISA 2009 |       |       |
|               | R         | M     | S     | R         | M     | S     |
| Finland       | 2-2       | 1-4   | 1-1   | 2-4       | 4-7   | 2-3   |
| Korea         | 1-1       | 1-4   | 7-13  | 2-4       | 3-6   | 4-7   |
| Canada        | 4-5       | 5-10  | 3-6   | 5-7       | 9-12  | 7-10  |
| Japan         | 11-21     | 6-13  | 3-9   | 5-9       | 8-12  | 4-6   |
| New Zealand   | 4-6       | 8-13  | 3-9   | 6-9       | 12-14 | 6-9   |
| United States | NA        | 32-36 | 24-35 | 11-25     | 26-36 | 19-29 |
| Mexico        | 41-44     | 46-48 | 48-49 | 46-49     | 49-51 | 50-51 |

students between 15 and 16 years of age, the achievement levels and averages are subject to errors of estimation. It is thus technically impossible to always precisely determine the exact position of a given country in relation to the other countries for each evaluation area (reading, mathematics, and science). The magnitude of error for an estimated average for one country is often within the magnitude of error for an estimated average for another country. In this case, it is determined that such countries are technically or statistically tied.

With this clarification, Table 2.1 indicates that Finland achieved the following positions within the groups of countries participating in the PISA tests:

First place (undisputed, without a technical tie) in reading in 2000

First place (undisputed) in reading in 2003

First place, in a technical tie with three other countries, in mathematics in 2003

First place (undisputed) in science in 2006

First place, in a technical tie with three other countries, in mathematics in 2006

Second place, in a technical tie with two other countries, in reading in 2009

Second place, in a technical tie with another country, in mathematics in 2009

**Table 2.2** Ranking of results by ranges in all the PISA rounds in reading (R), mathematics (M), and science (S), in a selection of OECD member countries, in a comparison including only OECD countries

| <u>Country</u> | PISA 2000 |       |       | PISA 2003 |       |       |
|----------------|-----------|-------|-------|-----------|-------|-------|
|                | R         | M     | S     | R         | M     | S     |
| Finland        | 1-1       | 4-7   | 3-4   | 1-1       | 1-3   | 1-2   |
| Korea          | 4-9       | 2-3   | 1-2   | 2-3       | 1-4   | 2-3   |
| Canada         | 2-4       | 5-8   | 4-8   | 2-4       | 4-7   | 6-9   |
| Japan          | 3-10      | 1-3   | 1-2   | 10-18     | 2-7   | 1-3   |
| New Zealand    | 2-8       | 4-8   | 4-8   | 4-6       | 7-10  | 4-8   |
| United States  | 10-20     | 16-23 | 11-21 | 10-19     | 22-24 | 17-23 |
| Mexico         | 27-27     | 27-27 | 27-27 | 29-29     | 29-29 | 29-29 |
| <u>Country</u> | PISA 2006 |       |       | PISA 2009 |       |       |
|                | R         | M     | S     | R         | M     | S     |
| Finland        | 2-2       | 1-2   | 1-1   | 1-2       | 1-3   | 1-1   |
| Korea          | 1-1       | 1-2   | 5-9   | 1-2       | 1-2   | 2-4   |
| Canada         | 3-4       | 3-6   | 2-3   | 3-4       | 4-6   | 4-7   |
| Japan          | 9-16      | 4-9   | 2-5   | 3-6       | 3-6   | 2-3   |
| New Zealand    | 3-5       | 5-9   | 2-5   | 3-5       | 6-8   | 3-6   |
| United States  | NA        | 24-26 | 18-25 | 8-20      | 21-29 | 13-22 |
| Mexico         | 29-29     | 30-30 | 30-30 | 34-34     | 33-34 | 34-34 |

Finland did not rank first in 2009 in any of the areas, as can be observed in this table, because it was surpassed by Shanghai’s students. Nevertheless, a direct comparison between Shanghai and OECD countries or PISA partner countries or regions violates the principle of comparability between the same levels of analysis: country with country, province with province, and municipality with municipality. A comparison can be made to establish the position of a country, region, municipality, locality, or even a particular school but not on a ranking basis.

Table 2.2 indicates that Finland achieved the following in relation to OECD member countries:

- First place (undisputed, without a technical tie) in reading in 2000 and 2003
- First place, in a technical tie with another country, in reading in 2009
- First place, in a technical tie with two other countries, in mathematics in 2003 and 2009
- First place, in a technical tie with another country, in mathematics in 2006
- First place, in a technical tie with another country, in science in 2003
- First place (undisputed) in science in 2006 and 2009

If we look at the PISA 2000 results in Tables 2.1 and 2.2, Finland has the 1-1 position in reading. This means that according to PISA 2000–2002 data,<sup>3</sup> Finland's overall position was first place without a technical tie with any other country. In other words, the range of the results from no other country intersected or overlapped with Finland's range. This is what placed Finland in the spotlight, as of 2001, as PISA's best reference, at least in the area of reading.

Now, also in Table 2.1, let us look at the cases of Korea and Japan in PISA 2000 in the area of science. Both have a range of 1-2. This means that the two countries are in a technical tie. With the information obtained, it is not possible to identify which country was in first or second place. What we do know, with a certain degree of confidence, is that either of the two could be in first or second place. In other words, the differences in the results from the two countries may be due to random factors, and it is not possible to know from the ranking which country is above the other.

The three countries in the North American region show very different results. Canada, which comes out ahead, competes among the top ten positions in the world, with a clear advantage in reading. The USA ranks at approximately the middle or below the middle in nearly all the areas and all the rounds. And Mexico clearly ranks among the very lowest positions.

Because of Finland's impressive results, it has been visited since 2001 by hundreds of delegations of experts, professionals, and observers from around the world, in search of its secrets. And since 2001 the Finnish people have published their own official and unofficial versions of the reasons behind their country's success. All kinds of papers and reports have been written comparing Finland to the OECD average or to the other PISA partner countries, or comparing Finland to the rest of Europe, or comparing Finland to Asia. In short, Finland is at the height of attention.

So, what is behind such consistent, overwhelming success? The explanation is certainly not the amount of spending on education, nor the time dedicated to teaching or studying, as one might argue in the case of Shanghai or South Korea. Nor can this success be explained by the possibility of parents selecting the school where their children attend, or by the level of teachers' salaries. Nor, in my opinion, is this success due to the education system, or to the constructivist method, or to its comprehensive education—or to the size of the country's population, or the size of the education sector, or the size of schools. It is most likely that success in education is due to a varied, intricate, but interlinked, complex set of factors—an ecological view—that for some and still mysterious reason come together and work in a virtuous manner. So then, what is this set of factors?

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<sup>3</sup> PISA 2000 was repeated in 2002, given to an additional dozen countries. While the OECD offers integrated PISA 2000–2002 results in ranking lists, the fact that this small group of countries was added to the PISA 2000 test makes a comparison of the results less valid, because the test was not applied in all of the 43 participating countries under standardized conditions. One could argue that the countries in which the PISA test was applied in 2002 had the advantage of knowing the conditions and contents of the test applied originally in 2000.

## Finland and its *Sampo* in Education

In order to answer this question, I have visited this Nordic—not Scandinavian—country several times in search of the *sampo* for education. *Sampo*, in the Finnish epic narrative poem entitled *Kalevala*, refers to a magic mill able to do marvelous things, producing gold, food, and prosperity. So, could there be an educational *sampo*? Do the Finnish people have their own unique *sampo*? And is this *sampo* or formula transferable to the rest of the world?

Instead of attempting to theorize on the ubiquitous function of educational production or learning—which in my humble opinion is impossible to achieve—I would like to invite my readers to explore the enigmatic Finnish world—through its educators and students, through experts and observers—to find the different reasons for this country’s success. And even more importantly, I invite you to examine a nation’s thinking, embedded in the changes occurring in the complex global community, as Finland faces the challenges inherent in the peculiar modernity of the twenty-first century and all its global challenges.

What makes the Finnish so successful in the field of education? Or, we might borrow the question asked in a thought-provoking article in the *Wall Street Journal*: “What makes Finnish children so smart?” (Gamerman 2008).

The Finnish are known for being quiet and shy, and in appearance, they are. They have a life that is charmingly rural and simple, and sometimes even archaic. I have been given this fascinating perspective from friends, acquaintances, and even passers-by. Professors Jouni Välijärvi and Hannu Simola, from very different epistemic positions, as well as Maarit Rossi, the principal of a lower secondary school known for its high student performance, and Tapio Penttilä, a student in teacher education, have all opened up the world of these characteristics of the Finnish culture to me. In Tapio’s words, being Finnish means: “a simple, modest life with love for nature, the forests and family.”<sup>4</sup>

Finnish people rarely initiate a conversation but rather simply observe. A group of Finnish people would be capable of simply waiting for several minutes in the middle of an informal social gathering before interrupting the silence of the occasion. This would be unheard-of in a Latin culture, for example.

Finnish people are indeed quiet. This can be observed in a Finnair flight, or in the Pendolino fast train from Helsinki to Jyväskylä, for example. However, they are not only quiet, but also respectful of the physical and virtual space of those around them. Most of the passengers on an airline flight attempt to pass the time with their eyes closed, while some read, and only a very few glance up at the monitors distributed throughout the airplane cabin.

I came to Finland as part of a wave of curious and interested people, experts, observers, and educational authorities from numerous countries around the world in search of the magic *sampo* of education.

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<sup>4</sup> Communication by email, May 19, 2009.

Still, the Finnish are not the only ones with consistently high results in education. The Chinese from Hong Kong, the Taiwanese, the South Koreans, students from Edmonton, Alberta, Canada, the Flemish from Flanders, New Zealanders, Singaporeans, and now the Chinese from Shanghai as well—all of them show very high results in international standardized tests. What is surprising about the Finnish is the consistency of their high results in the four PISA rounds, how close these results have been (OECD 2007b, p. 96), their students' high achievement levels, and their apparently reduced investment of study hours both in school and outside school (see Table 4.1 in Chap. 4): in sum, high results with moderate inputs.

And if that were not enough, enrollment and spending indicators place Finland in an enviable position. Finland is, more or less, at the same level as other industrialized countries in terms of enrollment, level of schooling, and graduation rates,<sup>5</sup> while it is far from being the country with the highest spending on education, whether in relation to the size of the economy,<sup>6</sup> number of students,<sup>7</sup> or share of total public spending.<sup>8</sup>

As much as I would like to, it would be both arrogant and untruthful for me to attempt to construct a ubiquitous model of education on the basis of the experiences of the Finnish, South Koreans, Singaporeans, New Zealanders, or the Chinese from Hong Kong or Shanghai. The story of the reasons for success, or the “whys” of high educational results, is very complex. Still, should this complexity discourage us from searching for a *sampo* (that may not even exist)?

I do not know. And since doubt is the source of curiosity, I will once again attempt to delve deep into the study of school education in this remarkable Nordic country. Perhaps the source of its educational eloquence can be found in its social and cultural wealth, which has allowed it to build a network of protection and support for children and their families from the time before their birth.

In the narrowest hallways of research with all their scientific pretensions, it is important to mention that not even the Finnish agree on the reasons for their success. In fact, as commented by a mathematics professor at the University of Helsinki during a dinner on the first evening after one of my arrivals in the capital city, “perhaps we’ll never know—there’s not just one reason, but many.”

We may never be able to precisely identify the most important factor that tips the scales of Finland's educational success. Perhaps the secret lies in the mysterious, intricate process of human and physical interrelations that operate in such a fine-tuned manner, but hidden from our eyes, similar to the complex, exquisite diversity through which nature acts in its favor. The wealth and complexity of this “ecological” interaction are mentioned by Scott in his extraordinary narrative on the reasons for the failure of major state projects in the history of humanity that, in search of efficiency, have sown the seeds of destruction for the various, mysterious arrangements of natural, ecological, and human diversity (Scott 1998).

<sup>5</sup> OECD 2007c, pp. 291 and 293; 2008a, pp. 42–44, 65, 68, and 331.

<sup>6</sup> OECD 2008a, p. 237.

<sup>7</sup> OECD 2008a, p. 218.

<sup>8</sup> OECD 2008a, p. 262.



## Finland's Education System

I will not enter into a detailed description of Finland's education system, since this has been provided by the country's authorities in several publications<sup>9</sup> and by international agencies and entities through comparative analyses of education.

In general, compared with other systems, such as the English, French, Swiss, German, US, Canadian, Mexican, or Chilean, the Finnish system is relatively easy to understand and to follow. However, there are many research articles and results that are only published in Finnish. This means that one often depends on official, but limited, translated versions, or on secondary sources. One way to remedy this deficiency is through repeated visits, interviews, and direct observations—and this is the path I have chosen.

Finland has a small education system, since it is a country populated by relatively few inhabitants. In 2007, the total number of students (in all educational institutions at all levels, including adult education) in the Finnish education system was 1,937,700, served in a total of 4,443 institutions. Of this total number of students, 580,200 were in comprehensive basic education.<sup>10</sup> By 2008, the number of students in comprehensive basic education had decreased to 561,061, receiving educational services in 3,174 schools.<sup>11</sup> And by 2009,<sup>12</sup> the number of students had diminished even further, to 553,329 in 3,065 schools.<sup>13</sup> Thirty years ago, in 1980, the comprehensive education system served 598,587 students in 4,877 schools.<sup>14</sup> This means that enrollment has diminished by 45,258 students, or 7.5%, and the number of schools has dropped by 1,812, or 37%. These numbers are barely noticeable in relation to the sizes of education systems in other OECD countries such as the USA, Japan, England, Germany, France, and Mexico, for example. For many analysts, this simple fact is reason enough to question educational comparisons.

Of all the levels of schooling in Finland's education system—specifically preschool, comprehensive basic, general or vocational high school, university or vocational higher education, and graduate or polytechnical university—it is clear that the level receiving the most attention is comprehensive basic education, which begins with the 1st year of elementary school and continues through the 3rd year of

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<sup>9</sup> For interested readers, I would suggest consulting the following official Finland websites: <http://www.minedu.fi/OPM/Koulutus/koulutusjaerjestelmae/?lang=en>; <http://finland.fi/Public/default.aspx?contentid=162939&nodeid=41807&culture=en-US>; [http://www.oph.fi/english/education/overview\\_of\\_the\\_education\\_system](http://www.oph.fi/english/education/overview_of_the_education_system); as well as the following websites of international organizations, agencies, and services: <https://webgate.ec.europa.eu/fpfs/mwikis/eurydice/index.php/Finland:Overview> [http://www.ibe.unesco.org/fileadmin/user\\_upload/Publications/WDE/2010/pdf-versions/Finland.pdf](http://www.ibe.unesco.org/fileadmin/user_upload/Publications/WDE/2010/pdf-versions/Finland.pdf) [http://en.wikipedia.org/wiki/Education\\_in\\_Finland](http://en.wikipedia.org/wiki/Education_in_Finland); and <http://www.edu.fi/english/SubPage.asp?path=500.4699>.

<sup>10</sup> Statistics Finland 2008a, p. 387.

<sup>11</sup> Statistics Finland 2008b.

<sup>12</sup> Statistics Finland 2009b.

<sup>13</sup> Figures for 2008 and 2009 include preschool students and schools, and an additional optional year (tenth grade) of middle education.

<sup>14</sup> Statistics Finland 2007, p. 389.

middle school or lower secondary education (that is, 9 school years). Unlike other education systems, what is equivalent to elementary school in Finland begins when children turn 7 years of age, following 1 year of preschool education.

In Finland, nearly 100% of the children who take the PISA test are enrolled in grade 8 or most commonly in grade 9, corresponding to the last year of basic or comprehensive education.

Despite its success, Finland has reformed its school curriculums on various occasions and is currently (in 2012 and 2013) engaged in debate on more reform. The most recent comprehensive school curriculum<sup>15</sup> entered into effect in 2004, but it was implemented gradually; so, it was in 2006 that this new curriculum was fully in effect. In 2010–2011, the current curriculum was reviewed in order to reform aspects associated with special education as well as the support and differentiation scheme that schools should provide to children with special learning needs. Finland is drafting a new curriculum after a new law setting national goals and distribution of hours. The curriculum will become effective in 2016.

## Curriculum

Although what we observe today in Finland is a decentralized education system, with significant municipal, school, and teacher autonomy, it was only three decades ago that this country's school education model was very centralized. The state had broad government control over schools through an intricate school inspection system in which the school curriculum, dictated by national school authorities, was followed by teachers with specific instructions to follow on everything and to use textbooks authorized by the state (Ropo and Välijärvi 2010).

The major school reform of the 1970s—which had been in preparation since the second half of the 1960s, and which eliminated the dual education system that selected students for either an academic track or civic (profiled for vocational education) track at the end of elementary school, a system similar to what continues to exist in Germany, Flanders, The Netherlands, Switzerland, and Singapore—did not do away with the state's strong control over school education through a detailed, strict curriculum (Ropo and Välijärvi 2010). It was not until two more decades had passed that ideas regarding decentralization, based on school autonomy and the pedagogical freedom of teachers, arrived in schools and led to three fundamental changes that are currently the cornerstone of Finland's education system: first, a curriculum based on standards to work toward, instead of standards tied to accountability and demands (Aho et al. 2006, p. 9 and 12; Ropo and Välijärvi 2010), and in which the details of implementation are left to localities, schools, and teachers; second, a professional teaching staff that is highly trained and trusted by authorities and society; and third, a fair education system in which school and teacher effort is concentrated toward assisting the students with the most need for pedagogical or learning support.

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<sup>15</sup> The word “curriculum” will be used to express what legislation in Mexico refers to as study plans and programs.

Since the major education reform of the 1970s—which was perhaps the most important of all the periods in Finland and which included curriculum changes (Aho et al. 2006, p. 43)—the Finnish have passed through four curriculums for basic education: in 1970, 1985, 1994, and 2004 (Aho et al. 2006, p. 25). Despite the profound educational and curriculum reform of 1970 in which the dual education system was transformed into the comprehensive system (Linnakylä et al. 2010), “the national curriculum was turned into an instrument of control in the development of a new way to conduct school activities” (Ropo and Välijärvi 2010).

It is true that the Finnish of the 1990s, with the framework curriculum of 1994, were accustomed to a very centralized education model, derived from the curriculums of 1972 and 1984–1985, which were detailed and under state control. Actually, the 1994 curriculum involved a profound change toward local and school autonomy. However, the 2004 curriculum, more detailed in the way in which schools are expected to respond to their new social responsibility or role (Ropo and Välijärvi 2010), and with more emphasis on the holistic well-being of students, was interpreted by principals and teachers as an attempt at re-centralization. Thus, curriculum reform since the 1970s has swung back and forth like a pendulum (Linnakylä et al. 2010).

There is no better way to gain a full understanding of the current curriculum framework for basic education in Finland than to go to the offices of Finland’s National Board of Education, or Opetushallitus (OPH,<sup>16</sup> its acronym in Finnish). It is through this entity that the country’s school education policies are implemented. This very important Board is a semi-autonomous institution of Finland’s Ministry of Education and Culture<sup>17</sup> (Minedu).<sup>18</sup> OPH has responsibility for the following levels of education: preelementary, elementary, middle school or lower secondary, high school or upper secondary (general and vocational), and adult education.<sup>19</sup>

Since 2009, the OPH offices are located in a building that is distinguished by classic Finnish architecture and is impressive due to its size, facilities, spaces, and silence.

It was there that I conducted interviews with a number of officials, beginning with Irmeli Halinen, who is the person at OPH responsible for the curriculum development office. She is responsible for all the curriculums associated with education, from the preschool, comprehensive basic and general high school levels, to adult education and special education.

Irmeli began by using a phrase that describes modern curriculum philosophy very well: “Curriculum is more a process than a product.”

This phrase reminded me of another one from a distinguished behavior psychologist, B. F. Skinner, who said: “learning is a process and not an outcome.” From this

<sup>16</sup> <http://www.oph.fi/english/frontpage.asp?path=447> (March 17, 2009). Also known as FNBE, its acronym in English, and CNEF, its acronym in Spanish.

<sup>17</sup> As of May 1, 2010, the name of this Ministry changed from Ministry of Education, to Ministry of Education and Culture: <http://www.minedu.fi/OPM/?lang=en> (May 6, 2010).

<sup>18</sup> Opetus- ja kulttuuriministeriö: <http://www.minedu.fi/OPM/?lang=fi> (May 6, 2010).

<sup>19</sup> Adult education is divided into two areas: one, with a practical or liberal focus concentrating on the everyday needs of adults, and the other, with a vocational focus and more formal programs.

perspective, curriculum and learning are interwoven, clearly reflecting the modern emphasis in curriculums toward learning.

Most teachers and schools find answers to their many questions in curriculum guidelines, but according to Irmeli Halinen:

Teachers have to decide how to implement them. In this way, they express their own opinions and viewpoints in a responsible, committed manner. They observe the local situation, but implement the solution in line with a national framework. Furthermore, when teachers write the school curriculum, they attempt to address what each student needs. In the end, the school curriculum is their curriculum.

She continued:

In curriculum development, the image is usually one of “top-down,” from legislation to the teaching-learning process. In Finland we think differently. We begin with teaching-learning, and instead of legislation determining a curriculum, it is the basis for the school curriculum and the teaching-learning interaction. This is a change in paradigm from “top-down” to “bottom-up.” This philosophy or scheme is accompanied by an important teacher training program, and therefore all proposals operate in the same direction, or in other words: teacher training, curriculum and study materials all move in the same direction, specifically toward “successful learning for all students.”

According to the opinions of some principals and teachers, the new curriculum (2004) is more demanding and contains new obligations for schools, such as students' personal development, something that was previously solely in the hands of families and society. Notwithstanding, the students' comprehensive personal development has been part of the national curriculum since the 1970s' school reform.<sup>20</sup>

The new curriculum for basic education (Finnish National Board of Education 2004, pp. 22–23)<sup>21</sup> mentions aspects associated with students' well-being, as specified in Exhibit 1.

Exhibit 1: Excerpts from the Finnish National Core Curriculum for Basic Education

Pupil welfare includes attending to the child's or young person's basic learning prerequisites and his or her physical, psychological, and social well-being. Pupil welfare consists of both communal and individual support. The objectives are to create a healthy, safe learning and school environment, protect mental health, prevent social exclusion, and advance the well-being of the school community.

Through pupil welfare, an operational culture of care, concern, and positive interaction is promoted in the school community, and an equal opportunity to learn is ensured for all. Pupil welfare helps to maintain the individual's and the community's ability to function in situations that threaten physical and psychological security.

Pupil welfare promotes the learning and balanced growth and development of the child or young person. The objective of pupil welfare is the prevention, recognition, amelioration, and earliest possible elimination of obstacles to learning, learning difficulties, and other problems connected with attending school.

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<sup>20</sup> Prof. Jouni Välijärvi's comment on an earlier draft of the book.

<sup>21</sup> The curriculum can also be consulted at: [http://www.oph.fi/english/sources\\_of\\_information/core\\_curricula\\_and\\_qualification\\_requirements/basic\\_education](http://www.oph.fi/english/sources_of_information/core_curricula_and_qualification_requirements/basic_education) (March 10, 2012).

Pupil welfare is the concern of all persons working in the school community, as well as those authorities responsible for pupil welfare. It is implemented in close cooperation with the home.

The previous curriculum, from 1994, was published in a slim volume, and consequently, its written contents seemed diminished. According to the OPH officials I spoke with, reactions from teachers to the 1994 curriculum were along such lines, suggesting that the curriculum contents were “insufficient.”

From Irmeli Halinen’s point of view, the pressure on schools and teachers does not actually come from the national curriculum but rather from the local (municipal) curriculum and textbooks.

The national curriculum (Finnish National Board of Education 2004) lists the goals and principles that the school curriculum should include, as specified in the school plan. Some of the topics emphasized are health, well-being, security, social responsibility, interaction in the school community, guidance, counseling, individual education plan, local support networks, prevention and taking care of crises and nutrition.

Irmeli Halinen concluded: “If society is more complex today, it’s good for schools to be prepared.”

A few months later, we once again addressed the topic of the school curriculum and new responsibilities for schools in relation to children’s well-being and personal development. I have noted divergent viewpoints with regard to the latter, specifically whether schools should or should not assume the family and social responsibility of raising children. Irmeli Halinen commented the following:

We’re a little old-fashioned when it comes to curriculums. We haven’t moved away from a curriculum based on teaching by subjects. It’s true that we have three areas that we focus on: learning to learn, knowledge and children’s well-being. With regard to the latter, what this means is that teachers should be respectful toward children, they should cooperate with them, and demonstrate that the opinions of “others” are valuable. Also, teachers in general have a great responsibility in relation to children’s well-being. And schools should establish a well-being group composed of the principal, nurse, psychologist, special education teachers, and mentor or counseling teachers. In this sense teachers’ attention at school is directed toward each child, on an individual basis.

On this same topic of curriculum, my next question was: “To what degree are municipalities able to move beyond the guidelines of the national curriculum?”

Irmeli Halinen responded:

They should respect the national goals and general guidelines with regard to the main contents, but they can further develop contents and be more precise. They have the freedom to decide what to emphasize in the contents and how to do so, and they have 100% freedom in terms of methodology, which includes how teaching and learning are organized, how daily schedules are organized, and the allocation of resources and teaching materials. Up until 1992, Finland had a system for authorizing textbooks; now teachers have the freedom to select them. In 1994 the education system was reformed, and along with it, the curriculum. As of the 1994 curriculum, power in education was delegated to municipal authorities and to schools. Also, since then, curriculum models based on schools have been developed. The main idea behind these models is that teachers discuss and together decide how the curriculum will be implemented. With these reforms the system was forced in a way toward the organization of learning communities in schools.

## **From *Peruskoulu* (Basic Comprehensive Education) to *Lukio* or *Ammattikoulu* (General or Vocational High School)**

When students move from lower secondary school to upper secondary school, they are accepted on the basis of their academic record. Only in cases of specialized education as in the areas of music, art, or technology, schools decide whether or not an entrance exam will be applied. There is free choice of school even at the elementary level in Finland. However, for practical reasons as it happens in all countries, preschool and elementary children go to the nearest school. However, municipalities are allowed to give priority to children living in the same neighborhood in basic education.<sup>22</sup> At *lukio* or upper secondary or high school level, free choice is the norm and the practice. Any student, from any region or municipality, may in theory request or be accepted into any of the country's high schools. It is something like an extended educational voucher system. This possibility of transferring to another school also includes private Finnish schools that are totally subsidized by the government. However, it is important to mention that there are very few private schools in Finland, and the few that exist receive government subsidies and enter into the category of dependent private schools. The percentage of total school enrollment that corresponds to dependent private schools in Finland is: 1.3 in elementary school, 4.1 in middle school, and 14.1 in high school (OECD 2008, p. 346). Municipalities finance high schools. Therefore, as in other European countries, if a student from any municipality attends a high school in a different municipality, the municipality of origin covers the cost of his/her education in the municipality of destination.

Each general and vocational upper secondary or high school has its own curriculum. Consequently, in all, there are three school curriculums in Finland: for basic education, for general upper secondary, and for vocational upper secondary education. While thus far only the 9-year basic comprehensive education has integrated all basic education in a model from grade one to nine, there have been well-documented attempts at total integration,<sup>23</sup> but these attempts have not been successful to date. There is, however, as mentioned in the accounts given in some high schools, greater flexibility and openness for navigating between the general and vocational models and for entering higher education.

The curriculum scheme in Finland represents the most modern thinking on learning for life and work. This scheme is based on two pedagogical philosophies: (1) Freinet's ideas, among other philosophical and pedagogical traditions, and (2) a combination of a competence-based curriculum and a content-based curriculum. In addition, one must also recognize that curriculums are not only the product of the sincere, technical thinking of a group of teachers, education philosophers, and

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<sup>22</sup> Prof. Jouni Välijärvi's comment on an earlier draft of the book.

<sup>23</sup> Trant 1999, pp. 28–31, and Vuorinen and Mäkinen 1999, pp. 160–187.

education specialists. As pointed out by Aho et al. (2010) and Ropo and Välijärvi (2010), Finland's curriculum history, at least since the education reforms implemented in the 1970s, also responds to the political viewpoints of the individuals and interest groups in power.

In 2010, Finland initiated a new process of curriculum reform that was then interrupted with the change in administration in June 2011, but reinitiated with the new government. In the words of academic experts, difficulties are still experienced, specifically: attention to students considered at risk (in cognitive, affective, and social terms); ways to support talented students without neglecting those lagging behind the most; better use of electronic means for learning to detect valuable information; education for immigrants—only notable very recently in Finland; the difference in results between genders; ongoing emphasis on lifelong learning; and attention to the issues of students' motivation and attitudes in order to improve their self-esteem (Linnakylä et al. 2010).

## **Between 15 and 16 Years of Age: Open Opportunities**

When Finnish youngsters reach 15–16 years of age, they must make a decision: general or vocational education. If they choose general education, they must present an application. Admission policies vary from one institution to another, as already mentioned.

If students opt for an academic education, they will sit an exit “matriculation” exam for certification at the end of their general upper secondary education. These students will obtain two diplomas or certificates, one granted by their high school and the other issued by educational authorities after they have presented and passed the old, well-known, famous matriculation exam. If students opt for a vocational track, they will present a practical competence exam at the end of their vocational high school studies, although this exam is not at the same academic level as the matriculation exam.

The matriculation exam is used as a letter of presentation for entering universities. These universities design their own admission policies, which may or may not require additional entrance exams. Some university policies, such as those for teacher education, have similar requirements throughout the country.

At any rate, the genuine tendency is for students to have all options open to them. For example, a student in general studies may enroll in a vocational school to take certain classes and vice versa. Statistics (Statistics Finland 2008a, b) indicate that 10% of students in the vocational track are also enrolled in general schools. And vocational students have the option of taking the matriculation exam and may choose to apply for admission to a university. Universities have the freedom to decide whether or not to accept these students.

## A Glance at Some of the Reasons for Finland's Educational Success

According to the charismatic principal of a fascinating, small public school—I will describe each of my visits to this school in a later chapter—there are seven secrets behind the Finnish success in school education (Hellstrom 2009):

### Trust

The best youngsters want to become teachers

Historically, schools had a remarkable role in the birth of Finland

Academic training of teachers

Teachers as professional experts

Pedagogical autonomy

Education policy provides a support system

Also, based on preparation work for presenting at conferences and giving talks, Irmeli Halinen has summarized what many experts and observers mention as factors of Finland's educational success in the following lines from an interview with her on March 19, 2008:

It's a set of factors, all of them interacting at the same time. I've grouped together the different factors into three sets: education system; good, appreciated teachers; and individualized assistance or support. In the first major group I would place the structure of an education system that does not divide students up or separate them by abilities within schools into groups of those with more or less talent. It's a system that maintains all paths open for our students to enter upper secondary school and higher education. When policies of grouping or dividing students according to abilities were eliminated for seventh, eighth and ninth grades in 1985, and when students were given free choice to continue their studies, we had a lot of discussions in Finland around the advantages and costs of such a change. It was said that it was very difficult to determine the true abilities of each student. The discussion was centered on the point of whether or not it would be convenient to open up all opportunities for everyone, which would frequently signify a waste of resources in support for students. Fortunately, the position of opening up equal opportunities triumphed. Also in this set of three factors, I see another group of variables associated with the value that our society places on education. Society places a high value on the concept of a civilized person. Also in this scheme, teaching as a profession is accepted, valued and supported. A third group of factors within this set is what I call the "spirit of the system": interactive, cooperative and based on trust and support. In Finland there are no national census inspections or exams.

It is true that the word "trust," mentioned by the two experts just quoted, is a word I have heard a number of times in different contexts during my visits to Finland. Frequently, the Finnish refer to themselves as a population that bases their relationships on trust. This is further supported in the writings of Ropo and Välijärvi (2010), who maintain that it is not an exaggeration to say that the guarantee of quality in an education system depends to a significant degree on trust in teachers. A culture of trust also implies cooperation (Aho et al. 2006, p. 12) and networks, which is another feature attributed to Finnish education.

Irmeli Halinen continued, with the second set of factors focused on teachers: "The quality of teaching in Finland is very high. The best students go to college to get a teaching degree."



The third set of factors in Irmeli Halinen's list is associated with the topic of "individualized support." When students have problems, they are detected and addressed in time—early enough to have a greater impact.

In her view: "on this matter we also try to see that students have an active role in their education; thus in the end we have a positive work environment or atmosphere in our schools between students and teachers."

At the end of the interview, I asked her: "looking at the problem from the perspective of public resources, when resources are scarce and optimization fundamental, where would you invest additional resources?" She responded: "in the quality of teachers, in both their training and their professionalization."

## **From OPH to the University of Helsinki, and More About the Reasons for Success**

On the same day in 2008 that I interviewed experts at the OPH office, by 3:00 in the afternoon, I was at the famous University of Helsinki—perhaps the most selective and sought-after of all the universities in Finland. There, I was to meet for the second time (the first was in 2004) with Hannele Niemi, the university's vice president, who has an incredible trajectory in the country's education. We talked a bit about the countless number of visitors coming to Finland due to its PISA success.

The number of visitors has reached the point that Finnish authorities have decided to establish a policy for receiving them. The idea is to schedule the visits through the Ministry of Education (Minedu) for official delegations from other ministries of education.

In my conversation with Hannele Niemi, we focused on the topic of teachers as a factor of success and touched upon the different paths for selecting, studying, and mastering the teaching profession. There are basically two paths: one leads to becoming an elementary teacher or "class teacher" and the other to becoming a lower and upper secondary school teacher or "subject teacher."

Becoming an elementary teacher requires approximately 5 years of university studies. Teacher education, which I will explore in more depth in Chap. 3, is very extensive, involving a broad base of competencies. Approximately 10 to 15% of elementary teachers change careers after they begin teaching, but most remain connected to the field of education. As Hannele Niemi commented, "often their main idea is to support the development of human beings."

Of course, we also addressed the popularity of the teaching profession. We talked about the famous survey conducted by the newspaper *Helsingin Sanomat*, and Niemi said the following:

The teaching profession has not been very popular for finding students interested in mathematics and science. That is part of why the LUMA project was developed, even including the "LUMA Center Website." In addition to LUMA, there have been many efforts to interest students, parents, and schools in the sciences and mathematics. All of this in order to create a new culture in favor of natural sciences.

LUMA<sup>24</sup> (its acronym in Finnish) is a governmental project. It was founded in 1996 for the purpose of improving abilities in mathematics and natural sciences with an eye toward elevating the culture in relation to these topics. Another aim, however, was to increase the abilities of Finnish young people with the objective of placing them within the top 25% of the highest OECD levels. Given the results from PISA 2003, PISA 2006, and PISA 2009, one could say they hit their target. Furthermore, some analysts from the academic world maintain the same.<sup>25</sup>

I posed the same question to Prof. Hannele Niemi as I did to the interviewees mentioned earlier regarding the factors explaining the success of Finnish education. From her viewpoint, there are a number of reasons, grouped into five factors:

**Equality** For us in Finland, the ideal of equal opportunities is something we hold very high.

**Population's General Attitude** We are such a small country, that we quickly become aware of the negative effects when fairness is not achieved.

**Learning as an Asset** We have no better assets than learning and education.

**Culture and History** Two hundred years ago, even in the smallest homes there was a small bookshelf with the Bible, some songbooks or hymnbooks, a spelling book, and technical books on agriculture.

**Women's Influence** All of a sudden, schools found themselves with a great majority of female teachers—many of them with high averages from their years in *lukio* schools and with the best records on entrance exams into universities—and there was also a high percentage of women in Master's programs in universities and technological schools. Our schools are influenced by women's presence.

Regarding the books commonly found in the most humble of homes, historical recollection would seem to confirm this assessment. The following is an account by a historian:

They [the townspeople] also bought books, mostly prayer books and religious tracts, although treatises on political economy, natural law, and medicine, dictionaries, and even works of fiction and poetry also crop up in the inventories of their possessions. ... Even the very poor might own a hymnal or prayer book. (Kirby 2006, p. 53)

When I toured the fascinating, open-air historic Luostarinmäki Cloister Hill handicrafts museum<sup>26</sup> in the city of Turku, I noticed the small bookshelves in the simple wooden homes on display there, holding the type of books mentioned by Niemi and Kirby.

Finland is a nation with a close relationship to books and education. Although there are very few Finnish speakers around the world, Finland has developed an extraordinary support system for facilitating the reading of its vernacular language. Its

<sup>24</sup> <http://www.helsinki.fi/luma/english/> (July 23, 2009).

<sup>25</sup> Ahtee et al. 2007a, pp. 269–270, b, pp. 99–106; Havu-Nuutinen and Ahtee 2007, p. 235; and Linnakylä et al. 2010.

<sup>26</sup> <http://www.turku.fi/public/default.aspx?contentid=67049> (March 18, 2009).

system of libraries is excellent. And the services in its libraries are unsurpassable, as I was able to confirm in great libraries such as the National Library in Helsinki and the Turku city library and those in universities such as the Helsinki and Jyväskylä. And the same was true in the most modest but no less functional and well-used libraries such as the ones in the municipalities or towns of Kirkkonummi, Kemijärvi, Sodankylä, Hetta, and Rovaniemi, to mention just a few.

As I am writing now, with some distance and time since my first visits to Finland, I still remember, with special emphasis, the words of Hannele Niemi when we spoke of the Finnish success. She commented with a gentle, thoughtful smile on her face: "When you're in first place, there is only one direction you can go." As she inferred, once the highest position has been achieved, it is very difficult to maintain it, and the only possible movement is downward.

This is, without a doubt, a great challenge for Finland, with the additional countries in the new PISA rounds, and Singapore among them. Singapore is a country that has invested heavily in education and it has demonstrated high results in other international tests and indexes such as the Trends in International Mathematics and Science Study (TIMSS) test<sup>27</sup> sponsored by the International Association for the Evaluation of Educational Achievement (IEA).<sup>28</sup> Another country with impressive results is South Korea. Chinese provinces and administrations also show very high results.

There is much more to be said regarding the secrets or reasons for Finland's educational success, and I will come back to this topic in a later chapter. For the moment, I would recommend a publication by Aho et al. (2006, pp. 120–135) to readers with a special interest in this topic. It has a section on Finland's performance and the reasons for its success. Also, and more recently, an article by Linnakylä et al. (2010) offers an excellent description of the factors associated with Finnish success in school education. And even more recently published are the successful books written by Pasi Sahlberg (2011) and Hannele Nieme et al. (2012).

## Is the Physiognomy of Finland's Schools Changing?

In the September 2, 2008 edition of the popular, influential *Helsingin Sanomat*<sup>29</sup> newspaper, there was a feature on the number of students classified under the category of special (social and behavior) education in the municipality of Espoo. The news article reported that this number had increased by 11% in 10 years, with an annual growth rate of 1%. This signified that there were approximately 10% more aggressive students in the schools than 10 years earlier. Furthermore, this infor-

<sup>27</sup> Information on the various rounds of the TIMSS test can be found at: <http://timss.bc.edu/index.html> (May 27, 2009).

<sup>28</sup> Information on the IEA can be found at: [http://www.iea.nl/brief\\_history\\_of\\_iea.html](http://www.iea.nl/brief_history_of_iea.html) (May 27, 2009).

<sup>29</sup> Print edition, page A9; translation by Maarit Rossi during the interview on September 2, 2008.

mation describing the situation in Espoo (a town and municipality located next to Helsinki) could also be true for the rest of the country. According to Maarit Rossi, the most stressful aspect for schools is that, despite this situation, authorities have cut funds to schools—and want to further cut them. In order to confront a budget situation that is increasingly difficult every year, and which is intensified by the gradual increases in salaries as specified in collective bargaining contracts, schools increase the number of students per classroom in order to make more efficient use of resources. At any rate, the net effect of all of this seems to be that the money available per student tends to be less.

Espoo is a wealthy municipality in which one would not expect to find a high number of children in special education, or at least not a high number of children placed in special education due to learning environment problems at home linked to poverty or low socioeducational, socioeconomic, and sociocultural levels. In fact, according to principal Maarit Rossi, in less advantaged areas, the number of children in special education can be as high as 20%. For example, the same newspaper reported on September 1, 2008 that 15% of students in the Vaanta (a municipality also near Helsinki but poorer than Espoo) school district were in special education.

To confront this situation of greater challenges with fewer resources, Maarit's school, which is the *Kirkkoharju* school located in the municipality of Kirkkonummi (45min on a suburban train from Helsinki), implemented the following changes from 1999 to 2012:

An additional teacher in mathematics and Finnish

Another additional teacher as a teaching assistant to help the main teacher in mathematics and Finnish

Classes for students with special needs (10 students per class)

In 2008, a total of six special education teachers, four in special education classrooms and two who rotate through different classrooms, were appointed to work with the growing number of students with behavior problems.

Maarit clarified:

In terms of students, the school is about the same size. The amount of money for the school between 1999 and 2008 is the same, but my budget for expenditures is greater because teachers now receive higher salaries. The solution has been to increase the number of children per classroom from 20 in 1999 to 24 in 2008. And I haven't even mentioned the higher prices of books. All of this causes pressure toward a drop in the quality of schooling.

Could these observations be part of a generalized tendency in Finland? Or, is this an isolated case? To investigate this matter and others, I went to the famous Finland statistics office.<sup>30</sup>

On the cold but sunny morning of September 3, 2008, I met with Mika, a staff person specializing in education.

Mika reminded me that Finland achieved a high rate of school enrollment in elementary and middle school education (from first to ninth grades) between 1917, when the country declared its independence, and 1925. The year 1921 was an im-

<sup>30</sup> [http://www.stat.fi/index\\_en.html](http://www.stat.fi/index_en.html).

portant year in the history of Finnish education, not only because the country had achieved nearly total coverage in enrollment at the elementary level, but also because that was the year in which elementary school attendance was made obligatory. And between the two wars, enrollment in both elementary and middle (lower secondary) school education reached 100%. By 1950, the education policy had changed its focus to the quality of education. The system also grew in the 1960s, particularly because of the significant increase in students entering universities. The 1970s were crucial for education in Finland. During that decade, comprehensive education reform was implemented (this was when the dual system dividing students according to academic aptitude at the end of elementary school was eliminated, and the new basic comprehensive education was created for grades one to nine, with equal education for all in the same type of school). This reform was obligatory and continues in effect today. And the benefits are now well known around the world.

The previous education system was divided into elementary, middle school, and high school. Some schools were private. Elementary school was free because it was obligatory, but it was necessary to pay for middle school and high school education.

According to Mika, there were few students in high schools in the 1950s. But with the comprehensive education reform, all of elementary school and middle school education was free. Also, before the comprehensive school reform, there was an entrance exam for middle school.

Later, I spoke with Mika about special education, as well as the change in Finnish students, and the quality of schooling, as I had discussed with Maarit and read in the *Helsingin Sanomat*. In the new education system, the current one, it is true that the number of students in classrooms has increased from 19–20 to 23–35, and there are more special students with low learning and behavior problems. As a consequence, there are more groups of students classified in the area of special education or special learning. The student population seems to be more difficult now, and on this point there is agreement among three sources: Finland's most important newspaper, the principal of a middle school, and a *Tilastokeskus* expert in statistics. Even so, this is not sufficient to conclude that today's children are more difficult than children in the past. As a simple anecdote, we can look at the words of one of the fathers of the Finnish nation and education, Mikael Agricola, who, in 1543, said the following: "How difficult it is to orient young people, these uncontrolled animals, toward a positive aim and solid results in their academic development" (Lehto-Vahtera 2007, p. 21).

I also asked Irmeli Halinen (responsible for curriculum development at OPH) for her opinion on this matter of increased numbers of students with special needs, since according to official statistics, the figure for these students had passed from 2.9% of total enrollment in basic education in 1995 to 8.4% in 2008—an increase characterized by more boys than girls (Statistics Finland 2009a, p. 35). She commented:

There is a special reason that explains this increase. First of all, we now have better diagnostic measurements that allow us to detect problems sooner and with greater frequency. In addition the problems experienced by children are actually increasing. However, in order to confront this situation, we've decided to allocate more resources to implement a new strat-

egy in special education with emphasis on the early stages of children's development. There is a cultural change in society derived from modifications in family structures. Generally speaking, parents now have less time to dedicate to their children. And all of society seems to be changing in this manner. In some way communication media transmit the idea to children that they are already grown up; and the relationship between families and schools needs to change in order to acknowledge these profound social transformations. We need to work on children's limits; we should empower them in different ways.

When I was reviewing OECD statistics on classroom sizes, I found to my surprise that data on Finland for this point did not appear in the corresponding tables (OECD 2007c, p. 381; OECD 2008, p. 436). It is very unusual to find that information on Finland is missing in the standardized data reported by international organizations. So, I asked Mika about the reason for this omission and he said the following:

We don't have data on classroom size. We are gathering information on class size from teachers. It will be ready at the end of this year [2008]. We haven't yet decided if we will continue gathering this type of data for the comprehensive education [*perusopetus*]. In the future it's likely that the Minedu will do this. In order to accomplish this for the current year, we have prepared a questionnaire for all the teachers, with a response rate of 80–90% [87%, to be more precise, according to information provided by Mika in an interview in September 2009], so we have a good indication.

From both the *Education at a Glance 2009* publication by the OECD and my interview with Mika on September 25, 2009 at the Finland Statistics office, I can verify that Finnish authorities reported the information on class size in terms of numbers of students per class groups. In both cases, that is, elementary and middle (lower secondary) schools, the number of students per class is approximately 20, which is small. And while Finland is not the country with the greatest or smallest number, this indicator is below the OECD average for both cases among OECD countries. The number for Finland at the elementary school level is 19.8 students per group, which ironically coincides with the number reported for Mexico (the country with the lowest results in the PISA test); and the number for Finland at the middle school level is 20.1, while this number for Mexico is 29.2 (OECD 2009, p. 382). Nevertheless, this does not prove that the quality of education is a consequence of group size since, for example, South Korea, which has very high performance on the PISA test, has the greatest number of students per classroom in the OECD sample (35.6 in middle school classrooms), while Russia, a non-OECD member country with low educational performance according to PISA tests, is classified as having the smallest number of students per classroom at the middle school level, i.e., 18.

## Reading and Libraries

In the experiences described in the following chapters, especially the chapters on teachers and schools, we will frequently hear that Finnish people read a lot, or at least, more than people from other countries do. We will see in the responses from many interviewees that the history of Finland's educational success is closely linked to books and reading. These are assessments based on impressions that are difficult

to document factually, since even in the statistics gathered in Finland or from the outside by international organizations, data are collected through perception-based questionnaires. At any rate, it is worth the effort to compare the data from my interviews with statistics compiled officially. Let us look at two cases for now: reading and libraries.

The question, then, is: how much do Finnish people read? According to statistics on this country, Finnish males between 10 and 64 years of age read for 39 min a day in 1999, in comparison with 52 min in 1979 (Statistics Finland 2008a, pp. 542 and 543). The figures for Finnish females were 52 min for both years. For another variable, “time dedicated to study per day,” the data indicated the following: 44 min for males in 1999, in comparison with 63 min in 1979; and 58 min for females in 1999, in comparison with 66 min in 1979 (Statistics Finland 2008a, pp. 542 and 543).

So, is this a little or a lot? One way of knowing is to compare reading time with people from other countries. This can give us a more precise idea of the value given to reading in Finland.

According to data compiled by the European Commission, Finnish people between the ages of 20 and 74 years read more than people in seven other European countries (Germany, Spain, France, Italy, Sweden, UK, and Norway). In this study, people from Finland read 46 min a day, while people in the other European countries mentioned read between 15 min a day (Spain) and 38 min a day (Germany) (Eurostat 2007, p. 156).

It seems, therefore, that while the tendency is toward reading less than before, Finnish people still read more than people from other countries do.

The next question to investigate is: how much do Finnish people use libraries?

While cultural statistics are difficult to measure and compare, some positive efforts have been made to compare statistics related to the number, size, and use of public libraries. One of these efforts is led by LibEcon, a project financed by the European Commission. According to the statistics from this project, in a group of approximately 35 countries, Finland is one of the countries with the greatest number of books in public libraries per inhabitant, and it is the country with the highest number of library books borrowed per inhabitant in the same sample (Fuegi and Jennings 2004, Chap. 6).

In 2009, Finland (the OECD country with the highest PISA performance) had a total of 863 public libraries (without counting mobile libraries);<sup>31</sup> Mexico (the OECD country with the lowest PISA performance) had a total of 7,330. In Finland, with a population of 5,351,427 inhabitants,<sup>32</sup> each public library serves 6,201 inhabitants. In Mexico, with a population of 107,550,697 inhabitants,<sup>33</sup> each public library serves 14,673 inhabitants. In 2009, Finland had a total library collection of 40,056,000 volumes or books in public libraries,<sup>34</sup> signifying a total of 7.5 per

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<sup>31</sup> [http://www.stat.fi/tup/suoluk/suoluk\\_kulttuuri\\_en.html#libraries](http://www.stat.fi/tup/suoluk/suoluk_kulttuuri_en.html#libraries) (April 29, 2010).

<sup>32</sup> [http://www.stat.fi/tup/suoluk/suoluk\\_vaesto\\_en.html](http://www.stat.fi/tup/suoluk/suoluk_vaesto_en.html) (April 29, 2010).

<sup>33</sup> [http://www.conapo.gob.mx/index.php?option=com\\_content&view=article&id=125&Itemid=203](http://www.conapo.gob.mx/index.php?option=com_content&view=article&id=125&Itemid=203) (April 29, 2010).

<sup>34</sup> [http://www.stat.fi/tup/suoluk/suoluk\\_kulttuuri\\_en.html#libraries](http://www.stat.fi/tup/suoluk/suoluk_kulttuuri_en.html#libraries) (April 29, 2010).

inhabitant. For the same year, the estimated number of volumes in all the libraries in Mexico, including public, specialized, and school libraries, was 70.6 million,<sup>35</sup> which translates into a total of 0.66 books per inhabitant.

The total number of visits to public libraries in Finland during 2009 was 54,344,185,<sup>36</sup> or just over ten times the size of its total population. This signifies an average of each person in Finland visiting some public library ten times during 2009. The estimated number of users or visitors in all of Mexico's libraries (public, specialized, and school libraries) was 73.2 million in 2009, a figure below the size of the national population. This means there are many more Mexicans than the number of visits to libraries. On average, each person in Mexico visits a library less than once a year, or approximately every 16 months.

These comparisons between Mexico and Finland overestimate the figures for Mexico, since all the libraries in the country are included for Mexico, while the figures for Finland were calculated on the basis of only public libraries. If we would include the books and volumes, and visits to school libraries in the figures for Finland, the figures would be much higher. This is because not only are libraries in Finnish schools a central aspect of learning, they are also used intensively by both teachers and students. At any rate, the above figures and comparisons serve to point eloquently to an enormous difference in cultural habits and inputs between the two OECD countries that, according to the PISA tests, demonstrate the most dissimilar educational performance.

Looking to the future, Finland has a new program for library development entitled the "Program for Finnish public libraries 2015," aimed at transforming and increasing the quality of their services, in order to transform them into genuine learning centers with an emphasis on digital information.<sup>37</sup>

## **A Good School Meal is an Investment in the Future<sup>38</sup>**

We often hear that good nutrition is essential for healthy living and learning. This is beyond question, and the Finnish people believe this. Finland was the first country in the world to begin to serve free school meals (Finnish National Board of Education 2008, p. 2). Finland has offered this service since 1948. Today, this service is free for at least preschool children (6-year-olds) and students in basic comprehensive education (children from 7 to 15 years of age, in first to ninth grades). In all of the schools visited, free school meals were also offered to high school students.

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<sup>35</sup> <http://www3.inegi.org.mx/sistemas/temas/default.aspx?s=est&c=21702> (April 29, 2010).

<sup>36</sup> <http://findikaattori.fi/en/85> (April 29, 2010).

<sup>37</sup> The Spanish version of this public document can be consulted at this Finnish Ministry of Education webpage: <http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2009/liitteet/opm34.pdf?lang=en> (April 29, 2010).

<sup>38</sup> Finnish National Board of Education 2008, p. 7.



In Finland, the free lunch-type meal received by all students at the basic education level, as well as in high schools and vocational schools, is very standardized throughout the country. It is designed to provide a third of the daily nutrients required by each student. The policy on school meals is dictated by law and administered by each municipality.<sup>39</sup>

The menu normally consists of a selection combined with various options such as: sausage, chicken, spaghetti, rice, mashed potatoes, simple green salad (based on lettuce and simple dressings), grated carrots, ground meat (meatballs), water, milk and liquid yogurt, crackers and high-fiber bread, butter, and fruit.<sup>40</sup> The diet should also include fish at least once a week (Finnish National Board of Education 2008, p. 4).<sup>41</sup>

There is no school in Finland, whether large or small, urban or rural, centrally located or remote, that does not serve a school meal. In some cases, the menu is quite extensive but always nutritious, and in other cases the menu simply consists of a warm nutritious soup with fruit and a light cracker. Sometimes, the food is prepared on site in kitchens that may be simple or well-equipped and semi-industrial, and other times food is provided by vendors managed by or contracted by the municipalities.

In some schools, especially those with middle and high school sections, there are vending machines for drinks and food that could be classified as junk food. The response by a principal at one of these schools, when asked directly, was that they could not meet the demand, and that she would prefer that students consume these items at school instead of outside school during their free time. A strong argument!

## Educational and Pedagogical Leadership

Around 2:30 one afternoon in March 2008, I was trying to find my way to the offices of the Institute for Educational Leadership<sup>42</sup> among mounds of snow and the various buildings of Jyväskylä University. There, I would meet with the director of an institute for executive training of schoolteachers and principals from Finland as well as from around the world. The director was Dr. Jukka Alava, and we had a long, informative talk.

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<sup>39</sup> More information is available on the webpage for the National Institute of Public Health, at: [http://www.ktl.fi/portal/english/public\\_health\\_monitoring\\_promotion/monitoring\\_interventions/nutrition\\_in\\_finland/catering\\_and\\_meal\\_patterns](http://www.ktl.fi/portal/english/public_health_monitoring_promotion/monitoring_interventions/nutrition_in_finland/catering_and_meal_patterns) (May 21, 2008).

<sup>40</sup> To see menu examples in the Helsinki school district, consult: [http://www.hel.fi/hki/opev/en/What\\_s\\_new/School+menus](http://www.hel.fi/hki/opev/en/What_s_new/School+menus) (January 25, 2010).

<sup>41</sup> More information regarding Finland's school meals, as well as the culture of food in this fascinating country and the history of school meals, can be found at: Finnish National Board of Education, 2008.

<sup>42</sup> <https://www.jyu.fi/edu/laitokset/rehtori/en> (February 3, 2010).

I learned that the institute began with a program for preparing school principals in 1996. The programs and ideas of the University of Jyväskylä led to a change in Finnish legislation associated with the qualifications required to become a school principal. It turns out that prior to the change in legislation, applicants were required to take an administrative exam. Now, a university education can also be the path toward obtaining the necessary qualification. According to Jukka, “since then, many teachers who want to be principals and others with different goals come to the Institute to be trained through our programs.”

In line with the new legislation, someone who aspires to a principal's position and who meets the established requirements can access certification through the previous system, that is, by taking an administrative exam, or through the new option of a university education program. Many students working toward a teaching degree decide on the school leadership program as an area of specialization for their minor study program, and it directs them toward leadership tasks.

In Jukka's opinion, this is a program that emphasizes leadership abilities more than management skills in school administration. These are leadership abilities associated with culture, values, ethics, and changes in organizations. The alternative route, taking the administrative exam, emphasizes administrative abilities.

In order to be certified as a principal, one must first be a certified teacher, or in other words, have graduated from a university as an elementary teacher or a subject teacher. Then, the applicant must sit the above-mentioned exam or successfully complete the university training.

Still, according to Jukka, “we don't find a high demand for filling the position of school principal. A principal's job is increasingly more difficult and demanding.”

Jukka then moved from educational leadership to pedagogical leadership:

Within educational leadership we find pedagogical leadership, as reflected in the curriculum. If we speak about the history of pedagogical leadership, we become disconnected with what is called instructive leadership in the United States, specifically, teachers instructed to instruct. In Finland, teachers are qualified for pedagogical leadership. This means that teachers are prepared to administer the freedom granted to them in the school curriculum. However, beyond the curriculum is the school culture. Here, the school principal should take the lead in cultural changes, because if he/she does not do so, the culture will develop on its own, without direction. And a vision is needed for this: in what direction do we want to take schools in the coming 25 years, for example? Without a particular vision, there will be many paths and goals, because each teacher has his/her own ideas: The goal of schools is related to the following question: Why do we exist? And also: Why are we necessary? Vision and mission grow out of these questions. And both vision and mission must be discussed under leadership. All of this comes together in a broad-based definition of pedagogical leadership, which intersects all the other elements of administration, finances and personnel.

After this talk on school and pedagogical leadership in Finland, Jukka gave me a paper he had written, with an extraordinary, thought-provoking title: “Quality is not accidental.” It refers to the integration and maturation of his institute for leaders-to-be.

We ended our conversation with Jukka's opinion regarding the factors of Finland's school educational success:

There's no single reason. We're a nation that holds education very high. Our teachers and the contents of our education are very good. Every year 2,000 people apply to be accepted in this university, and only 300 are accepted. So, those who enter are the best. The number of applicants is an indication of the value we place on education. And this has historical roots. For example, after surviving the Second World War, we had to pay a large debt in kind to the Soviets. In reality this burden was transformed into an opportunity. In order to pay, we had to quickly build 1,000 locomotives. To build them, we had to develop a skilled labor force, and thus we urgently needed new and better vocational schools and labor training. To accomplish this, we developed a good system of labor training in a short amount of time. Also, after the war we had an "explosion of babies," and this generation grew up with the idea and the need for more and better education. Consequently, in order to satisfy this demand, we had to educate many more teachers for general education, and this served as a trampoline for education. We had a president, Urho Kekkonen,<sup>43</sup> who decided that there should be a school in each and every rural community in the country. This decision was made because he had come from a rural community.

Jukka continued on a more personal note:

The value placed on education comes from people like my parents who survived the Second World War. They thought that the secret for getting ahead was education. But this history dates back to 1921 with the so-called law of equalization. Other historical reasons are the following: (1) School principals had an important role in their communities in the 1940s, 1950s and 1960s. They were also highly valued in large cities. (2) The same thing happened in rural communities with a thousand or less inhabitants and only one or two schools. School principals were also teachers. They were usually women, people thought very highly of them, and they lived in the schools. They became "maternal" figures for the entire community. (3) We have a habit of reading. Finnish people generally read a lot. We have an excellent system of libraries—something identified in the studies by Jouni Välijärvi since 2003. (4) We're a culture of a different breed: isolated, quiet, trusting and trustworthy, responsible and serious, workers, not extremely ambitious. With these attributes, how is it that we have something like Nokia? Well, it's the same as for PISA. There's no single reason.

## Welfare State and Fairness

As we have seen in some references to the reasons for success, and as we constantly hear in conversations with experts, principals, and teachers, a crucial topic in the narrative on education quality is equity in all aspects of Finland's social, economic, and educational life. The final word on the causal relationship between equity and quality of education has not yet been written. Still, from the conclusions of the OECD studies on the PISA tests, it can be said that equity is required to have a strong influence on quality. I share this vision and I would sum it up with the following phrase: "The path to quality is equity."

In the cafeteria of Building C in the Jyväskylä University complex, I talked with a renowned Finnish researcher, Pirjo Linnakylä. With respect to equity and its re-

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<sup>43</sup> A political leader in Finland for over 30 years, first as prime minister from 1950 to 1956 and then as president from 1956 to 1982.

relationship with quality, the professor answered directly: “We know now, thanks to PISA, that quality of education is a function of equity.”

And this equity is promoted by a strong welfare state—a feature of all Nordic countries. The topic is not, therefore, exclusive to Finland. And equity is not only promoted by the government during the school stage, but rather its beginnings can be found in families’ services and mothers’ care. Also, the attention and care given to children by their mothers and fathers from the first day of life are admirable.

Maternity leave in Finland can last as long as 3 years, although it is common for this absence from work to be shorter. What is interesting, however, is that on the one hand, maternity leave can be shared alternately with the father, and on the other hand, the government provides financial assistance to mothers who care for their children. This childcare system began in Sweden and then extended to the other Nordic countries.

## **In Education, *Quo Vadis* Finland?**

It is very difficult to be a fortuneteller on topics related to human behavior. It is even more difficult when the specific topic is education. However, there is a significant volume of scientific research conducted by different epistemic groups that points to the importance of learning as a process and not only as an outcome. It is impossible to think of teaching, without taking learning into consideration. And learning is a complex function with many factors: from cognitive and noncognitive, to those involving the socioeconomic status (cultural and social capital) of students’ families and schools.

It was clear at the end of the second millennium that profound changes were necessary in education. For example, it was emphasized in 1967 at the International Conference on the World Crisis in Education, held in Williamsburg, Virginia (Coombs 1968), that once again very important changes were required. Changes in world education, at least in the role of the programs of different governments around the world, are the order of the day. These changes are associated with an acknowledgment of learning within education. This acknowledgment has involved, among other things, significant modifications to school curriculums in at least the countries with high academic performance—which point the way for the others following behind them. Transformations in curriculums include what are referred to as twenty-first century programs, which are strongly influenced by aspects of technology, science, reading, and mathematics. And entering into the debate is the position held by those who think teaching should be comprehensive and universal, and those who conceive of the development of human beings as a matter of learning for life. Finland is not far removed from this last tendency—in fact, it is spearheading it.

Alongside these changes, a demand for education results has emerged. This has signified that measurement and evaluation instruments in the field of education have been designed and disseminated around a concept of competence that originated in the business world, and that is known as accountability. Educators or education-

alists are not those pressuring for this type of accountability-based measurement. Those involved in the coercion toward this tendency come from worlds and interest groups associated with government bureaucracies, politicians, business people, and communication media who believe the formulas from business and political life can be transferred to the world of education. The bottom line is that the enormous force of these two major tendencies—the pedagogy of learning and evaluation based on standardized, accountability-focused measurement schemes—seems to be on a collision course.

How is this tension expressed in Finland? Where exactly does the pressure for standardizing, measuring, and assigning responsibility come from? How will all of this impact the future of education in Finland and around the world? To respond to these questions, I sought the opinion of an education sociologist at the University of Jyväskylä, whose current research is oriented toward these and other similar questions.

Thus, my next interview, on September 19, 2008, was with Prof. Tapio Aittola. We had a long, extended conversation on one of the topics of his research: How do people learn? The emphasis was on the point where formal learning connects with informal learning and also on the pressure for changes in Finland's education.

Here are some of his comments:

In Finland politics and education systems have been part of a national project based on a very traditional society. But there are symptoms that indicate things are changing. Transformations are being caused by modern pressures for greater competition, and by neoliberal thinking that brings more individualist ideology into schools and threatens to break up group cohesion. This ideology has also brought ideas that reduce the amount of resources allocated to education. However, not everything is negative. Some positive things are derived from these phenomena and these forces, for example, the freedom to choose. On the other side, however, this ideology leaves individuals on their own: "it's your problem."

He emphasized the following:

Discussion around changes in economic systems in favor of neoliberalism places everything in measurable terms. Thus education policy should be measured and should be accountable in order to demonstrate that it is effective. The old days of a system based on trust is disappearing. Municipalities and schools receive money, and the way this money is administered must be oriented by results and not trust. This is the clearest, most obvious change in people's thinking. Before, everything was based on trust, but now, it must be demonstrated that everything is subject to a strict administrative system. At the level of schools, we find that teachers and students continue to trust in each other, but we are beginning to see some changes. The relationship between teachers and students has become more informal. The hidden curriculum, that is, when and how, and rituals, too, are changing. The ways in which students raise their hands, move freely about classrooms, and speak to teachers are changing. Some new teachers are very good at adapting to these changes. But older teachers are finding it difficult to adapt. This means that the younger generations are able to work in changing environments and with a number of situations at the same time. In the end, the new system that demands results is very stressful for both children and young people. In the old system the focus was not on high performance, so children had time to relax. Now, we have changed to a system oriented toward performance. All of these are symptoms involving changes and we do not yet know where they will take us.

Therefore, both the questions and the answers are still open—with positive and negative aspects at the same time. Some changes are good, such as responsibility, but others are not

so positive, such as increased stress and decreased trust. What will happen in the end? We do not know. The school system is under the same type of pressure and turmoil as the economy, due to the connection to the labor market. Not even highly educated people are sure they will keep their jobs. Young people know this very well. And they are thinking: "I'm not sure I can get a job with the abilities I can get in the university." This has perhaps caused inflation in the education of our young people. It's likely that we are over-educating them.

Things will change—no doubt about that. But how will the tangled mess we have created unravel as the twenty-first century progresses? This is a question for which I do not have an answer. But it is indeed a great topic for reflection.

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# Chapter 3

## Teachers

### Background

The quality of Finnish teachers is frequently cited as the main reason behind the country's school success. And there is a lot of truth to this. However, even in this case, it is important to pause and engage in some reflection before arriving at a definitive and universal conclusion. Thus, this chapter attempts to understand the scheme of attracting and educating Finnish teachers.

There are different sources in the literature that address the matter of Finland's teachers and teacher education. Some have attempted to use comparative logic to explain the structure for attracting, training, and placing teachers in schools. This can be seen in the comparative studies conducted by the European Union (EU), United Nations Educational, Scientific and Cultural Organization (UNESCO), and the Organisation for Economic Co-operation and Development (OECD), and references to these studies will be made in this chapter.

We might begin the study of available materials by consulting the reports prepared by experts from different countries with the aim of enhancing the OECD-sponsored comparative study on attracting, educating, and retaining effective teachers. There is, for example, the report prepared by the Finnish Education Ministry in 2003.<sup>1</sup> Also, for a comparative approach, one can seek answers from the work of the European Commission as an institutional entity that promotes efforts of shared interest for EU members. Especially worth mentioning are the Eurydice tasks in relation to each of the countries, and concretely, Finland.<sup>2</sup> UNESCO has a website with general information on educational systems and less detailed information on teachers.<sup>3</sup> More specifically, within the scheme of attracting and educating teachers, and their subsequent performance, the publications from university scholars, such as Hannele Niemi, Jouni Välijärvi, Pertti Kansanen, Hannu Simola,

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<sup>1</sup> <http://www.oecd.org/dataoecd/43/15/5328720.pdf> (July 22, 2012).

<sup>2</sup> [http://eacea.ec.europa.eu/education/eurydice/eurybase\\_en.php#description](http://eacea.ec.europa.eu/education/eurydice/eurybase_en.php#description) (July 22, 2012).

<sup>3</sup> [http://www.ibe.unesco.org/es/en-el-mundo/europa-y-america-del-norte/finlandia/profile-of-education.html?type=target%3D\\_top](http://www.ibe.unesco.org/es/en-el-mundo/europa-y-america-del-norte/finlandia/profile-of-education.html?type=target%3D_top) (May 4, 2010).



Ritva Jakku-Sihvonen and many others, will be cited throughout this and other chapters.

The topic of teachers can be addressed from very diverse perspectives: attracting, educating, placing, and retaining teachers, and their performance, vocation, remuneration, motivation, and evaluation. All of these points will be addressed here. The main focus of this chapter is to respond to two questions: How much truth is there in the assertion that teachers are behind Finland's school education success? And, how much truth is there in the belief that the teaching profession is one of (if not *the*) most popular profession(s) among young people seeking a university degree? By studying these questions, it will be possible to glean some comparative lessons for education policy in Finland and other countries.

In order to respond to these questions, I should provide some context to the topic of attracting and educating or training teachers. To this end, I will refer to the literature and the information and opinions gathered from my interviews. Among the latter, an interview especially noteworthy is the one I conducted with Elisa Heimovaara at the University of Jyväskylä. Elisa is a teacher at the famous education school at this University, and she is also in charge of the school's international collaboration. In addition, she is an expert on the link between teacher education in Finland and the rules of the Bologna Process (BP).<sup>4</sup>

During the years in which I was compiling information on this topic, teacher education was subjected to changes originating from two sources: the BP and Finland's policy on teacher education. I will discuss both of these processes in detail.

In order to understand the latest information, there is nothing better than starting at the very roots of teacher education in Finland.

## Milestones

### 1863

The first teacher-training school in Finland was established in 1863, in Jyväskylä to be precise, under the auspices of the Jyväskylä teacher-training institute

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<sup>4</sup> The Bologna Process refers to a European initiative—that includes the European Union, member and nonmember countries, as well as other organizations—for promoting the convergence of curriculum courses and programs in higher education, through equivalences in academic credits known as “European Credit Transfer and Accumulation System” or ECTS (see [http://ec.europa.eu/education/programmes/socrates/ects/index\\_en.html](http://ec.europa.eu/education/programmes/socrates/ects/index_en.html)). The Bologna Process, based on the Declaration of Bologna, seeks convergence, initiated in 1999 and programmed for 2010 (culminating in the European Higher Education Area) (see: [http://www.coe.int/T/DG4/HigherEducation/EHEA2010/BolognaPedestrians\\_en.asp#P117\\_13189](http://www.coe.int/T/DG4/HigherEducation/EHEA2010/BolognaPedestrians_en.asp#P117_13189)), in higher education programs organized in three cycles: a Bachelor's degree, Master's degree and doctorate. In this way accreditation of courses and programs is facilitated, with validity in all European Union member countries. More information is available at: <http://europa.eu/scadplus/leg/es/cha/c11088.htm>.

(*seminaari*).<sup>5</sup> Only 2 years of study after lower secondary school were required to become a teacher.

## 1934

This was the year that the Jyväskylä teacher-training school (*seminaari*) was turned into a college or university in education studies. Soon after, this new teacher-training college expanded into other disciplines such as humanities and social sciences.<sup>6</sup> The program was elevated to a level slightly below what is currently known as a Bachelor's degree. The requirement for entering this new college was a high school or upper secondary diploma.

## 1966

The requirements for a teacher's degree were increased and the college became a full university, the University of Jyväskylä, although they were still below those required for a Bachelor's degree. The program was known as "primary teacher qualification."

## 1970 – 1980

Although teacher education was transferred completely to universities in 1971, it was dictated during the 1970s and 1980s by a strict national curriculum established by Minedu<sup>7</sup> (Niemi and Jakku-Sihvonen 2006, pp. 31–32). As part of the 1971 reforms, pedagogical education was introduced in programs for subject teachers (Niemi and Jakku-Sihvonen 2006, p. 31). This in situ specialization within teaching degrees for subject teachers (for example, English, mathematics, literature, biology, chemistry, etc.) continues today. An additional change was also in the making during the 1980s.

In Elisa Heimovaara's words: "We went from a system with a teaching degree just below a Bachelor's degree (BA) to one in which the minimum degree required would be equivalent to a Master's degree. The previous degrees and programs were oriented toward a practical, pragmatic education that did not include components of scientific analysis and educational research. They were aimed more at educating teachers 'how to teach.'"

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<sup>5</sup> Prof. Jouni Välijärvi's clarification on an earlier draft of the book.

<sup>6</sup> Prof. Jouni Välijärvi's clarification on an earlier draft of the book.

<sup>7</sup> Ministry of Education and Culture: <http://www.minedu.fi/OPM/?lang=en> (July 30, 2010).

This is an important point in the history of Finland's teacher education that happened "without being planned that way," I learned from Prof. Hannu Simola at the University of Helsinki.<sup>8</sup> According to my recollection of Prof. Simola's words, the education reformers of that time never thought about turning teacher training into a graduate-level education. From his point of view, this transformation took place alongside an overall reform of Finnish higher education that turned practically all programs into Master's level programs, thereby increasing requirements from a Bachelor's to a Master's level. The only fields of study that remained outside this scheme were areas such as Law that even today requires only a Bachelor's degree.

An issue particularly relevant to explaining the relationship between teachers and the education success of students in Finland was also highlighted by Prof. Simola. He underscored that raising the level of university degrees for teachers from one day to the next did not automatically make teachers become good teachers. In addition to their education, there are other factors such as their motivation and desire to do a good job of teaching and knowing how to teach well, and these are all variables not necessarily associated with an academic degree. In short, as we all know, a degree does not make a teacher.

### *1990s and the Change of Century*

In the 1990s, in addition to the formal aspect of adhering to the BP, teacher education in Finland was strengthened. One of the ways this happened was that research and reflection abilities were introduced into the program.

Since the 1990s, Finland's teacher education has been based on the following pillars (Niemi and Jakku-Sihvonen 2006, pp. 40–41):

- Professional knowledge
- Reading frontier research
- Interdisciplinary research in subject content and pedagogy
- Teaching methods adaptable to different students
- Teacher education based on research and study for improving effectiveness in different cultural contexts
- Research attitude in teachers
- Learning of analytical approaches with an open mind to their application on the job
- Construction of conclusions based on observations and experiences
- Systematic development of teaching and learning environments

At the end of the 1990s, the profile of a Finnish teacher was someone with a university education, with both practical and theoretical skills, and with great academic and professional prestige. In short, the reforms implemented served to academically transform teachers and raise the level of the profession in society's eyes.

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<sup>8</sup> This point was emphasized by Prof. Hannu Simola during two interviews conducted in his office at the University of Helsinki, on March 26 and September 16, 2008.

## The Second Decade of the Twenty-First Century and Beyond

Finland's teachers began the new millennium with the outstanding results from the Programme for International Student Assessment (PISA) tests. Some anecdotal evidence suggests that even the Finnish were surprised by the outcome. Still, more concerned about teaching and learning than about test performance rankings, the Finnish have continued to reform their educational system. In 2004, they introduced a new curriculum that was implemented in all schools beginning in 2006. During the second half of this century's first decade, they moved ahead with significant reforms in the processes of attracting and selecting students for university teacher education programs. And in 2010–2011, they amended the basic education curriculum. In 2012, they were talking about new curriculum reform. In 2013 they almost have ready a new curriculum that will be effective in 2016.

To describe the first-decade changes to teacher education, I would borrow the words of Elisa Heimovaara, the director of the teacher education school at the University of Jyväskylä,<sup>9</sup> who clearly frames the path of studying to be a teacher:

The path is different for class teachers and for subject teachers. For those who are elementary or class teachers, we have recently changed the system for access to universities. This is how the process currently works: (1) A standardized national exam must be taken by anyone with a diploma or matriculation certification;<sup>10</sup> (2) those who pass this exam, in the case of the University of Jyväskylä, must take a second exam; (3) those who pass this second filter are invited to an interview; and finally, (4) a decision is made by the university. The admission rate for this school in the university is approximately one out of every eight applicants. We've changed the application system. Before, students from *lukio* were assigned points associated with their school performance and matriculation. Now, anyone may take the national admission exam, and their points are not taken into consideration. This offers more opportunities to all of those graduating from *lukio*. Basically, the idea is to increase the diversity in the pool of applicants to the teacher education program. For those who wish to become a subject teacher, the admission procedures are determined by the different programs, such as mathematics, physics, biology, etc.

And she continued:

All our class and subject teachers must obtain a Master's degree. The philosophy behind this is that candidates for becoming teachers and teachers themselves must be lifelong learners. To this end, they must be given strong theoretical and practical elements with solid research tools. Teachers work in an environment in which new knowledge is constantly being generated. Consequently, they must be prepared to learn and reflect upon their own work, using these types of tools.

The certifications required for a permanent teaching position are shown in Fig. 3.1.

Early and preschool education from birth to 6 years of age is viewed in Finland as a matter of "children's well-being," and is thus regulated, at least until 2012, by

<sup>9</sup> Interview on March 27, 2008.

<sup>10</sup> The topic of matriculation will be addressed in more detail in Chap. 4 entitled "Is education evaluated in Finland?"

| Teaching Activity   | Certification Required  |
|---|---|
| Early and preschool education (optional): from birth to 6 years of age  | Bachelor's degree in early and preschool education. This teacher certification and the next one at the preschool level do not require a Master's degree. <sup>1</sup> |
| Preschool education (optional): 6 years of age  | Bachelor's degree in early and preschool education, or class or elementary teacher  |
| Comprehensive basic education (compulsory): from 7 to 15 years of age (program consisting of nine school years) | Elementary or class teachers and subject teachers, both with Master's degree.   |
| High school education consisting of around three school years   | Subject teachers with Master's degree.  |
| Vocational education  | Vocational education teachers, and subject teachers, with Master's degree.  |
| University education  | Professor with academic degree  |
| Special education <sup>2</sup>  | Teachers with Master's degree in education sciences   |
| Guidance counsellors <sup>3</sup>   | Teachers with Master's degree in education sciences   |

**Fig. 3.1** Teaching activities and certifications required. (Table developed with information provided by Elisa Heimovaara and based on Jakku-Sihvonen and Niemi (2006, p. 11)). **a** Certification may be obtained in different ways: with a Bachelor's degree (180 ECTS) in education sciences or with a social services certificate from a polytechnical school (Parkatti 2008, p. 13). **b** Working at the basic education level (grades 1–9) in vocational education and in training (Parkatti 2008, p. 16). **c** Working primarily at the middle school level (grades 7–9) and at the high school level, whether in an academic or vocational program (Parkatti 2008, p. 13)

the Ministry of Social and Health Affairs<sup>11</sup> instead of the Ministry of Education.<sup>12</sup> School education, beginning at around 7 years of age and preschool education at around 6 years of age, is completely free, but early education and childcare programs

<sup>11</sup> <http://www.stm.fi/en/frontpage> (May 27, 2009).

<sup>12</sup> I will address preschool education and child care or child development programs in more detail in Chaps. 5 and 6.

are not. Parents must pay between 18 and 200 EUR per month for these services.<sup>13</sup> And the salaries received by teachers at the early and preschool levels are less than those received by elementary or middle schoolteachers. According to Elisa: “This is why preschool teachers push for better salaries and higher social esteem. Also, at this education level, teachers have longer workdays and fewer days of vacation.”

In addition to the characteristics mentioned above with regard to education and certifications, Elisa emphasizes a particular conclusion that I believe is critical for teacher education and for the teaching profession (Heimovaara and Rasku-Puttonen 2007): “Total commitment to thoughtful reflection, through research and systematic dedication to ongoing professional development. Finnish teachers are learning throughout their entire lives.”

This is a perspective that one hears repeatedly in Finland, and it is associated with the essence of teacher quality.

The theoretical origin of this orientation toward “lifelong learning” can be traced back to the 1960s and 1970s, as documented in the work by a psychologist and scholar of education and evaluation, Torsten Husén. He was the director of the International Association for the Evaluation of Educational Achievement (IEA)<sup>14</sup> in its early days, and was also closely associated with the OECD.

In Husén’s words (1975, p. 37): “In our contemporary learning society, [education] is a lifelong process.”

This notion of lifelong education, in which educational systems should emphasize not so much the objective of an educated person (as a product of a school process) but an educable person (with lifelong learning), also comes from the results of the previously mentioned conference held in Williamsburg, Virginia in October 1967 and entitled “International conference on the world crisis in education” (Coombs 1968, p. 109).

Before Husén and after the International Conference, UNESCO—through a prestigious 1972 report entitled “Learning to Be” (Faure et al. 1972)—had already underscored, on the shoulders of other great education thinkers from the 1960s, 1950s and even before, the importance of learning for life and work and its relevance in developing cognitive and noncognitive skills and competences.

Still, this is a theme that the Finnish people may recall proverbial authorship from years, if not centuries, ago. According to Prof. Ari Antikainen (2007, p. 342), there is a Finnish proverb that says: *Oppia ikä kaikki* or “all of life is learning.”

However, words and phrases may be remembered, and wherever learning approaches during, from, and for one’s entire life have originated, it is clear that teachers in Finland must climb many steps before standing in front of students in a classroom.

Returning to the matter of the curriculum, there is currently a movement toward a more experience-based orientation in teacher education, according to Elisa. It emerged from a demand made by students in teacher education for more experience-based activities outside teacher-training schools (which are located in education

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<sup>13</sup> <https://www.jyu.fi/edu/laitokset/okl/en/educationsystemfinland> (May 4, 2010).

<sup>14</sup> IEA (<http://www.iea.nl/>).

schools within universities and known colloquially as *norssi* but officially as *normaalikoulu*). Agreements have been formalized with six elementary schools to promote this type of practice (extramural) (Heimovaara and Rasku-Puttonen 2007).

In short, good theoretical foundations, with tools for analysis, reflection, and interpretation of scientific research, with experience-based opportunities inside and outside *norssi* schools, are the elements that define teacher education in Finland in the twenty-first century. This is, furthermore, a totally university-based education. Students working toward a teaching career in Finland are not viewed as different from other university students. They are university students as much as their colleagues working toward any other profession. Moreover, as I will comment again, many of the classes they take are offered in other education departments or colleges. Hannele Niemi and Ritva Jakku-Sihvonen (2009), two academic authorities, offer a broad perspective on Finland's teacher education and education system.

## Structure of Teacher Education Programs

There are a number of paths to becoming a teacher in Finland. The point of entrance is through universities but the specific forms used for teacher education depend on cooperation from the various academic departments within universities, and this has increased in recent years (Niemi and Jakku-Sihvonen 2009, p. 191).

Young people may make the decision to embark upon a teacher career at any point during their university education: at the very beginning, in the course of their studies, or at the end of their program in the case of subject teachers. In the case of students who know they want to study for a teaching degree when they first apply for acceptance into a university, they can aspire to be admitted into one of two programs—to become an elementary or class teacher or to become a subject teacher. The application for admission is processed in the department of education or teacher education in the university they have selected. Teachers who graduate from one of these two programs may teach elementary school, grades 1–6, in the case of class teachers or middle (lower secondary) school, grades 7–9, in the case of subject teachers. And as you will remember, these two sections (elementary and lower secondary school) make up what is known as comprehensive education (completed in 9 school years).

The scheme is flexible. Class teachers may take specialization courses that will allow them to teach in lower secondary school, and subject teachers may teach in elementary school if they take the pedagogical courses required.

The second path for becoming a teacher—also a subject teacher in this case—is taken by young people who started their university education in another academic department, studying a specific area such as music, physics, mathematics, history, political science, biology, chemistry, etc., and then in the course of their studies or upon completion, they decide to pursue a teaching qualification. Whether they make such a decision during or at the end of their studies, they must enroll and complete a series of credits in pedagogy offered by the teacher education department at

the university where they are studying. Obviously, the different departments within universities work closely to offer a menu of options for different areas that students in either program (for class teachers or subject teachers) may specialize in, for their main or subsidiary study (Linnakylä et al. 2010; Niemi and Jakku-Sihvonen 2009, p. 191).

And the system continues to be flexible. As we will see in the experiences in schools in the next two chapters, there are cases in which schools hire persons to fulfill a teaching role in a specific way, even without a teaching certificate. This takes place when school principals determine, in light of specific circumstances, such as insufficient human resources available in a particular area, that it is necessary to hire persons without teaching certificates to fill certain temporary positions.

After this introduction, and with the help from the information received from Elisa Heimovaara and observations made by Prof. Jouni Välijärvi, and gleaned from the literature, which emphasizes the detailed curriculum for preparing both class and subject teachers, as specified by the Teacher Education Department at the University of Jyväskylä,<sup>15</sup> I will offer a concise, didactic description of the basic structure of the famous education program for class or elementary teachers in Finland. Although, as clearly stated by Niemi and Jakku-Sihvonen (2009, pp. 180–181),<sup>16</sup> there is no homogeneous program for teacher education, due to the academic autonomy granted to universities, we do find shared criteria promoted by an inter-university project known as *Vokke*,<sup>17</sup> which is housed at the University of Helsinki and directed by Profs. Niemi and Jakku-Sihvonen.

The program is concluded when students successfully complete 300 European Credit Transfer and Accumulation System (ECTS).<sup>18</sup>

Since the BP, the Finnish educational system, which was based on a single certification, with a Master's degree, changed to a "European" model in which basically, the same scheme is offered through two different paths, with two certificates: one with a Bachelor's degree upon completion of 180 ECTS and one with a Master's

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<sup>15</sup> <https://www.jyu.fi/edu/laitokset/okl/en/curriculum/curriculum%20pdf/view> (July 30, 2010).

<sup>16</sup> In an article published in the Education Journal of Spain's Ministry of Education, the last name of Prof. Jakku-Sihvonen is written as Jukku-Sihvomen. The correct last name is the former, and thus the bibliographical reference to this article in the current publication is listed as Jakku-Sihvonen.

<sup>17</sup> <http://www.helsinki.fi/vokke/english/> (June 7, 2010).

<sup>18</sup> In terms of semester or annual work, a full-time workload for 1 academic year is equivalent to approximately 60 ECTS. One ECTS is equivalent to an estimated 27 work sessions in general (Niemi and Jakku-Sihvonen 2009, p. 180). Each session is equivalent to 60 min of class work, independent work or face-to-face contact with pupils or "in front of group." For example, a course for one subject, such as "Growth and development environments," is equivalent to 3 ECTS, involving 81 h or work sessions. However, in practice, more than 81 h are involved. In this course, students must study two extensive books, write papers, etc. Thus, students take 20 courses (approximately 3 ECTS per course) each academic year. Not all the credits coincide with the same number of hours of work in other departments in a given university or in other universities. In other education departments, one might obtain more credits for the same amount of work. (Information provided by Elisa Heimovaara during an interview conducted in her office at the University of Jyväskylä on March 27, 2008.)



degree upon completion of 120 additional ECTS. This change took place on August 1, 2005 (Niemi and Jakku-Sihvonen 2006, p. 35). In addition to this change, the BP requires students in teacher education programs to have more hours of direct contact with pupils or face-to-face teaching. Fewer hours were required in the Finnish curriculum. What was also increased through the BP was the number of hours of independent study per week. In financial terms, this is positive for universities, since independent study is less expensive than direct contact with pupils. At any rate, according to Elisa Heimovaara, the number of hours of face-to-face contact at the University of Jyväskylä was maintained above the number required by the BP, specifically 25 h/week.

As mentioned earlier, since the BP, the previously monolithic program was divided into two parts, a Bachelor's program and a Master's program. However, it did not change in structural terms, since in order to be a certified teacher in Finland, a Master's degree is required, no matter what the BP specifies. At any rate, Figs. 3.2 and 3.3 summarize the teacher education program for elementary or class teachers. For the purposes of the BP, the program is divided into a Bachelor's option and a Master's option, even though in essence the program has not really changed, since a Master's degree continues to be required before a teacher may stand in front of a class.

Teachers who are in front of a class at the lower and upper secondary school levels need a university or vocational polytechnical education in the subject area they have chosen, such as mathematics, physics, languages, literature, chemistry, physical education, arts, etc. During or following their university education, they must complete a pedagogical education program equivalent to 60 ECTS, typically requiring 1 year of studies. These studies are equivalent to a minor or subsidiary study for the students.<sup>19</sup>

What are the contents of this 1-year pedagogical program? The answer can be found in Figs. 3.4 and 3.5. In summary, the program is divided into two parts: one for basic studies and the other for intermediate studies in education.

To gain an idea of what is studied in some of the subjects in this pedagogical program for subject teachers, I asked Elisa Heimovaara to go over the curriculum in a little more detail. I asked, for example, "What is studied in the intermediate course listed above as 'Developing individuals in groups'?" In this case, students study topics associated with the prerequisites for individuals to learn, and to learn how to learn, and abilities for communicating in groups and creating networks.<sup>20</sup>

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<sup>19</sup> The ECTS requirements may thus exceed the 300 ECTS for subject teachers. "Subject teachers finish their Master's degrees with between 300 and 350 ECTS. In addition to their studies in their major and minor areas, the qualifications for obtaining a degree for becoming a subject teacher require pedagogical studies equivalent to at least 60 ECTS, including a teaching practice" (Parkatti 2008, p. 14).

<sup>20</sup> This information regarding what should be taught and learned in each course in the program for class teachers and for subject teachers, with a complete bibliography, can be found in detail in the teacher education curriculum at the University of Jyväskylä: <https://www.jyu.fi/edu/laitokset/okl/en/curriculum> (July 30, 2010).

| Subject                                  | Contents  | ECTS |
|--|---|------|
| Communication and guidance studies       | Introduction to university studies and personal study plan, scientific research, ICTs <sup>1</sup> , mother tongue, Swedish and foreign language.   | 20   |
| Basic studies in education               | Introduction to education, psychology of education, sociology of education, guidance of growth and learning, and research-based growth to teacher (10 ECTS of teaching practice included).  | 25   |
| Subject studies in education             | Individual learning, interaction in a group and networks, the learning organizations, planning, implementation and evaluation of learning, research methodology and communication, Bachelor's thesis (10 ECTS of teaching practice included). | 35   |
| Multidisciplinary school subject studies | Technology, arts, music, mathematics, Finnish, textiles. Includes didactic aspects for each subject, except foreign languages.  | 60   |
| Minor subject studies                    | Geography, biology, physics, music, special education, psychology, social sciences.   | 25   |
| Optional studies                         | Almost any subject in any university department (including abroad). Students often select courses in multidisciplinary areas to reinforce their studies.  | 15   |

**Fig. 3.2** Summary of program for obtaining a Bachelor's degree (B.Ed.) for elementary or class teachers ("Tutkinto KK: Kasvatustieteen Kandidaatti"). Total ECTS: 180 (duration: approximately 3 years). *ICTs* Information and Communication Technologies. (Figures 3.2, 3.3, 3.4, and 3.5 were developed by the author from three sources of information: the University of Jyväskylä curriculum available at <https://www.jyu.fi/edu/laitokset/okl/en/curriculum> (May 19, 2012); 2) data and interpretation provided orally and written by Elisa Heimovaara during an interview conducted at her office at the University of Jyväskylä on March 27, 2008; and 3) a publication by Niemi and Jaku-Sihvonen (2006, pp. 38–39))

In the course or subject listed as "Guidance in learning and the learning organizations," the topics addressed are divided into two areas: (1) participative learning organizations and (2) planning, implementation, and evaluation. Each curriculum subject requires at least one set of sessions/classes, papers/projects, and a final

| Subject                            | Contents  | ECTS |
|------------------------------------|---|------|
| Communication and guidance studies | At least one introductory course in statistics; introduction to scientific research and a statistics package (SPSS). Communication in mother tongue.  | 5    |
| Advanced studies in education      | Education, ethics and philosophy of education, growth and development environments, school community and society, teacher as researcher, development of teacher's and pupil's thinking, an advanced optional subject, advanced research methods, thesis seminar. Educational practices (16 of the 80 ECTS). | 80   |
| Minor subject studies              | Teacher as researcher, advanced optional courses in education, research methodology and communication, two seminars, Master's thesis, maturity examination.   | 35   |

**Fig. 3.3** Summary of program for obtaining a Master's degree (M.Ed.) for elementary or class teachers ("Tutkinto KM: Kasvatustieteen Maisteri"). Total ECTS: 120 (duration: approximately 2 years)

| Topic   | Sub-topic                          | Course  | ECTS |
|---|------------------------------------|---|------|
| Guidance for teaching and environments for teacher's work | Introduction to an educator's work | Introduction to education                                       | 5    |
|   |                                    | Psychological foundations of education                          | 5    |
|   |                                    | Sociological foundations of education                           | 5    |
|   | Introduction to a teacher's work   | Guidance for growth and development                             | 5    |
|   |                                    | Practical instructed guidance for teachers with research skills | 5    |

**Fig. 3.4** Basic pedagogical program for subject or lower and upper secondary school teachers (25 ECTS)

| Topic                        | Course   | ECTS |
|------------------------------|--|------|
| Learning and its supervision | Developing individuals in groups   | 6    |
|                              | Guidance in learning and the learning organizations  | 7    |
|                              | Teachers' ethics and educational philosophy  | 4    |
|                              | Communication and research methodology   | 3    |
|                              | Instructed basic practice: planning as the basis of teaching and learning  | 5    |
|                              | Instructed advanced practice: an inquiring, experimental teacher; developing him/herself as well as pupils' thinking | 7    |
|                              | Instructed adaptive practice   | 3    |
|                              | Instructed specialized practice  | 3    |

**Fig. 3.5** Intermediate pedagogical program for subject or lower and upper secondary school teachers (35 ECTS)

seminar. In the subject we are considering here, required reading is divided among three sets of reading material<sup>21</sup> contained in three books. For the section on planning, implementation, and evaluation, the course is organized by sessions/classes, an exam, and reading. At least two books are used as supportive material.<sup>22</sup>

My next question was regarding credentials for teaching English. Most of the English teachers in Finland, in both elementary and lower secondary schools, are teachers who studied to become subject teachers. However, the University of Jyväskylä has had a program since 1995 for class or elementary teachers, known as Jyväskylä University Language Integration and English Teaching Program (JULIET),<sup>23</sup> which prepares students through a rigorous English curriculum consisting of 35 ECTS and completed over the 5-year period in which they are studying their

<sup>21</sup> A packet of regulatory material on schools prepared by the OPH. A book on sociology of education in Finnish. A textbook: Peterson, J.M. & Hittie, M. 2003. *Inclusive teaching: Creating effective schools for all learners*. Boston: Allyn & Bacon.

<sup>22</sup> A book in Finnish on the topic "How do we learn?" and another: Woolfolk, Anita. (2008). *Educational psychology: Active learning edition* (10th edition). Boston, MA: Allyn & Bacon. Professor Woolfolk has her own web page (<http://www.coe.ohio-state.edu/ahoy/>) and another that accompanies the textbook ([http://wps.ablongman.com/ab\\_woolfolk\\_edpsych\\_9/10/2713/694768.cw/index.html](http://wps.ablongman.com/ab_woolfolk_edpsych_9/10/2713/694768.cw/index.html)).

<sup>23</sup> "Jyväskylä University Language Integration and English Teaching Program" <https://staff.jyu.fi/Members/misumatt/Juliet/?searchterm=juliet> (May 19, 2012).

Bachelor's and Master's programs. The program is divided into two sections: (1) study of the English language and culture and the teaching and learning of English and (2) integrated learning of English and the contents and themes of the English language, pedagogical language, culture, and literature. The areas mentioned in the first section are covered during the first 3 years of university education of students, and the second during the last 2 years. Students who complete the JULIET program receive a certificate or qualification that allows them to teach English in elementary schools.

In order to be an English teacher at other educational levels, different certificates or qualifications are required. A subject teacher with advanced English courses can teach English in high schools; a teacher with an intermediate qualification in any language, such as German, for example, can teach this language in lower secondary and elementary schools; and a teacher with basic qualifications, such as in French, for example, can teach this language only in elementary schools. The same logic applies to all other subjects for subject teachers.

To the same degree that the curricular structure of the two programs is novel and imaginative, the study plan for each student is crucial for the program's success. In the study plan I have referred to here, students confront an enormous range of possibilities, and practically all that the University of Jyväskylä has to offer educationally is open to them and to any student at the university. There is an immense database that contains all the courses and course schedules offered at the University. Students may take courses at different hours of the day and with different professors to comply with their curricular program. This database is known as the *Korppi*.<sup>24</sup>

In short, the teacher education program is very demanding academically, but it is very flexible and enjoys strong institutional support. This allows students to “play” with different options in terms of studies and qualifications. In the end, the results are surprising: on the one hand, teachers are academically prepared in a sophisticated, in-depth manner, and on the other, they are dedicated to their profession with a strong combination of intrinsic and extrinsic motivations that I was able to verify during the interviews I conducted. This is true even though at first glance, the teaching profession does not seem to be popular among high school students. However, it is important to note that the current teachers I interviewed did not view the profession favorably when they were in high school. I will address this matter of motivation later in this chapter.

At any rate, this curricular program at the Department of Education at Jyväskylä is complemented with each student's personal study plan that consists of (1) times (the times at which each student decided to take the courses or complete the work required for complying with the ECTS), (2) exchange programs, and (3) minor subjects. Each student has a teacher adviser who helps him/her in developing an individual study plan. Although there are a total of 13 education schools in the eight universities in Finland, plus five vocational polytechnical schools, a school for adults and a school for Swedish teachers located in Vaasa, it is true that the

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<sup>24</sup> *Korppi* requires students to register, but the basic idea of the database can be found at <https://korppi.jyu.fi/kotka/portal/showLogin.jsp> (May 19, 2012).

Universities of Helsinki and Jyväskylä offer the most popular programs. And in addition to education studies, the University of Helsinki also offers a specialization in educational psychology that is pursued by many students.

There is also a vocational route to becoming a teacher, and it is primarily directed at teachers who will end up teaching in vocational institutes or polytechnics.<sup>25</sup> The essential requisites and philosophy are the same as those described for subject teachers in general lower and upper secondary schools. The substantial difference is that this program is offered at polytechnical or applied sciences universities (there are five in Finland<sup>26</sup> offering teacher training), and the students typically have been in the labor force more years (at least 3 years) before beginning this pedagogical program—which requires 1 year of study and 60 ECTS, as described in the websites for the applied sciences universities of Jyväskylä,<sup>27</sup> Haaga-Helia in Helsinki,<sup>28</sup> and Oulu.<sup>29</sup>

## Normaalikoulu (Norssi Schools)

I had the opportunity to sit through entire classroom sessions in *norssi* schools, which are schools where students in teacher education programs carry out their teaching practice as part of their curricular program (for becoming both class teachers and subject or lower secondary school teachers). As pointed out to me by an elementary school teacher in one of these schools, the pupils who attend these schools have basically the same experience as those who attend other schools.

What I observed was the following:

1. In the case of those studying to become class teachers, student teachers lead the group session completely on their own, with very few interruptions by the instructing teacher, who is the main teacher for the target group—in this case, the 3rd year of elementary school. The class session takes place in a cordial manner, and the student teacher does not seek assistance from the main teacher, acting instead like a substitute teacher. At the end of the session, and after pupils have left the classroom, there is a dialogue between the student teacher and the instructing or main teacher that lasts about 15 min, during which the latter makes observations and suggestions to the former.
2. The dynamic is similar for student teachers preparing to become subject teachers. I observed a physics class for pupils in the 1st year of lower secondary school, or seventh grade. The student teacher arrived at the classroom with a series of instruments on a cart, ready to conduct an experiment on rays and angles of

<sup>25</sup> [http://www.koulutusnetti.fi/index.php?path=vocational\\_teacher\\_education](http://www.koulutusnetti.fi/index.php?path=vocational_teacher_education) (May 20, 2012).

<sup>26</sup> <https://www.opekorkeahaku.fi/opehaku/> (May 20, 2012).

<sup>27</sup> <http://www.jamk.fi/english/education/vocationalteachereducation/> (May 20, 2012).

<sup>28</sup> <http://www.haaga-helia.fi/en/vocational-teacher-education> (May 20, 2012).

<sup>29</sup> [http://www.oamk.fi/amok/english/vocational\\_teacher\\_education/](http://www.oamk.fi/amok/english/vocational_teacher_education/) (May 20, 2012).

reflection and refraction. The student teacher took control of the class, with the instructing teacher sitting at the back of the classroom and only interrupting the class session occasionally to discipline the pupils. At the end of the session, a short dialogue took place between the student teacher and the instructing teacher. The latter went through a series of observations of the session, based on a written list. In this case, the instructing teacher was not a main teacher, but a university professor dedicated to supervising the practical experiences of student teachers in lower secondary school. I would add here that, in my experience, student teachers in lower secondary schools tended to be older than student teachers in elementary schools.

In primary teachers programs, there are four training phases for teachers-to-be. They begin with strict guidance from the supervising and tutoring professor and move up to an independent teacher mode in the fourth stage. For an excellent review of the teaching practice and the whole teacher-training program, see Silander and Välijärvi (2013).

## **The Quality of an Educational System Cannot Exceed the Quality of its Teachers**

I have often read an expression, in the form of a dictum or aphorism, which says, “The quality of an educational system cannot exceed the quality of its teachers.” This expression can be found in the works of Andreas Schleicher (2008), the PISA international coordinator at the OECD, as well as in a publication by the McKinsey & Company business consultation firm. The article by this firm attributes the phrase to an education policy administrator in South Korea (McKinsey and Company 2007, p. 16). However, no matter where the expression came from, the real question is: What happens in educational systems that simply do not have high-quality teachers? In both Finland and South Korea, the teaching profession is highly respected and valued by those who decide to begin a university teaching program. In both countries, a long path of study is required, and in the case of South Korea, there are national certification exams. But what can be done to change the culture and appreciation for the teaching profession in societies in which a teaching program in a teacher-training school is not necessarily synonymous to a university program? What can be done so that those applying to enter a university teaching program hold this profession in high esteem, even above other professions?

In South Korea, the answer may be fairly simply, since the salaries received by teachers in that country are above those of nearly all the teachers in OECD member countries. In Finland, however, where there is a perception among students and teachers that a teacher’s nominal salary is low, what is necessary to make the teaching profession an attractive option?

When I asked Prof. Simola “how does one measure or account for society’s high esteem for the teaching profession?” he offered this hypothesis:

When members of the upper classes of a society send their children to universities to obtain a teaching degree, one can claim that society holds this profession in high esteem. One of the unintended benefits of reforming higher education in Finland—requiring a Master’s degree for nearly all careers, including the teaching profession—was that the upper classes had a favorable view of the Master’s level for the teaching profession. This sparked a change in society’s appreciation for this profession.<sup>30</sup>

The report by McKinsey and Company (2007, p. 13, 22 and 38) points out that one of the three ingredients of a successful school system is “assuring that the right people [high caliber] are those who become teachers.” But who are the “right people?” If the “right people” signify the best high school graduates, then what can be done to raise the profile and society’s appreciation for the teaching profession among high school students? External incentives could help of course—for example, better salaries for this profession. However, as demonstrated by comparative studies of the salaries received by teachers in various countries, the level of salary received is not a sine qua non condition for better academic performance of an educational school system. The classic case of relatively low salaries and high-level results is Finland, but there are also other countries, such as the Czech Republic, Sweden, the Slovak Republic, and Hungary, where there is evidence of the same relationship. And there are other countries in which there are relatively high salaries but relatively low-level results, such as Portugal, Spain, and Greece (OECD 2007c, pp. 396–398).

## The Popularity of the Teaching Profession: What Does the Evidence Say?

In Finland’s parlance, the teaching profession is very popular.

It is true that the proportion in some universities between those applying for and those admitted into teaching programs can be ten to one, or even less. Furthermore, young people tend to begin their university teacher education (or any other education) a few years after finishing their general or vocational upper secondary school program.

With such a strict selection of students who, in addition, are somewhat older than other university students, it is difficult to reject the hypothesis that Finland’s educational success is due to its teachers.

What does the evidence say? When there is a great demand for only a few positions offered, this tends to guarantee that the highest caliber students, or the “right people,” apply for and are admitted to the teaching profession.

Frequently in my interviews, but also in official and academic publications, there is mention of the great demand for the teaching profession. For example, during my interviews with an Opetushallitus (OPH) official, we addressed the topic of the popularity of the teaching profession. The official recalled the famous survey

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<sup>30</sup> Interview with Prof. Hannu Simola at the University of Helsinki on September 16, 2008.



published by *Helsingin Sanomat*,<sup>31</sup> in which it was detected that education was the most powerful field of university study with the greatest possibilities for universities to select their students.

“But why is it so popular?” I asked. The answer:

A university academic degree is involved, and thus, it’s a profession valued by society. Parents like to see their children in the academic and university world. Also, teachers in Finland have a lot of freedom to innovate. Teachers decide what and how to teach. They are happy and satisfied. And they don’t have inspectors looking over their shoulders. Let me emphasize: education in Finland has always been respected. This is a tradition because Finland has been a very poor country. For example, my parents viewed education as something very important for me. They thought my life would be better than theirs—they had to go through very difficult times during the war. Thus, more education, more opportunities in life. If education is respected, teachers are respected. And so, they’re happy.

The result, then, is the following: teachers, who are academically oriented, unrestricted, and respected—in a system that exudes confidence. In addition, it appears that society in general respects teachers *prima facie*. National authorities also respect them, granting them pedagogical autonomy by law and through education policy. This vision—which is nearly common knowledge and is widely accepted in Finland—is sometimes cited as a reason for the country’s educational success, and there is a lot of truth in all of this. However, what is the origin of the generalized belief that the teaching profession is a popular one?

It is necessary to examine some statistics to respond adequately to questions regarding the popularity of the teaching profession in Finland and the reasons for the success of the Finnish model.

Nonetheless, in the interest of completing this portrait of the context for education and teaching in Finland and developing a better understanding of what takes place, I will digress briefly to once again reflect on the change in the system for students’ application/acceptance at universities. This digression will provide us with some additional elements for better interpreting the data that I will offer below.

The last year of the previous system for attracting students to enter the teacher education program was 2005. The characteristics of that system can be summarized as follows. First, students submitted their applications to education departments in universities. The applications were received and analyzed on the basis of high school averages and results from the exam known as the matriculation examination. Students also received points for work experience. After passing the initial filter in a particular education department, students were invited to an interview and to take an exam, the characteristics of which varied from one education department to another. After the interview and exams, the final decision was made to accept or reject each student.

The year 2006 was a year of transition, and education departments used elements from the old system and from the new system taking shape. It is for this reason that statistics on student admission/rejection are difficult to integrate. In fact, in some

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<sup>31</sup> [www.hs.fi/english/](http://www.hs.fi/english/).

of the statistics compiled by the University of Helsinki, information for 2006 is missing.

In 2007, the new system was initiated with new rules: now, students present a national exam developed by a group of experts that represent the education departments in the various universities. These exams are multiple-choice, with questions ranging from the simplest to the most complex. The national government places material on its website consisting of approximately 200 pages, as basic reading for preparing for the exam. Students are accepted based on a scheme of points that depend fundamentally on the results from the national exam. In applying, each student must select the three education departments in the order of his/her preference for the admission process. In theory, students are admitted to the department of their preference if they reach the level of points required by each education department or the education department they have selected. The most sought-after universities, such as Helsinki, Jyväskylä, and Tampere, require the highest level of points for admission. After students have been selected for the second phase, following the national exam, they are invited to an interview and an exam, which vary according to the specific requirements of each university.

According to Elisa Heimovaara, the changes in the application and admission system were made with two purposes in mind. The first was to increase the number of young people applying earlier to universities. The push to make this change comes from society's economic and financial sectors, which look at demographic pressures (the aging of the population) in relation to the custom among Finnish youth to wait a number of years after high school before entering the university. They see a solution in young people entering the university immediately after finishing their high school studies, whether academically or vocationally oriented. When young people wait a couple of years before entering the university, they do so at the cost of the country's national treasury, since they will tend to request unemployment assistance or hold only part-time jobs or employment with reduced fiscal requirements. This means, in theory, a greater fiscal commitment to maintain this segment of the economically active population. And it follows that the sooner these young people enter university or the labor market, the sooner they will be incorporated into the tax-paying system. The same sectors that pressure for this type of change have also worked to change the age for entering elementary school to a year younger, at 6 years of age instead of 7. According to Heimovaara, this last objective is less likely to succeed, in light of the enormous evidence pointing to the success of the Finnish school education system.

The second reason for the changes in the system is that authorities are interested in increasing the number of applications and admissions of young men into teacher programs. The statistics are overwhelmingly one-sided. Of the total number of students admitted into education and pedagogy programs, 89% are women. And of the total number of students admitted into programs for elementary or class teachers, 82.8% are women (Hillilä 2008a, p. 2). This percentage can vary somewhat, with young men representing 11.6% of those accepted into the University of Jyväskylä and 33.3% of those accepted into Oulu (Hillilä 2008b). One factor is that the previous admissions system seemed to place a great deal of importance on education

in the Finnish language, and this subject has long been one of the strengths in the educational results of women over men in Finland. This is demonstrated increasingly so with the most recent results from the 2009 PISA test. The gap between women and men in reading is enormous. In summary, the new system is aimed at young people entering the university at a younger age, specifically upon finishing their high school education (or finishing their military service) and at increasing the number and percentage of young men admitted to teacher education programs.

These arguments offer evidence that Finnish students do not enroll immediately in the university at the end of their high school years. And we also find that the popularity of the teaching profession does not appear to be particularly noteworthy among high school youth. This hypothesis is confirmed through the anecdotes revealed in the interviews I conducted with both young people in lower or upper secondary schools and young people in a university teacher education program, as well as teachers working at different educational levels. In most cases, none of them seemed to have been highly attracted to the teaching profession during their high school years.

During the months of March, April, and September of 2008, I visited a number of schools in Finland. I interviewed young people in the equivalent of 11th and 12th grades in four different high schools: three in Helsinki and one in Jyväskylä. The four schools were selected because the academic performance of their students was reputed to be very high. When I asked which of them would pursue a career as an elementary or subject teacher, the majority responded negatively. Some of them gave the same reason: “you can’t have a good life as a teacher.” And when I asked, “what is a good life?” they answered “a life with money, power or fame.” In these groups, only between 5 and 10% of those interviewed responded by saying they would “possibly” pursue a teaching career or that it was “one of the options I’m considering.”

In the best of cases, approximately 10% and no more than 15% (Niemi and Jaku-Sihvonen 2009, p. 188) of the students about to graduate from high school ultimately decide upon a teaching career, whether during high school or later.

So, is this percentage high or low? If we compare these results with other professions, such as business, sciences, arts, humanities, law, or medicine, the percentage is low. But the comparison could be unfair since areas such as sciences and humanities for instance comprise many fields of study, whereas education comprises only education-related studies.

If one looks into the statistics offered by Statistics Finland (2007, pp. 393–395; 2008, p. 395 and 397), social and business sciences, humanities and the arts, health and well-being, and natural sciences absorb the majority of the market, specifically the student population aspiring to study at a university; but again, social and business sciences and humanities comprise many areas of studies. With this aggregated data is difficult to make a comparison without breaching the level of analysis rule that would make a fair comparison between education and analogously similar areas of study.

We can say, most humbly, that there has been a decrease over the years in the proportion of students applying for education related studies. This type of information is provided in Table 3.1.

**Table 3.1** Number of total and new students in 1988 and 2007. (Central Statistical Office of Finland 1990, pp. 417–420, Table 386. Statistics Finland 2007, p. 397, Table 389)

| Area of study | 1988    |         |        |        | 2007    |        |        |        |
|---------------|---------|---------|--------|--------|---------|--------|--------|--------|
|               | Total   | % Total | New    | %Total | Total   | %Total | New    | %Total |
| Education     | 9,713   | 9.35    | 1,857  | 12.41  | 14,332  | 8.13   | 2,077  | 10.24  |
| All others    | 94,182  | 90.65   | 13,108 | 87.59  | 161,972 | 91.87  | 18,205 | 89.76  |
| Total         | 103,895 | 100.00  | 14,965 | 100.00 | 176,304 | 100.00 | 20,282 | 100.00 |

As shown in Table 3.1, the percentage of Education students in comparison to all other areas of study has diminished in terms of total number of students and new students. The most severe decline is observed in the percentage of new education students in 1988 (12.41 %) in relation to the percentage of new education students in 2007 (10.24 %). What this indicates minimally is that universities have lost their capacity or intention to attract or receive new students in the area of education.

In order to understand clearly and exactly what has happened, we would need to also look at similar statistics for polytechnic schools. However, this type of higher education institution was only established in 1996,<sup>32</sup> and available statistics do not fully cover the previous years. Opportunities to study education in this sector were divided among different programs and institutes that were later replaced with polytechnic schools (Statistics Finland 2009a, p. 8).

Even so, when one looks at statistics for universities from 2002 through 2008 or 2009, for example, there are no important variations in the numbers of total or new students. Nothing out of the ordinary is observed, as noted in Table 3.2, except moderate growth over time. In other words, polytechnic schools did not change the supply and demand patterns in universities. This can be explained, in part, because the supply of education services is completely planned by national authorities through a scheme of admissions quotas known as *numerus clausus*.

As observed in Table 3.2, universities have maintained a relatively constant rate of growth in their total student population, although beginning in 2005, declines in numbers of new students were evident for 3 consecutive years, and this tendency only began to reverse itself in 2008. The total number of university students decreased in 2007 for the first time since 1970. The total number of students in polytechnic schools has increased consistently since their appearance on the education scene in 2000, with all of these schools operating in an ongoing manner.<sup>33</sup> From 2000 to 2008, the total number of students in polytechnic schools increased from

<sup>32</sup> Brief information on the origin of polytechnical schools can be found at <http://www.minedu.fi/OPM/Koulutus/ammattikorkeakoulutus/?lang=en> (July 30, 2010).

<sup>33</sup> <http://www.minedu.fi/OPM/Koulutus/ammattikorkeakoulutus/?lang=en> (January 22, 2010).

**Table 3.2** Students enrolled in Finnish universities 1990–2009. (Statistics Finland 2007, p. 394, Table 382; Statistics Finland 2008, p. 398, Table 390. Statistics Finland 2011, p. 391, Table 384)

| <b>Students Enrolled in Finnish Universities</b> |                |               |              |               |
|--|----------------|---------------|--------------|---------------|
| Year   | Total students | Annual growth | New students | Annual growth |
| 1990   | 112,921        |               | 15,977       |               |
| 1991   | 115,358        | 2.16          | 16,653       | 4.23          |
| 1992   | 121,736        | 5.53          | 17,123       | 2.82          |
| 1993   | 124,370        | 2.16          | 17,383       | 1.52          |
| 1994   | 127,846        | 2.79          | 17,034       | -2.01         |
| 1995   | 133,359        | 4.31          | 18,281       | 7.32          |
| 1996   | 140,129        | 5.08          | 18,980       | 3.82          |
| 1997   | 142,962        | 2.02          | 19,126       | 0.77          |
| 1998   | 147,278        | 3.02          | 19,903       | 4.06          |
| 1999   | 152,466        | 3.52          | 20,521       | 3.11          |
| 2000   | 157,796        | 3.50          | 21,077       | 2.71          |
| 2001   | 162,939        | 3.26          | 22,509       | 6.79          |
| 2002   | 164,312        | 0.84          | 22,574       | 0.29          |
| 2003   | 169,846        | 3.37          | 21,750       | -3.65         |
| 2004   | 173,974        | 2.43          | 21,842       | 0.42          |
| 2005   | 176,061        | 1.20          | 21,716       | -0.58         |
| 2006   | 176,555        | 0.28          | 20,936       | -3.59         |
| 2007   | 176,304        | -0.14         | 20,282       | -3.12         |
| 2008   | 164,068        | -6.94         | 20,365       | 0.41          |
| 2009   | 168,475        | 2.68          | 20,954       | 2.89          |

114,020 to 138,852, equivalent to a 21.8% growth rate (Statistics Finland, 2009a, p. 47; Statistics Finland, 2011, p. 389).

We can also look at the University of Helsinki as an example. This university receives by far the highest number of students in Finland. Based on data provided by KOTA (a database available online),<sup>34</sup> the total number of applications to all the programs offered by the University of Helsinki in 2009 was 37,543, of which 5,579 or 14.86% requested admission to education programs. The numbers of admission

<sup>34</sup> <https://kotaplus.csc.fi/online/Haku.do> (May 21, 2012).

**Table 3.3** Those admitted in relation to those who applied to programs for becoming a class teacher as their first option. (Source: Adapted by Niemi and Jakku-Sihvonen 2010, Table 3, p. 9. The authors obtained the data from the School of Behavioral Sciences at the University of Helsinki)

|                             |      | Universities |       |           |       |         |         |         |       |
|-----------------------------|------|--------------|-------|-----------|-------|---------|---------|---------|-------|
|                             |      | Helsinki     | Turku | Jyväskylä | Oulu  | Tampere | Joensuu | Lapland | Total |
| Applicants                  | 2007 | 1373         | 1070  | 1006      | 934   | 808     | 559     | 317     | 6067  |
|                             | 2008 | 1254         | 898   | 964       | 909   | 679     | 513     | 296     | 5513  |
|                             | 2009 | 1432         | 1087  | 1020      | 847   | 789     | 508     | 316     | 5999  |
|                             | 2010 | 1578         | 1201  | 1103      | 972   | 774     | 613     | 345     | 6586  |
| Accepted                    | 2007 | 100          | 153   | 96        | 96    | 64      | 149     | 68      | 726   |
|                             | 2008 | 120          | 145   | 93        | 82    | 64      | 128     | 67      | 699   |
|                             | 2009 | 120          | 132   | 86        | 91    | 53      | 122     | 66      | 670   |
|                             | 2010 | 120          | 133   | 80        | 80    | 64      | 120     | 64      | 661   |
| Applicants/<br>Accepted (%) | 2007 | 7.28         | 14.30 | 9.54      | 10.28 | 7.92    | 26.65   | 21.45   | 11.97 |
|                             | 2008 | 9.57         | 16.15 | 9.65      | 9.02  | 9.43    | 24.95   | 22.64   | 12.68 |
|                             | 2009 | 8.38         | 12.14 | 8.43      | 10.74 | 6.72    | 24.02   | 20.89   | 11.17 |
|                             | 2010 | 7.60         | 11.07 | 7.25      | 8.23  | 8.27    | 19.58   | 18.55   | 10.04 |

applications for other fields of study were 8,321 (22.16%) to humanities, 7,508 (20%) to natural sciences, and 6,158 (16.40%) to social sciences.

How then can one reconcile the enormous difference between the supply and demand for studying to be a teacher, with ten or more applications for each admission? It is precisely due to this statistic, specifically the proportion between applicants and those admitted, that it is frequently stated in Finland that studying to be a teacher is very popular. This becomes even more notable since recent data on applications/admissions reveal that the percentage of those admitted in relation to the total number of those who apply has diminished (Niemi and Jakku-Sihvonen 2010, p. 9). Thus, if we follow the criteria that an indicator of popularity is the number of those admitted in relation to the number of those who applied, the data in Table 3.3 indicate that popularity has increased, even though the only element that has genuinely increased is the number of applications, perhaps due to the new scheme of admissions into universities. This is because the number of students admitted, according to the *numerus clausus* or quota continues at the same level and perhaps slightly lower (Niemi and Jakku-Sihvonen 2010, p. 9). Therefore, one can observe that the number of those admitted in relation to those who have applied, for the seven universities in Table 3.3, has increased considerably from 5,513 to 6,586, from 2008 to 2010, but the quota has diminished from 726 (the highest point) in 2007 to 661,

in 2010. The new rules seem to be attracting more young people and increasing the program's popularity, but the quota, at the same level or decreasing, is what reduces the proportion even more, from 12.68% (highest point) in 2008 to 10.04% in 2010.

The strict control over the number of positions offered for each teacher education program responds to the questions posed in the previous paragraph. What the universities offer is administered and planned by national education authorities. Each year, Ministry of Education and Culture (Minedu) informs universities of the number of positions available for teacher education programs in each university. This is part of an education planning policy that has characterized Finland since at least the final years of the 1960s as a way to strengthen the relationship between labor and education markets (OECD 1982, p. 21, 31, 110 and 111). Furthermore, other fields of study, such as those mentioned earlier, seem to have the same or even more intense levels of application rejection. Furthermore, the evidence from anecdotal sources suggests that more students apply and more students are accepted into careers associated with business, economics, medicine, arts, and law than education.

Now then, all of the above does not mean that students entering into teacher education programs are not of high caliber. In reality, most of these students are. Specifically, Finland's preuniversity education system is of such quality and fairness that those who enter into universities have a similar, very high academic level. All the students, we could say, are of high caliber. This is because of the well-designed construction of the levels of preschool, basic (comprehensive) and upper secondary education—which the Finnish have been able to sculpt from their cultural and historical roots.

## **Entrance Age to University Teacher Education Programs and Implications for Policies to Attract and Educate Teachers**

Now, let us turn to a second question: Is it true that young people do not begin university programs in teacher education until some years after finishing high school (whether general or vocational high school)?

Fortunately, we have data to help answer this question, analyzed by an education professor at the University of Oulu. This information was made public in 2008 on the University of Helsinki's website.<sup>35</sup>

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<sup>35</sup> These data were found by clicking on the link "Tilstoja" highlighted in yellow and on the left side of the page at: <http://www.helsinki.fi/behav/vakava/tilastoja.htm> (June 3, 2008). Unfortunately, this text was not translated, and more recently (January 2010), the work cited in this section was no longer available through the link. However, with assistance from Elisa Heimovaara of the Department of Education at the University of Jyväskylä, during a number of interviews and through email correspondence during 2008, I was able to obtain and translate part of the information from this source.

The data clearly demonstrate that under both the new and old systems for applications/admissions into programs for becoming elementary or class teachers, the majority of students accepted had graduated from high school some years before the year they were applying for admission. For example, the students selected (accepted) by all the education departments for becoming elementary or class teachers in 2007 (under the new admissions system) can be divided into two groups: matriculated students who passed their matriculation examination<sup>36</sup> in 2007 or 2006 after graduating from high school, and those who did the same in 2005 or prior to that year. In this case, of all the students accepted in 2007, 53.2% were matriculated in 2005 or before. This signifies that a significant percentage—more than 50%—of students take 1, 2, or more years to decide which field of study they wish to pursue, or at least this is the case for elementary school teachers.

Clearly, the case was more dramatic under the old applications/admissions system than under the new system. Under the old system, the percentage of students who were accepted into universities in the years following the year of their matriculation exam was much higher, between 89 and 95%, depending on the university (Helsinki, Joensuu, Jyväskylä, and Turku, which are four of the universities with the greatest number of admissions for 2005).<sup>37</sup> Statistics for 2004 indicate the same situation as for 2005. In short, students wait for 1, 2, or more years before they make their final decision.

What might explain this difference between the year that students finish upper secondary school and the year they begin their elementary teacher education program?

It is significant to recall that two particular attitudes were reflected in the majority of my nonrepresentative interviews with young people in high-performing *lukio* schools: (1) rejection of a teaching career because “being a teacher doesn’t allow you a good life” and (2) in the best of cases, indecision. Only a very low percentage of the young people I interviewed had made a decision to pursue a teaching career at the age of 18 (theoretically, the age of students in their last year of high school in Finland) or at 17 years of age. And not all of those making such a decision would choose a career as an elementary school teacher. Some of them would study to become a subject teacher, making it necessary to first complete an undergraduate degree and then a Master’s degree in a specific area, such as biology, literature, English, mathematics, chemistry, history, etc. In case of the latter, such students would have the opportunity/limitation of waiting a few years before making a definitive decision about becoming a teacher.

One cannot argue that a reason for waiting at least 1 year after graduating from upper secondary (*lukio*) school before starting teacher-training school is the year of military service required of all young men, since men constitute only a very small percentage of students applying for and accepted into university programs for becoming an elementary school teacher.

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<sup>36</sup> The process around the “matriculation examination” taken after graduating from high school and through which students become “matriculated” will be further explained in Chap. 4.

<sup>37</sup> Hillilä 2008d.



It is thus necessary to look for the reasons elsewhere. There is no doubt that one reason could be personal finances or circumstances. Students may be tired of studying and want to take a “sabbatical year” or “a year to earn some money.” Since these students do not have high qualifications, the possibilities for work are very limited. Their jobs are typically temporary jobs and only part time or at least not full time. This is worrisome for economists and public officials, who have attempted and partially succeeded in pressuring for modifications in regulations for applications/admissions into universities and polytechnical schools. Their intention is to motivate young people to begin their university studies more quickly, and this is also part of the justification for reforms to the applications/admissions process for teaching programs.

Another hypothesis from my interviews is associated with students’ uncertainty regarding the path they should follow. This indecision leads to the notion of a “sabbatical year,” but it appears the primary reason is indecision. Young people of 18 or 17 years of age, or younger, view a teaching career as a low-caliber profession because it does not allow them “a good life” in terms of salaries, fame, or power, as I mentioned earlier. However, after finishing high school and as time passes, they begin to change their ways of thinking about what they want to do with their lives. Money, fame, and power are not the variables associated with “living a good life,” which at 20 years of age or older is more related to other factors: security, stability, and free time. And consequently, the longer these young people take to decide to pursue a university degree, the more certainty there is that they are making a more “mature” decision. This hypothesis is reinforced by the work of scientists specializing in learning and cognitive psychology, related to the maturity of the so-called brain’s executive function, associated with this stage in life.

I will ask the reader to allow me to digress once again to point to the conflict between an efficiency hypothesis (a savings in resources from immediate admission into a university program) and an executive hypothesis. I would propose that the best decision is synchronized with the natural and educational development of the brain’s executive function.

The changes proposed by the first hypothesis, which we might describe as economic or behavioral in nature, could fall in the trap of the great efficiency intentions. The search for efficient, simplistic solutions may become negative over time: “By themselves, the simplified rules can never generate a functioning community, city, or economy” (Scott 1998, p. 310). This centralizing, simplifying attitude on the part of the state that Scott has documented as having negative results on the well-being of those who are governed by the state might be extended to school education.

Finland’s school education is, without a doubt, one of the most distinctive elements of the Finnish culture. School performance has been the result of cultural and historic combinations of great complexity and tradition. The results have been phenomenal. Any attempt at state engineering to modify this complex web of habits and inheritance could jeopardize this highly refined fabric of school education, among the most exceptional in our times. In my opinion, the state must abstain from over-regulating the spontaneous behavior of individuals and society. The objective of efficiency, as measured in large scale by the state, does not justify cultural intervention

when the result of the original interaction is positive, as in the case of Finland's school education. A drastic change in the culture—when habits are creative and productive—could provoke negative results.

Regarding the hypothesis of the brain's executive function, the likelihood of making good decisions increases in two contexts: adequate family and school learning environments and the natural development of the most frontal section of the frontal lobe of the brain—which evolves with age up to youth. Perhaps, for this reason, those who decide to pursue a teaching degree use more arguments that are more balanced, such as “because it provides you with security, stability and time for your family and other activities,” than those stated by younger persons when they reject the teaching profession “because it doesn't allow you a good life, with money, fame or power.”

What one observes in the case of Finland, in comparison with other high-performance countries or regions, such as Flanders of Belgium, is that Flemish teachers reach the classroom at about 21 or 22 years of age, which is the age at which Finnish young people are just beginning their teacher education. If one carefully reflects upon this potentially impacting comparison, the hypothesis suggested behind the phrase “The quality of an educational system cannot exceed the quality of its teachers” begins to wobble on its own. Finnish teachers are scrupulously selected and begin their careers at an age (25 or 26 years of age or older) that allows them to balance intrinsic and extrinsic motives. They are part of a teaching generation that is very homogeneous and highly educated, and this on its own, creates a strong epistemic group oriented toward learning.

Flemish teachers enter teacher-training schools without any other requirement than high school studies. They prepare for teaching in 3-year programs with a practical orientation and begin to teach students very soon after finishing higher non-university education. Pupils in both countries, Finland and Flanders, demonstrate very high performance. It is thus important to investigate this matter further to find the cause of educational success before beginning to change policies for educational systems. In the end, as I suggested at the beginning of this book, there is no single reason, but rather a complex, intricate, and interconnected network of factors. And furthermore, one question always remains: what does “teacher quality” actually mean?

## How Much do Finnish Teachers Work?

In Finland there's a joke that goes like this: “Finnish people have two and a half reasons to explain why being a teacher is so popular: June, July and half of August,” referring to the long summer vacation enjoyed by teachers. In addition to this vacation time, it should be added that teachers have rather comfortable workloads. For example, a biology teacher takes 17 h a week, and a teacher of Finnish takes 22 h a week. If these weekly workloads are distributed among the 5 school days, we find that these teachers have direct classroom workloads between 4 and 5 h a day. One possible interpretation is that despite the relatively low salaries received monthly or

yearly by Finnish teachers—in comparison to other professions in Finland and to teachers in other countries—we might say that in relation to the teachers' workload, or the income received per hour in front of a class, their salaries might be considered high or even very high. Before accepting or rejecting this hypothesis, we need to look at some statistics.

When I asked teachers directly about this, they corroborated the information. The number of hours worked can vary among schools, from 1 school year to another, and among different subjects taught, but these numbers do give a good idea of the situation at the elementary and lower secondary school levels. Some teachers may request extra work hours since this generates increased income, but in general, the workload is quite comfortable and manageable.

In the end, those who determine the limit of workloads are school principals who negotiate the assigning of regular and extra hours, on a case-by-case basis. Among principals' considerations may be an attempt to maintain a healthy balance within the entire teaching staff. For example, in a small elementary school that I visited in September 2008, the principal told me that she had chosen to address the topic among the school's teachers (a total of seven) in order to avoid misunderstandings. However, in a lower secondary school I visited at approximately the same time, I asked two of the subject teachers about their workloads and discovered that each was unaware of the other's situation. It would seem therefore that even though salaries and workloads are similar among different schools, the way in which salary arrangements are decided upon and communicated depends on each principal and his/her interaction with the teaching staff.

I decided to investigate the extra hours (outside the classroom) worked by teachers. Maarit Rossi, the principal of a lower secondary school in the Kirkkonummi municipality, clarified: "In reality there aren't that many hours. Groups are small, and most of the work is accomplished at school." It is true that class size in Finland is among the smallest in the world, with typically between 17 and 22 students per class, and there are even fewer students in preschool classes.

I asked a number of teachers during my September 2008 visit to Finland about extra hours. The answers varied greatly. Some teachers do not work any extra hours outside of school, or maybe a couple of hours a week, and others dedicate a great deal of afternoon time to their work. The number of hours that teachers are contracted to work includes usually 3 h/week for administrative or learning tasks, including participation in professional learning communities. A popular theme—in both the halls of academic institutions and schools—is that teachers' activities and monetary rewards do not begin or end in front of their classes.

So then, the popularity of the teaching profession can be rationalized in individualistic terms, I thought. And I said to myself: "it isn't a matter of cultural heritage or intrinsic motivation after all." However, before presenting this thought as a conclusion, I found that nearly all those whom I interviewed affirmed that teachers indeed occupy a special place in the construction of modern Finland, and this is approximately the same answer I was given by a school principal in Oulu. In the small towns throughout the municipalities in Oulu, the important people in communities were Lutheran priests, physicians (when there were any), and teachers. In the early

days of education in Finland, even before Finnish schools were established, priests were also the teachers in these small towns and communities, in addition to mothers who also fulfilled teachers' tasks.

At any rate, when teachers appeared on the scene, they were key to education and also later when the church was no longer the primary place where a school education was provided.

So, we might consider a scheme in which part of the popularity of the teaching profession responds to the historic reputation of teachers in building their own educational environments; another part can be explained by the months of "June, July and August" (and other vacation days, as I will mention in more detail later), and lastly, a fraction more of the explanation may lie in the short workdays with fairly bearable workloads. And all of this, despite the fact that the salary structure—in place for over a 100 years, and based on an egalitarian intention—does not contribute to this profession remaining at high levels of popularity among today's high school students. Actually, there is evidence that the relative salaries of Finnish teachers are below those of other professions with the same level of qualification, in professions oriented more toward mathematics (Carnoy et al. 2009, pp. 82–85).

Teachers in Finland receive the same salary per grade or subject taught, no matter what their workload is. A teacher with a workload of 17 h in front of a class receives the same proportional income as a teacher with 22 h. And the teachers' union—which has significant influence on daily life in schools—is opposed to modifying this scheme.

This is changing, according to school principal Maarit Rossi, although at such a minimal rate that it is almost imperceptible. For example, schools currently (since 2008) have the option of granting a salary increase on the basis of workload difficulty, but at a ridiculously small amount of a teachers' current salary.

Some researchers (Kansanen 2003, p. 87) maintain that non-salary benefits have attracted more Finnish women to the teaching profession. This is difficult to affirm at a comparative level, however, since the great majority of the teachers in nearly all of Europe and the United States are female (UNESCO 2006, p. 38; OECD 2005b, p. 57).

## **Motivation to Become and Continue Working as a Teacher: Do Finnish Teachers Earn a Lot or a Little?**

What motivates the best and brightest students to choose a teaching career despite the relatively low nominal salaries? The answer from a male teacher at a middle school near Helsinki was something like this:

Teaching is not well paid in Finland, but the entire package is very attractive. This includes a reasonable salary, social security, free time to be with family, and a pleasant school environment.

In general, when I asked teachers why they were teachers, many answered "for two and a half reasons" which is a joking way to refer to summer vacations, as I

mentioned earlier. According to their answers, vacation periods and days of rest for Finnish teachers can be described as follows: 1 week in January (as part of the Christmas or end-of-year vacation), 1 week in February (winter break), 2 days in April for Easter and Holy Week, 1 day in April or May for a national holiday; 2.5 months in June, July, and half of August, and 1 week in December (at the beginning of the Christmas or end-of-year vacation). The school year consists of 38 weeks.

Some teachers responded with qualitative arguments such as:

It offers you a good quality of life, meaning time for family and reading or resting.

An opportunity to interact with children.

Job security in a safe environment.

Teaching is a profession that offers a special lifestyle.

Evidence based on comparative studies indicates that the salary received by Finnish teachers, from elementary to high school, is slightly below the average for OECD countries and even more below the average for European OECD countries (OECD 2009a, p. 399). In addition, evidence offered by Carnoy et al. seems to indicate that salaries, at least those received by subject teachers oriented toward mathematics, are below those received by professionals with the same qualifications (2009, pp. 82–85). Nevertheless, when we use the nominal salary received by teachers per hour of direct contact with students (after 15 years of experience) as a measurement, Finland is above both the OECD average and the European average (OECD 2009a, p. 400), although far from (below) the two OECD countries noted for the particularly high salaries received by their teachers, specifically Korea and Luxembourg. Thus, teachers' perceptions and OECD data seem to agree: in terms of their salary per hour or workload in front of a class. Finnish teachers receive a salary that is good enough to make the entire package as I have described it to be very attractive.

If in addition to a sufficiently good salary, with conditions characterized by high levels of job security and a positive school environment, we also add intrinsic reasons (such as those illustrated in the next page), it should not be surprising that many young people, a bit older than the age of high school (upper secondary) graduates, seek the "life package" offered by the teaching profession. Of course, one cannot lose sight of the fact that teachers and student teachers, when interviewed about the reasons that motivated them to seek a teaching career, frequently answer with arguments showing an intrinsic motivation. The OECD also reached this conclusion in its research on teachers in different countries. Teachers tended to respond with strong intrinsic arguments (OECD 2005b, p. 67), with comments such as "I want to teach," "I'd like to work with children," and "I'd like to play a role in education." According to the OECD, external factors such as "job security," "free time and vacations," and "salaries" are ranked low among reasons for choosing to become a teacher (OECD 2005b, p. 68). This does not seem to be the case in Finland, where the answer lies in a combination of intrinsic and extrinsic factors. Perhaps the responses from teachers, students, and student teachers with a strong intrinsic component referred to by the OECD correspond to what researchers call "social desirability bias" (Koretz 2008, p. 18), in which those interviewed or surveyed respond with answers that are or seem to be the correct answers in cultural or contextual terms.

“Why did I choose the teaching program?” Answers from ten students at the University of Helsinki:

### **Elementary or class teachers**

Male student: When I was in high school, the truth is that I wasn't interested in studying to become a teacher. But now, I'm studying for this career because I like to work with children. Also, teachers have long summer vacations, so when I have my own family in the future, I'll have a lot of appreciation for my profession. Teacher education is very academic and I really like the academic focus.

Female student: I want to work with children because I admire their enthusiasm and curiosity for life. I want to have a positive influence on people's lives, by supporting their growth and helping them to find their own personal strengths. It's very fulfilling work.

Female student: I like to work with children but not little children. I want to make this world a better place and I want to help people think for themselves. I want a job in which each day is different. I like to study a lot, and as a teacher, I will have to study for the rest of my life. Children's development and thinking is fascinating. Also, the hours for working as an elementary school teacher are very tempting. The days aren't too long, and vacations are fabulous. Education for an elementary school teacher is an excellent foundation if I decide to do something different.

### **Subject teachers**

Female student: Teaching and working with children and young people is enjoyable. To be a subject teacher, one must have extensive knowledge of the subject one is teaching. It is fabulous to see the way children understand things. I can further my own development in this profession. As a biology teacher, I will be involved with human beings and nature, and not with computers.

Female student: When I was in high school, I had a great history teacher. He suggested that I study history. I want to pass on to my students the same enthusiasm and cultural knowledge that my teachers gave to me. Also, I like to work with young people.

Male student: It's a real profession in which real money is paid. And it's a profession in which the work is person to person.

Female student: Every day at work will be different and challenging. Working with children and young people is something interesting for me.

Male student: I didn't necessarily want to be a teacher, but I've worked in the business world as an instructor and a teacher. The work of teachers is more relaxed and enjoyable.

Female student: Because being a teacher will allow me to inspire students to read Finnish literature and to support them in their lives. Also, I really like to see how children develop

Female student: Because I want to improve my knowledge of the language and I want to be with people. I want to be a versatile teacher that children enjoy listening to.

In summary, student teachers in Finland who are older than 17 or 18 years of age seem to make a decision based on a combination of intrinsic and extrinsic motivations, specifically: a sufficiently good salary, free time, small groups, a cordial atmosphere with colleagues, homogeneous teacher professionalism, pedagogical autonomy, a school nutrition program for the last 60 years, a high quality of life, and taking pleasure and feeling affection and interest in children and in human contact.

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## Chapter 4

# Does Finland Evaluate School Education?

The answer is *yes*, but in Finland's own way. The Finnish notion of education evaluation is based on two ideas: trust and cooperation.

According to legislation on education enforced since 1999 (Linnakylä et al. 2010), the providers of school education, specifically municipalities, must both conduct their own evaluations and accept external evaluations (national and international) as determined by authorities.<sup>1</sup>

However, the Finnish do not conduct national census assessments, do not make comparisons among schools, and do not officially develop ranking lists. Also, they do not tie the results of their evaluations to accountability. Because of deeply rooted trust, they reject the idea of ranking schools according to results from standardized tests or assessments. The following quote from two prestigious academic researchers (Ropo and Välijärvi 2010) eloquently expresses the way in which the Finnish refuse to become involved in the frenzy of linking standardized tests to accountability:

We believe that academically educated teachers are the best experts to design their teaching practices within the fairly loose frame of national curricula. We also trust that they do their best in the classroom to promote learning. This may sound quite idealistic, but in view of the results of the recent international studies at least, the teachers have deserved this trust. It is also important to keep in mind that in terms of educational investment Finland has clearly made a choice different from most other European countries. Instead of external evaluation, Finland has invested heavily on teacher education.

People in Finland do not reject school evaluation. Instead, they oppose certain uses of evaluation results in relation to accountability. The Finnish have dedicated more resources and efforts to the teaching-learning process than to measuring results for the purpose of making comparisons or demands. It may seem ironic, but the results from the Programme for International Student Assessment (PISA) have contributed to decisions to avoid standardized national census assessments.

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<sup>1</sup> A brief explanation of education evaluation policy in Finland can be found in various sections of the website of the Center for Education Evaluation at the University of Helsinki: <http://www.helsinki.fi/cea/eng/index.html> (May 31, 2012).

Thanks to the excellent PISA results, Finland has, however, been able to avoid the “testing hell” that most other countries seem to be victims of (Ropo and Välijärvi 2010).

The second virtue in relation to education evaluation is cooperation through networking. The Finnish people, accustomed to a culture of trust, have developed social networks for research and education policy among national authorities, universities, schools, and civil society organizations. One of these networks is associated with the connection between academic research and education evaluation, and to this end, a Center for Education Evaluation shares the same building with the Institute of Education at the University of Jyväskylä. This Center, with only limited financial resources, is responsible for organizing and structuring the efforts of a number of epistemic groups that conduct ad hoc evaluations—not only of schools and their performance but of education policy itself.

In short, through education policies designed by the Ministry of Education and implemented by the same Ministry or by the Finnish National Board of Education (OPH), the Finnish conduct three types of evaluations: national assessments based on standardized tests applied to random samples; municipal or regional assessments based on standardized tests applied to random or census-based samples; and school assessments conducted through tests or self-assessments. However, even in the case of national assessments involving municipalities, the Ministry of Education designs and implements them through cooperative schemes with local authorities.

In essence, according to Linnakylä et al. (2010), the main idea is to develop and support schools, not control them.

Education authorities do not publish national or municipal ranking lists under any circumstances, since no one in Finland is interested in schools competing among each other (Linnakylä et al. 2010). Nevertheless, this does not mean that education authorities—in their individualized reports on results prepared for both municipalities and schools—do not provide specific information on the position and performance of a given municipality or school in comparative, regional, or national contexts. In fact, the Institute of Education of the University of Jyväskylä, as a project manager for PISA, provides participating schools in the PISA tests, on a case-by-case basis, detailed reports on their performance in comparison with the other schools in the region or in the country.

For education in the global and knowledge era, or twenty-first-century education, it is absolutely necessary to study and analyze the topic referred to as *metaknowledge* (Niemi and Jakku-Sihvonen 2006, p. 42), or knowledge of knowledge. This implies motivating and acquiring knowledge and applying the capital from individual and collective learning in order to generate new knowledge and confront new situations.

Through networks of cooperation, the Finnish have built a scheme for researching and applying this knowledge, together with evaluating metaknowledge or learning to learn (Hautamäki et al. 2006). The University of Helsinki maintains a research group too, with the fundamental focus of evaluating the process of learning to learn.

**Table 4.1** Finland's results in IEA tests

| Year                       | Test    | Area        | Grade | Position | Participants |
|----------------------------|---------|-------------|-------|----------|--------------|
| 1960 <sup>1</sup>          | FIMS    | Mathematics | 8     | 4        | 12           |
| 1960                       | FIMS    | Mathematics | 12    | 3        | 12           |
| 1970 <sup>2</sup>          | FISS    | Science     | 8     | 11       | 14           |
| 1970                       | FISS    | Science     | 12    | 7        | 14           |
| 1983-<br>1986 <sup>3</sup> | SISS    | Science     | 8     | 3        | 17           |
| 1983-<br>1986              | SISS    | Science     | 12    | 14       | 14           |
| 1999 <sup>4</sup>          | TIMSS-R | Science     | 8     | 10       | 38           |
| 1999                       | TIMSS-R | Mathematics | 8     | 14       | 38           |

<sup>a</sup> FIMS 1960: Husen (1967)

<sup>b</sup> FISS 1970: Comber (1973) and Peaker (1975)

<sup>c</sup> SISS 1983–1986: IAEEA (1988)

<sup>d</sup> TIMSS-R 1999: National Center for Education Statistics (2000)

## A Glance at Results from Finland's Performance in Other International Studies on Learning

We all know about Finland's exceptional performance on the PISA tests, but we do not all know the details of results from other tests that are less well known, although no less valuable from a methodological perspective. The purpose of this brief section is to look at Finland's position in this international game of comparisons. Fortunately, Finland has participated in many international evaluations since the 1960s.

If we retrace the history of international evaluations in the areas of mathematics and sciences conducted under the auspices of the International Association for the Evaluation of Educational Achievement (IEA),<sup>2</sup> the results for Finland have not been particularly high, and, in some cases, performance has been low, as evident in Table 4.1.

Unfortunately, we cannot refer to information from more recent (before 2011) IEA tests since Finland has not taken part. The good news, however, is that in 2011 Finland began to once again participate in the Trends in International Mathematics and Science Study (TIMSS)<sup>3</sup> and Progress in International Reading Literacy Study

<sup>2</sup> <http://www.iea.nl/> (May 31, 2012).

<sup>3</sup> <http://www.iea.nl/timss2011.html> (June 1, 2012).

(PIRLS),<sup>4</sup> also associated with the IEA. It is important to point out a difference between these tests and the PISA test. The former tend to measure knowledge and skills in line with the curriculum contents corresponding to specific grades. The PISA test, on the other hand, tends more toward measuring skills and abilities that students between the ages of 15 years 3 months and 16 years 2 months are presumed to have, regardless of their current grade in school.

Nevertheless, on December 2012, TIMSS and PIRLS 2011<sup>5</sup> results were published. Finland, again, was not as high as in PISA, but it was high enough to merit outstanding remarks. As said before, TIMSS and PIRLS are curriculum-based tests; they are applied to children of certain grades. I will refer to TIMSS's results in mathematics and science for eighth grade and PIRLS (reading) for fourth grade. As also said, PISA is an age-referenced test. It is often said that PISA is a test about what children at that age should know in order to solve new problems, and IEA's tests are about what children should know based on the curricula of both eighth-grade science and math domains, and fourth-grade reading domain. In both 2011 IEA's tests, East Asian countries perform very high but Finland is the highest performing West-European country.

In TIMSS Mathematics for eighth graders, South Korea, Singapore, and China Taipei are tied as the top performers. Finland comes lower tied in the seventh position with another five countries. The USA is also seventh tied with another eight countries. In other words, Finland's ranking could range from 7th to 11th and USA's ranking could range from 7th to 14th. In TIMSS Science for eighth graders, Singapore is the top performer followed by Chinese Taipei, South Korea, and Japan. Finland's ranking could range from 4th to 5th; USA's ranking could range from 9th to 13th. In PIRLS 2011 for fourth graders, Hong Kong, the Russian Federation, Finland, and Singapore are tied as top performers. The USA's ranking could range from the 5th to the 11th position.

But beyond rankings, what can one tell after digging a little bit inside the TIMSS's reports? One discovers some interesting findings:

1. Comparing answers from perception questionnaires to teachers across participating countries in TIMSS 2011 Math, school emphasis on academic success is one of the lowest in Finland and is high or very high in Qatar, England, the USA, and Australia. This means that Finnish teachers are not so frantic about academic success as they are worried about learning and teaching.
2. Finland also shows, tied with Norway, the lowest standard deviation of average scale scores of the 45 countries taking part in TIMSS Mathematics. This shows that Finland has, in TIMSS as well as in PISA, either the most equable or one of the most equable and equitable distributions of performance results. This means that no matter what school children go to, they all have very high chances of performing high.

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<sup>4</sup> <http://www.iea.nl/pirls2011.html> (June 1, 2012).

<sup>5</sup> <http://timssandpirls.bc.edu> (December 29, 2012).

3. According to teachers, memory-drilling exercises are very low in Finnish classrooms. Only 13% of students are subject to this type of activities. In Chinese Taipei, for instance, 51% of students at the eighth-grade level are involved in activities that teachers report as memorizing for rules, procedures, and facts; in Japan 48%; in South Korea 46%; in England 24%; in the USA 23%; and in Singapore 21%. The international average for this indicator is 45%. This means that drilling methods are low or very low in Finland compared to other countries.
4. From teachers' answers to context questionnaires, one knows that in Norway and Finland only 52 and 60% of students were taught in all the TIMSS Mathematics topics. The international average for this indicator is 80%; whereas in the USA it is 90%, in England 84%, in Chinese Taipei 79%, in Hong Kong 84%, in South Korea 92%, and in Singapore 88%. This means that Finnish students obtained very high results in topics that seemingly were not included in their curricula.
5. According to students' answers to TIMSS context questionnaires, around 16 or 17% of students in Hong Kong, Chinese Taipei, and Singapore spend 3 h or more per week on mathematics homework. The international average is 15%, which is the same percentage reported by US students. In South Korea, Sweden, and Finland, only 2% of students report doing math homework for 3 h or more per week. This is consistent with PISA findings. Finnish students seem to devote less time to study inside and outside the school and yet perform very high. This is called learning efficiency.
6. Finally, real striking data that reveal different school and classroom learning environments are that, based on teachers' reports, the percentage of students whose teachers give mathematics tests or examinations every 2 weeks or more is 98% in Chinese Taipei, 56% in Hong Kong, 46% in South Korea, 97% in the Russian Federation, 39% in Singapore, 77% in the USA, and 1% in Finland. This means that the Finnish are teaching to learn, whereas the rest are teaching to test.

Not everything is about scores and rankings. The stories behind scores, more often than not, reveal real realities.

As indicated by Linnakylä et al. (2010), Finland has demonstrated high-level results in other tests associated with other types of abilities such as reading comprehension (in a test conducted by the IEA in 1991) and adult literacy. With respect to the latter, the International Adult Literacy Survey (IALS) in which 20 countries (including 18 Organisation for Economic Co-operation and Development (OECD) members) participated at different times from 1994 to 1998, Finland ranked among the top four in two of the three areas of reading assessment and ranked 7th in the other area, according to the average results obtained by adults (16–65 years of age) participating in the study (OECD 2000, pp. 13–25).

In the following sections, I will attempt to weave together an account of the history and current status of education evaluation in Finland, through the voices of the authorities and experts I have interviewed and the literature's research studies and documents. I would also mention here that some ideas, anecdotes, and data from the cultural and institutional framework that gave birth to this scheme of education evaluation could be found in the works of Aho et al. (2006) and Linnakylä et al. (2010).

## The Perspective of the Finnish National Board of Education

I conducted my first interview on this topic on March 17, 2008 in the temporary offices of the National Board of Education (known by its Finnish acronym, OPH) located at *Kumpulantie 3* in Pasila, Helsinki. The Board's main building, which I had visited earlier in 2004, was still under renovation. It was not until 2009 that the Board returned to its original, majestic accommodations.

The Board official I spoke with was Reijo Laukkanen, who has many years of experience working in the area of education evaluation, including international experience as a member of Finland's permanent delegation to the OECD. Not surprisingly, we began the interview on the topic of education evaluation. Finland has a policy on education evaluation, but not a policy on the "national evaluation of basic education, school by school, student by student, or teacher by teacher." National evaluations are conducted with random samples.

According to Reijo, the Board has maintained the position that publishing evaluation results is unnecessary. Rather, the point is to use them to help teachers calibrate their work. This focus is known in the literature as "formative evaluation." The Finnish are already doing this with their current national evaluations: "we send the results to the participating schools for their analysis."

Currently, national evaluations are conducted with students in second, sixth, and ninth grades. However, Finland's municipalities (the total number of municipalities was 416 in March 2008, 348 in September 2009,<sup>6</sup> and 336 in September 2012<sup>7</sup>) are free to conduct census evaluations in their territories, and some of them do so. In these cases, the municipalities purchase the tests they apply to students from the Board, and this is what happens in *Kirkkonummi*, for instance.

The results from these evaluations are compared with national objectives in the area of education.<sup>8</sup> In Reijo's words: "When we evaluate, we do so in comparison to something, which in this case are national objectives. These goals have changed over time with each new basic education curriculum throughout Finland's modern era of education, specifically in 1970, 1985, 1994 and 2004."

Some schools may have the "good luck" or "bad luck" of being selected on various occasions for the random samples used in national evaluations. If this is the case, and if Board officials discover that one or more of these schools have consistently bad results year after year, there is nothing that educational authorities can do. According to my host at the National Board of Education:

All we do is expand our knowledge of education in Finland. We can't intervene in the processes of schools that fail. We give information to the schools. If schools

<sup>6</sup> [http://www.kunnat.net/k\\_perussivu.asp?path=1;161;279;280;105989;37567](http://www.kunnat.net/k_perussivu.asp?path=1;161;279;280;105989;37567) (January 19, 2009).

<sup>7</sup> <http://www.localfinland.fi/en/Pages/default.aspx> (September 13, 2012).

<sup>8</sup> In addition to the basic education curricula referred to in the following paragraph, a new curriculum for general high school education was initiated in 2003. There is another curriculum for vocational school, and universities are in charge of the curricula for university education, which includes teacher education.

don't use this new knowledge, there's nothing we can do. We don't even send the results to the municipalities, unless the municipalities ask for them, and pay for a municipal-level evaluation with tests given at all the schools. In this case we send the results to the municipalities, and they decide how they use them.

But Finnish authorities do more than conduct tests, censuses, and samples.

Finland's national education authorities have established an Evaluation Council which is housed, as I mentioned, at the University of Jyväskylä. This Council coordinates research conducted by Finland's academic centers on the results of learning. The objective is to learn more about education evaluation and measurement. It is also intended to bring together the efforts of researchers, teachers, principals, and authorities with the goal of advancing scientific knowledge of the task of education.

On a different occasion, I addressed this topic of education evaluation with Irmeeli Halinen, also with the National Board of Education. In relation to standardized assessments, she told me:

We don't believe in national census tests. Actually, the first national census evaluation is the exam known as matriculation [which I will address later]. We believe in teachers, who are constantly observing, concerned about and monitoring their students. At the National Board of Education, we emphasize to teachers how important it is that students are receiving feedback all the time. And this scheme is repeated from the first year of elementary school to the final year of high school.

Finally, an additional opinion received from another Board official confirmed the account I had been given regarding education evaluation:

The modern era of evaluation in Finland began in 1994 with a study conducted in upper secondary education. The results were reported in a publication in Finnish, and provided indicators of quality and scope. In 1998, national evaluations of random samples of ninth grade students began, using a sample of approximately 5,000 students and covering the areas of mathematics and the sciences. Prior to these systematic studies, assessments were limited and conducted only by universities. The only national census evaluation [which in reality has another purpose] is the matriculation exam taken at the end of high school education. In Finland, we aren't interested in conducting national census assessments. We ask schools and municipalities to work on their own curricula and evaluations. And we do this because if we developed a detailed national curriculum with standardized tests, we would be encouraging classrooms and schools to "teach to the test."

## Inspections

Educational inspections are no longer conducted in Finland. According to Reijo, municipalities are in charge of their schools, and they supervise and evaluate them.

Educational inspection was important prior to the 1970 reforms. It also remained important after that time until it was gradually eliminated in the 1980s (beginning in 1985). At first, inspectors and authorities attempted to change their role so they would not be viewed as inspectors but rather consultants, but this did not work. Municipal authorities, school principals, and teachers thought they did not need inspectors, stating "we don't need them anymore." There were even cases in which

inspectors, who had previously been quite powerful, started to be fearful of going into schools because of the cultural rejection they received.

According to my interviewee:

The inspector system prior to the 1970s was complicated. There were municipal and urban inspectors. In rural municipalities there were powerful regional inspectors. High schools were inspected by the National Board of Education. Over time regional inspectors were also given the responsibility of inspecting high schools. Now, municipalities have the power to conduct inspections, but I know they don't do it. Of course, if things aren't going well in a school, municipal authorities go and talk with the principals, teachers and students.

In fact, there is an education director in each municipality who is actually the “head of school principals.” This director has a great deal of power in terms of the difficult decisions that must be made by school principals. Decisions regarding firing teachers (extremely infrequent), budgets, sensitive matters associated with students' security, etc. are made in the municipalities.

In theory, there are state offices with the power to inspect schools when there are complaints of illegal activities. According to Reijo: “In short, inspection is a very powerful instrument of education policy. But if we would reinstate inspection, we would destroy the basic principle of our educational reform: TRUST.”

Trust is a value and a virtue of Finnish society that I have heard mentioned repeatedly, and I believe I will continue to hear it identified as one of the ingredients of Finland's educational success. Reijo continued: “We don't evaluate teachers in Finland, because we trust our teachers. But perhaps this is necessary in other countries.”

## Policy on Education Evaluation and Academic Research

The contents of this section are based on an interview with Heikki K. Lyytinen, who was at that time the Director of the General Secretariat of the Finnish Education Evaluation Council<sup>9</sup> (*Koulutuksen arviointineuvosto*) and also on bibliographic sources.

Education evaluation in Finland, beyond mere measurement through standardized tests, is derived from a network of institutions that come together under the authority of the Ministry of Education (Minedu). The main actors in this network, in addition to Minedu, consist of the Finnish National Board of Education,<sup>10</sup> the six provincial offices in Finland's provinces<sup>11</sup> of which only one is autonomous

<sup>9</sup> The acronym in English is FEEC. See: <http://www.edev.fi/portal/english5> (September 13, 2012).

<sup>10</sup> The responsibilities of the Finnish National Board of Education in the area of evaluation are described at: <http://www.oph.fi/english/pageLast.asp?path=447,2783,2789> (May 25, 2008 and June 4, 2012).

<sup>11</sup> In administrative terms there are six provinces—Lapland, Oulu, Western Finland, Eastern Finland, Southern Finland, and Åland—with governors designated by the country's president, except in the case of Åland. The provincial governments are in charge of certain matters in the seven Ministries, including education. For example, they intervene in the area of education through the



(Åland), the Finnish Council for Evaluation of Higher Education,<sup>12</sup> the 336 local or municipal authorities<sup>13</sup> in charge of school policies and the administration of schools (including education evaluation by school and by municipality<sup>14</sup>), and lastly, the Finnish Education Evaluation Council (FEEC), which functions as a “hinge” that promotes the work of experts, primarily in Finland’s network of universities and researchers.<sup>15</sup>

The Finnish had a complex school inspection system with 12 districts or provinces. Each province had an education department, and one of its main responsibilities was to inspect schools. Inspections were conducted annually, through questionnaires and visits. Inspectors turned in their conclusions and recommendations to the Minedu and the National Board of Education. The system survived until 1991. In addition, education research institutions conducted evaluations of educational results from different perspectives. The results of these evaluations were also presented to the authorities. The two schemes—inspection and research—coexisted from 1968 until 1991.

There is no better way to understand the delicate threads of education evaluation than to hear a review of history through the voice of one of its main actors. Thus, when I began the interview with Heikki K. Lyytinen, I asked him to narrate the philosophical and historical roots of Finnish education evaluation.

In the following paragraphs, I will attempt to capture what I learned from the interview with Director Lyytinen. I have enriched this explanation with information from some documents that he shared with me, and some others from bibliographical and electronic sources.

Beginning in the 1990s, Finland’s education policy strengthened participation by local (municipal) authorities in school tasks. To be more specific, this began with the basic education curriculum of 1994. As a result, self-assessments proliferated at local and municipal levels. At the same time, national assessments were conducted (and continue to be) and were centralized in the National Board of Education, although they are assessments of the system, based on standardized tests and random samples.

Up until 1991, there were two national boards of education, one in charge of general education and the other of vocational education. They were united into one board, referred to as the OPH, in 1991. With the new Board, the tasks of centralized, external national assessments began. “It was an important decision that resolved a problem, because research-based evaluation was integrated into the official national measurement,” emphasized Heikki K. Lyytinen.

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evaluation of municipalities’ educational services and they are responsible for administering public libraries (<http://www.laaninhallitus.fi/lh/home.nsf/pages/indexeng>, May 25, 2008). Also, see *Statistics Finland* (2008, p. 52).

<sup>12</sup> This is a Council existing since before the FEEC and inspires part of the latter’s work: <http://www.kka.fi/english/>.

<sup>13</sup> There were 416 municipalities at the time of the author’s interview with the FEEC director in March 2008. This number decreased to 348 in 2009 and to 336 in 2012.

<sup>14</sup> For example, a municipality may decide to implement standardized municipal census tests.

<sup>15</sup> A brief description of the FEEC and its role in coordinating academic research on Finland’s education evaluation can be found in: Lyytinen and Hämäläinen (2003).

During the time of school inspections, the National Board of Education also established the guidelines and characteristics of the inspections (the guidelines included the topics to be assessed as “cooperation by parents,” “special education,” etc.). School inspections were conducted every 5 years. With the education reform of 1991, all inspectors were removed, and, thus, between 1991 and 2003, education evaluation was conducted exclusively by the National Board of Education. This ended partially with the FEEC’s creation in 2003. When I asked why this change took place, Heikki K. Lyytinen responded: “In the name of neutrality in evaluation and a close relationship with academic research.”

According to the Ministers (members of Parliament) who designed the change in policy, the new rules for evaluating the education system were to rest on the following principles (Lyytinen 2008, pp. 8–10): (1) neutrality; (2) evaluation quality; (3) credibility; (4) connection with academic research on evaluation; and (5) the relationship between science, administration, and teaching.

According to Heikki K. Lyytinen, the system was moved gradually toward a scheme in which evaluation was positioned outside the administration of education, so that it would be possible to also evaluate administration. This would assure the independence of policies and administration, but the Ministers’ interest was actually focused on autonomy and professionalism: “in order to elevate evaluation with scientific foundations that contemplated methodological aspects, measurement theories and different evaluation models.” And Director Lyytinen continued:

The environments of education administration are not static. This points to the importance of critical models that allow for discerning new ideas, topics and lines of action for the future. In general, cultures are always conservative. For this very reason, culture is not capable of developing new ideas. And consequently, by associating evaluation with research, an impulse toward innovation was expected.

Another criterion for creating the FEEC, on the part of the Parliament, was “credibility.” According to Heikki K. Lyytinen, it was believed that it is difficult to trust an in-house evaluation:

It’s difficult to assign credibility to an evaluation of administration because administration has its own culture. Administrative culture will attempt to maintain a stable system. In these conditions, administrative reports won’t offer or find new or innovative solutions. Thus, in the end, the intention has been to constitute a system that will be capable of using expert knowledge for different evaluation topics. We request assistance from different professors and researchers from different universities in evaluating various areas. Furthermore, if the topic is associated with the evaluation of school principals, we seek assistance from school principals, or when a matter concerns teaching, we turn to teachers. In both cases, the only requirement is that such principals or teachers have experience in education and school evaluation.

Lastly, one more factor considered by the Parliament, when creating this system of evaluation, was to promote cooperation and communication among the different actors involved in education because “each one of them contributes different aspects of a highly complex reality.” In short, Heikki K. Lyytinen summarized Finland’s current evaluation system with these four concepts:

- Collective thought
- Professionalization

- Independence
- Neutrality

According to Director Lyytinen, this is a unique situation—at least in the Nordic world, in which only the Danish have an independent system. In the other Nordic countries, evaluations continue to be based on conservative schemes with inspectors and without apparent autonomy.

The FEEC was designed, in part, from the example of the Finnish Council for the Evaluation of Higher Education.<sup>16</sup> Heikki K. Lyytinen tells us that this Council, which already had 7 years of experience in 2008, works with professors from different universities as well as international experts. In summary:

The model consists of two entities: the FEEC and the Council's Secretariat. The FEEC is composed of 13 individuals. In 2008 6 of these 13 individuals were professors from different universities, and one of them served as the Council's Chairperson. The rest of the Council members came from different organizations, most of which were directly related to education. Here are some examples: the person in charge of the education and culture unit of the Association of Local and Regional Authorities; the chairperson of the Finland Association of Vocational Students; the education director for the city of Hämeenlinna; the Director of the Municipal Federation of Education in the Jyväskylä district; the director of the Center for Adult Education in Valkeakoski; and the director of Finland's Teachers' Union. The Council meets between five and seven times a year, and Council members receive a salary of approximately 100 EUR per meeting. The chairperson receives between 300 and 400 EUR per month.

The Council has a Technical Secretariat composed of eight individuals<sup>17</sup> who work full time at the Secretariat's headquarters located at the same building of the Institute for Educational Research at the University of Jyväskylä (although there is no administrative or hierarchical relationship with this Institute). The Institute has been the location for the Council and its Secretariat as a result of its historical involvement with Finland's education and reforms in education evaluation. In Director Lyytinen's words:

At the University of Jyväskylä we have programs for educating teachers, for special education, for research, for adult education—and all of these programs, from preschool to adult education, are oriented toward research. The Institute for Educational Research has evaluated education results for 40 years, from 1968 to 2008. The Institute is also involved in international evaluations such as PISA and TIMSS. Thus, in reality, this is not so much an administrative arrangement as a strategic alliance.

The Technical Secretariat's work is to prepare and present matters to be addressed by the FEEC as well as to implement its decisions. The Secretariat is focused on prioritizing agendas, developing proposals, and conducting preliminary planning for the working groups that will be in charge of conducting evaluations. For each topic to be evaluated, a working group is formed. The Council appoints, invites, and

<sup>16</sup> <http://www.finheec.fi/index.phtml?l=en&s=1> (June 4, 2012).

<sup>17</sup> Specifically, the secretary general; five persons, each responsible for one of the following five areas of education: basic, Swedish language, high school, vocational and adult; a local education coordinator; and a departmental secretary.

forms the evaluation planning groups. These groups develop an evaluation plan and sometimes also carry out the evaluation.

The idea—according to Heikki K. Lyytinen—is, for opinions and suggestions, to be received from diverse stakeholders in society. The work then continues through a second phase with a group of experts. This is a multi-sector strategy. Thus, we not only integrate a social orientation in education policy but also contextualize the topic to be evaluated so that there will be meaning in the recommendations for education and school policies.

According to Director Lyytinen, the Parliament has programmed a total annual budget of 1 million EUR for the FEEC, to be channeled through the Ministry of Education. In addition, the Council may provide special evaluation services. There are also cases in which the education offices in municipal governments have requested and paid for services from the FEEC. By March 2008, the FEEC had generated 31 reports.

Before drawing the interview with Heikki to a close, I asked him to give me his own hypothesis on the reasons for the success in learning by Finnish children and youth. He classified the reasons in two areas:

The teaching of basic education in Finland is very efficient. Specifically, the amount of time dedicated by students to their studies has been categorized as the lowest in all the countries studied, and the resources allocated to education are at the average level for OECD countries.

Teachers' commitment and high ethics are the key strengths in our education. In other words, the teaching profession is highly valued; all basic education teachers have Master's degrees; teachers are quite independent and trustworthy. Consequently, we don't conduct inspections or national standardized tests in basic education, and we don't publish ranking lists.

Director Lyytinen's perception regarding the efficiency of teaching in his country is most likely derived from the OECD statistics from the context questionnaires applied to students participating in the PISA test. According to the OECD, Finland is the country in which students report dedicating the lowest number of hours to studying both at school and outside of school (OECD 2004, p. 435).

## Matriculation Exam

As we have seen, there are no national census assessments in Finland. However, a matriculation examination is given upon completion of upper secondary school. About half of the age cohort actually sit for this test, so it is not a national census test since it is only taken by the academic track *lukio* students. This exam can be traced back to 1852.

The current annual publication of Finland's Statistics Office for 2011 offers data on the matriculation examination (*Ylioppilastutkinnot*) since 1910—even before the birth of Finland as an independent nation, which took place in 1917. Of interest is the information that in 1910, 929 students (of whom 36.7% were female) took this exam, and by 2010 this figure had risen to 32,324 students (of whom 58% were female; Statistics Finland 2011, p. 386).

In order to better understand the importance of the matriculation examination and how it works—and I might add that for each student it is quite a school, family, and personal event—I would like to share the conversation I had with a couple of young women at a high-performance upper secondary school in the city of Jyväskylä only moments before they took their exams in March 2008.

For these two young women that day was not only the day of their matriculation examination but also the last day of school for them, after 12 consecutive years of study. They were tired but upbeat, and ready to celebrate with their families, and they took the time to listen to me and answer my questions. Even though it was the last day of exams and classes, there was no noise or shouting, and there were no parties, fiestas, or music. It looked and sounded like a normal school day.

In order to receive a matriculation certification, each student must present at least four exams equivalent to four disciplines.

Aino<sup>18</sup> had selected seven disciplines and Saara six. The score received is calibrated on a scale of letters from L (*Laudatur*), the highest score, to I (*Improbatur*), the lowest score. In the middle are the corresponding scores between the highest and lowest: E (*eximia cum laude approbatur*), M (*magna cum laude approbatur*), C (*cum laude approbatur*), B (*lubenter approbatur*), and A (*approbatur*). Each student must receive at least an A in order to pass the exam, and students who receive a score of I must repeat the exam in that subject.<sup>19</sup>

So I asked Aino and Saara to tell me about the matriculation examinations, and on another occasion, I asked the same of two teachers at an upper secondary school in Helsinki. The following paragraph encapsulates what I was told:

After students have completed their high school courses, in accordance with the national and school curriculum, they are required to take the matriculation examination, which is given at two times during the year: autumn and spring. Each student must present at least four exams. The exam in Finnish is obligatory for all students whose mother tongue is Swedish as well as three exams out of four options: mathematics (advanced or basic); foreign language (advanced or basic) possibly English but can be any other; a second foreign language, Swedish for Finnish speakers or Finnish for Swedish speakers (advanced or basic); or a subject out of 12 different options, among them, biology, geography, physics, art, music, or gymnastic theory. Students have to take at least four exams, but they are free to sit for more as it happened with Aino and Saara to increase their chances of university admission.

## By Way of Conclusion

The world's education systems do not agree on the best way to measure, evaluate, inspect, and assess schools, teachers, and students.

There are two major tendencies around the world: one is headed by some school districts in the USA, such as those in cities like New York, Chicago, and Washing-

<sup>18</sup> An epic name. In the epic novel *Kalevala*, Aino is a sister to Joukahainen or Jouku, one of the main heroes in the novel.

<sup>19</sup> For an official description of the scale of results from the matriculation examination, I would suggest consulting: <http://www.ylioppilastutkinto.fi/en/index.html> (June 4, 2012).

ton, DC, followed by countries such as Australia and England (ironically, former leaders in national evaluations now follow the steps taken in New York City), and the other is headed by countries like Finland and Scotland, where national census evaluations are explicitly rejected.

With the turn of the century, we find that the world's education systems have been invaded by a management-type logic focused on accountability, intended to confront what politicians now perceive as threats from globalization. The debate around this trend is not a trivial one, since the introduction into schools of a commercial-oriented way of thinking is viewed by educologists as over-simplistic and harmful to the development of skills for learning and intelligence.

From the perspective on education in Finland and Scotland, efforts in education policy should be concentrated on teaching-learning and learning-teaching processes, instead of on superficial measurement of advances and results. For professional teachers, accountability is automatic and implicit. The point is not to avoid accountability, but rather to instill this element in the minds of teachers, as one aspect of their responsibility in exercising this profession. In the end, the notion of accountability should not be rejected. What should be questioned is a type of accountability that is based on limited and sometimes incorrect information derived from standardized tests given to students.

My direct observations and review of the literature allow me to propose a hypothesis: the less trust is placed in teachers and educational institutions, the more educational measurements aimed at accountability are adopted. Thus, when authorities in education systems praise the work of teachers, with rhetoric based on professional treatment and pedagogical and constructivist autonomy, but at the same time subject schools and their teachers to performance measurements based on standardized tests given to their students, a serious contradiction is evident.

The answer that seems to be consistent in high-performance countries is the use of compulsory final exams at the end of pre-university education, such as the matriculation exam.

As we have seen in the case of Finland, the matriculation exam is not a standardized exam in which all students take the same test. In reality, it is a scheme that offers a menu of options with minimum requirements such as four disciplines or areas of study. Emphasis is placed on the architecture of an individual plan of upper secondary or high school studies, developed by each student, in line with his or her talents and interests. In theory, there could be as many combinations of matriculation exams as students in Finland. This logic is reflected in upper secondary schools, where study programs are flexible in terms of options, certification levels, and time for completion. This philosophy of education for individualized and differentiated learning is gradually extending to the lower secondary and elementary school levels in Finland's education. Recent amendments (2010–2011) to the compulsory curriculum point in this direction.

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# Chapter 5

## Journeys into Finnish Schools: Lives and Thoughts of Teachers and Principals I

### Education and Learning in the Twenty-First Century

More than a decade into the new century, how do schools look and what are teachers and principals thinking?

It is often said that the children of the twenty-first century are significantly different from those of the twentieth century. Major changes in families and societies are also noted. Families, although smaller in size, have less time to be together, while both mothers and fathers dedicate their entire day to work, study, or television. Children receive less attention from their parents and move through the world—outside their homes—by way of three basic experiences: media, friends (plus social networking), and school. This means schools will have to take increasingly greater care in addressing the needs of children and young people, who are mostly left adrift, with less family interaction and with learning opportunities that are numerous but informal. These children and young people feel more independent, but it is often a type of forced independence, perhaps due to the early breakup of families or influence from the media and virtual social communities.

This is also the image of modern Finland, and it is reflected and documented in the statistics showing increased numbers of children with special or additional educational needs.<sup>1</sup> In 2011, the curriculum for basic education was reformed to reflect this reality and to pressurize schools to dedicate more attention to special education and differentiated education for all children, with an emphasis on individualized learning schemes—all of which require a great deal of high-quality attention from teachers.

The first three chapters of the book try to position the Finnish preuniversity education system as close as possible to its institutional framework, drawing from statistical sources, education policies, and theoretical published works. The analysis is done under three main topics: success (reasons thereof), teachers and teaching quality, and the unique school evaluation approach of Finland. But there are many

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<sup>1</sup> The number of students classified within “special education,” as a proportion of the total enrollment in comprehensive education, has increased from 2.9% in 1995 to 8.4% in 2008 (Statistics Finland 2009a, 35).



lessons, findings, and stories about Finnish education; even from the experts' eye, there are different views of what is important, very important, or less important to explain Finland's impressive education record. Since factors associated with success cannot always be separated, a more specific insightful view is necessary. Very few things other than statistics, regulations, and findings from amass-it-all studies can be said without going to schools and talking with principals, teachers, and students.

Therefore, Chaps. 5 and 6 are devoted to this endeavor. I have visited many schools in seven trips to Finland since 2004. What follows is a summary narrative of some of these visits, 28 stories, from 28 different schools in four of the five major regions of Finland: 18 in the south; 3 in the west (central Finland); 1 in the east; and 6 in the north. Since many schools have more than one level or section, the narrative includes 47 sections divided as follows: 8 preschools; 15 elementary sections; 12 lower secondary sections; 10 upper secondary or high schools; and 2 teachers' colleges. Apart from the narrative stories of Chaps. 5 and 6, written questionnaires were distributed to teachers and principals. Chapter 7 reports on the findings of this research.

The purpose of these two chapters is to complement the analysis of the three former chapters by looking at the ways the schools apply policies and practices and undertake teaching and learning in daily life. I tried to make the narratives as symmetrical as possible, stressing the school numbers, the school life, the school physical learning environments, and the viewpoints from students, principals, and teachers. There are some schools that I visited twice or thrice in different years, but the narrative is collapsed into a single section.

The reader will find many similarities but also significant differences among schools and school communities, but, most importantly, revealing insightful comments about what works and does not work in teaching and learning in Finnish schools at the beginning of the twenty-first century. Principals, teachers, and students address many topics that enlighten the discussion about the Finnish success story. Among those topics, we find: trust, teachers' quality, social and educational equality, students' spare time, teachers' own professional stories, technology and gadgets in schools, pedagogy, school and classroom learning environments, bullying, special education, leadership, creative learning, mathematics teaching, magnet schools, skills to learn other skills, thinking skills, professional learning communities (PLCs), physical learning environments, importance of education, foreign languages, school community interaction, individual teaching and learning, communicative learning, motivation, challenging learning environments, comparison between rural and urban schools, support systems, and timetabling. Topics are varied since narratives of interviews are as respectful as possible of their own words and comments. The reader then has the opportunity to balance the more theoretical approach of the first three chapters with the more qualitative views of Chaps. 5 and 6.

After reading the first six chapters of the book, the reader will realize that many elements of school education in Finland call for the quality of teachers and the teaching quality, and the cultural and social learning environments. At different times, I researched, through teachers' and principals' questionnaires and interviews,

on these topics. These research studies were conducted at the same time during my many visits to schools. Chapter 7 offers, then, a summary report about the findings from those studies complementing in a more formal reporting the narratives of Chaps. 5 and 6.

In all my trips and visits to schools in Finland, I have been in the north as far as Hetta and Utsjoki, in the west as far as Tampere, in the center as far as Jyväskylä, in the east as far as Joensuu, and in the south as far as Turku and Helsinki and many towns nearby. My overall conclusion is that schools in the east and west, center, and north and south share a vibrant school community: the *rehtori* as the leader; professional and highly trained teachers; safe and secure academic and physical learning environments; a fine-tuned culture for learning; a well-balanced, equal society in almost all aspects of life; and a supportive and coordinated municipal and national authorities' system. As a society, Finland offers a well-tuned and well-balanced social and cultural learning environment.

## Back to School

There are three very prestigious upper secondary schools in Helsinki: *Helsingin Suomalaisen Yhteiskoulun* (SYK), *Ressun Lukio* (RESSU),<sup>2</sup> and *Helsingin Normaalilyseo* or *Helsingin "Norssi."* Upper secondary schools in Helsinki and in all of Finland select their students based upon lower secondary school grade point averages (GPAs). That is where academic segmentation begins. For example, in the 2007–2008 school year, the approximately 700 students at RESSU had entered with a 9.3 GPA (on a scale from 4 to 10)—probably the highest in Finland—from their lower secondary years (grades 7–9).

RESSU was the first school I went to see during this visit, and it was the first upper secondary school I had visited in Helsinki, Finland's capital and largest city. When I interviewed the principal and asked about education in Finland, his answer was:

The word that describes our educative system is "Trust." Teachers trust their students, principals trust their teachers, and authorities trust principals. Besides, we have a very flexible system. Instead of inspectors, we have self-evaluation inside the schools.

With a total of 60 teachers, the school manages a flexible curriculum scheme. Upper secondary students in Finland are not divided by grade but by personal education plans. All upper secondary students register for required and optional courses, but only some for advanced courses.

At RESSU—the principal said—we have a large number of advanced subjects. Based on these three types of courses, students create their own programs. For this purpose, we offer 700 courses. RESSU has an optional IB<sup>3</sup> program. We have the largest IB school in

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<sup>2</sup> <http://www.ressu.edu.hel.fi> (January 24, 2010).

<sup>3</sup> International Baccalaureate.

Helsinki. And we offer about 13 or 14 different languages: English, French, German, Russian, Swedish, Spanish, Italian, Latin, Chinese, Estonian, Hungarian, Japanese, Polish, and of course, Finnish. And if this is not enough, our students can attend language courses at Finnish universities. However, this is not typical of *lukio* schools.

Everything revolves around the students at RESSU. They even participate in relevant decisions, such as hiring permanent teachers. According to the principal:

We have a ten-member decision-making school board: two students (who must be 18 years old to vote), two teachers, four parents, a staff member and the principal, who has the final tie-breaking (casting) vote. This type of school organization is extended to all upper secondary schools in Helsinki. Aside from the board, we encourage students to take part in many other activities.

The most important decisions made by the board are for hiring permanent teachers. The principal hires temporary teachers and has the power to fire them, although that rarely happens.

RESSU has well-motivated students. The school is very prestigious, and, therefore, needs no publicity for enrollment. Half of the students come from the provinces, an indicator of educational equity.

Two students and a teacher from RESSU joined us in the interview. We talked about the popularity and quality of the teaching profession. According to the principal, the teaching profession is among the three or four most popular professions, with medicine as number one. The students in the interview said the teaching profession is popular because “we want to be as good as our teachers.” Of course, this is an answer coming from very high-achieving students.

As for the teacher in the interview, she said:

It’s a profession that allows a special lifestyle. I said to myself: “I like going to movies, theater, museums, and to have free time; what profession can give you that?” Teaching. It’s not a profession to earn a high income. If I wanted that, I would have gone into medicine or law. I believe that new teachers choose teaching for the same reasons. The “two and a half reasons” (June, July and half of August—summer vacation) are an important factor in the decision. But it’s really a joke that others say about teachers. For example, teachers in compulsory education start working at the end of July, and many of them attend courses during the summer. But with teaching, once you have tenure, you have it for life. And if you are a certified teacher, opportunities open up throughout Europe.

Soon after, the principal invited all of us (Anna, the teacher, and Liisa and Martti, the students<sup>4</sup>) to move to another office.

“What is it that you and your classmates look for?”—I asked. Liisa and Martti answered:

Most students want to make money. So they enroll in business, law, medicine or engineering. They want to *be someone* and achieve something great. They want to be successful, but after a while, they change. They don’t want so much pressure.

I replied: “Then, couldn’t the popularity of the teaching profession be explained by the fact that everyone perceives being a teacher as a risk-free profession?” Martii’s response:

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<sup>4</sup> The names of the teacher and the two students have been changed in this case.

Had you asked me three years ago, I might have replied, “yes, I want to be a teacher.” But now, we know more about real life issues such as economics, law and business, and I prefer to follow this course. At RESSU we are more ambitious for money and status. Students want to be known: to achieve something, to be admired, or to be the “Nokia director.”

“Then regarding teachers, it’s different type of admiration. Is that right?”—I asked. Liisa responded: “As a teacher, only your students and their parents know you. But, as a Nokia director, many people know you. Besides, if you’re a teacher, you have low job mobility.”

According to the Organisation for Economic Co-operation and Development (OECD)’s statistics compiled in relation to the Programme for International Student Assessment (PISA), Finnish students apparently devote few hours to studying both inside and outside the school, at least compared with other participating countries. So, I asked: “What do students do with their spare time?”

Martti said:

In lower secondary school (which is the age at which students in Finland take the PISA tests) I enjoyed a lot of free time. I never did homework. I met with my friends at the “youth center,” hanging out, playing pool or watching TV. Most of my friends did not want to do their homework. I personally did not watch much television, maybe three hours a week, but I was on internet ten hours a week. I spent weekends with friends. I played ice hockey six times a week and played the violin. I didn’t read much. But my sister read a lot: three books a week. But now, I’m doing homework all the time, I don’t go out with friends, I watch two hours of TV a week, mostly American series like “24 hours” or “Heroes.”

Liisa’s response was not very different:

In lower secondary school I hung out with friends. I had many hobbies, though. I played the flute—which I did for ten years—and I played ice hockey. I watched a lot of TV. I didn’t use the computer. My friends and I didn’t go to the “youth center.” Now, all I do is homework. I hang out with friends a little, and take yoga and crafts classes. I do this because, according to the upper secondary syllabus, it’s necessary to devote some hours to manual crafts. It’s part of IB and is known as CAS (Creative, Active, Service). I watch about two to three hours of TV per week.

And the teacher answered: “When I was in lower secondary school, I spent my time playing the flute, reading, going to the movies, being with friends and doing some sports. I did not watch much television.”

Following my research protocol, I asked: “What are the reasons for Finland’s success in education?” Liisa answered:

Expectations and social pressure to be successful. I went to a large Montessori primary school where we had to do and get everything for ourselves, in an interactive mode. We were encouraged to work independently. But in general, lower secondary school teachers challenge their students to discuss, and not just “listen.” In addition, less talented students also fare well because they go to school and have many opportunities there.

Martti said:

We don’t have private schools, so the Finnish system shows a lot of fairness. We don’t have that kind of social pressure. Teachers are very encouraging, and at least at the elementary school level, they nurture us a lot. I had extra help in math. We’re treated as individuals and not just as a group. I went to an excellent elementary school, with a lot of quality teaching.

But we're not encouraged to get high scores on standardized tests like PISA. We're not encouraged to be the best.

Lastly, Anna, the teacher, mentioned: "Our education system is good and the quality of teachers is homogeneous. We don't like dropouts; that's why we have a strong remedial support scheme. Besides, if one is successful, that's no reason to celebrate."

Martti interrupted:

We have special teachers for special kids, but I have a concern about the Finnish education system: there are no challenging courses for talented students. Everyone is in the same class and teachers team up with the least talented students. This is the reason why we don't have high percentages of students in the highest PISA performance ranks.

Actually, other professionals, professors, and researchers share Martti's perception. In fact, some experts believe this is a point for review. But the argument that Finns do not have high percentages of students in high levels of achievement is on shaky ground. According to PISA results, Finns are located at the highest achievement levels in reading, mathematics, and science. Let us take, as an example, the levels of performance in PISA tests in 2006 in science, reading, and mathematics. In science, Finland has the highest percentage of students at the two highest performance levels for all countries. Finland and New Zealand are technically tied at the highest level.<sup>5</sup> In reading, Finland ranks second only to South Korea, with the highest percentage of students in the two highest levels of achievement.<sup>6</sup> In mathematics, Finland is located in fourth place after Taiwan, Hong Kong, and South Korea.<sup>7</sup> In PISA 2009, Finland again placed among the countries with the highest averages and levels of performance in the three areas of assessment.

At RESSU,<sup>8</sup> a young person can receive a great education because all the students are talented. It is a high-caliber school, with a strong learning environment. RESSU is an unpretentious school in terms of facilities and equipment. It is located in the very center of Helsinki and camouflaged between the buildings, streets, and avenues in a busy area of the capital. Inside the school, the environment is different: Everyone is harmoniously engaged, minding their own and everybody's business, like a baseball team.

As I walked through RESSU's corridors escorted by Anna, I kept hearing, from far away, the gentle, exquisite sound of a well-executed cello. I asked Anna if it was something special, "perhaps for a celebration," but she could not say. Gradually, I was more and more intrigued by the gentle music. The virtuoso performance did not seem to interrupt or disturb students or teachers who continued to go about their daily work. Finally, after crossing from one aisle to another, and passing through some wide glassed doors, we ran into the cellist and her cello.

There she was, a young woman about 17 years old, who had found a quiet, remote, secluded place for herself, underneath a staircase in a narrow corridor. The

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<sup>5</sup> OECD 2007b, 24.

<sup>6</sup> OECD 2007b, 222.

<sup>7</sup> OECD 2007b, 227.

<sup>8</sup> <http://www.hel.fi/hki/ressuy/fi/Etusivu> (June 4, 2012).

young cellist played, without hesitation, the beautiful Concerto Opus 85 by Elgar (a work played brilliantly by cellist Jacqueline du Pré in her glory years). Stunned, Anna and I stayed until the sweet young woman finished the last note of the concerto, “her concert.” It was a touching, beautiful scene, and perhaps the best lesson of the day on Finnish education. It summarized individuality and community, space and seclusion, respect and harmony, and silence and sound. A statement that the school may fascinate, to the extent that the learner is valued and respected in his/her individuality, and in turn, the learner can display his/her talent and interest without disrupting the everyday life of the community.

## Teaching: The Whole Package

It was 8:00 a.m. on Monday, March 19, 2008. My appointment was at the lower secondary school in the municipality of Kirkkonummi: *Kirkkoharjun Koulu*.<sup>9</sup> I was sitting at one of the desks at the back of a classroom that measured more or less 22 by 26 feet. History was the subject matter, and there were 23 students sitting in front or beside me. All the boys were sitting at the back of the room and all the girls in front. A young teacher in his thirties was trying to keep the class interested and active by projecting real news on a TV monitor. After about 7 min into the film, the teacher asked the students questions. Finnish students are shy and take awhile to respond, but gradually the teacher managed to get them to talk. The classroom was simple and unpretentious. It contained a TV monitor, videocassette recorder (VCR), a whiteboard, an overhead projector and some scribbles on the walls between columns, not visible to the teachers. When I mentioned the scribbles on the walls to the school principal sometime later, instead of being alarmed, she said: “That’s because children are bored; some teachers teach in traditional ways.”

The topics for discussion: the European Union and the crises in Tibet, Kosovo, and Kenya. The teacher focused the discussion on nationalism and propaganda. When the subject turned to propaganda, the teacher asked the students to open their textbooks. Students then connected the day’s lesson with the text. The teacher asked students to read for themselves a passage on the issues of “propaganda and nationalism.” While students read and reviewed their textbooks, the teacher walked around the classroom to see how they were doing. After 45 min, the class was over.

As I sat in the back of the room, I was able to observe the dynamics between two students next to me: whispering, restless, sometimes distracted, sometimes attentive, sometimes flipping through a couple of magazines, sometimes playing with their mobile phones.

Needless to say, the initial reason why I decided to visit this school since April 2004 was for its high academic performance.

After the class, when I was just about to begin an interview with the teacher, he said, “I wish I had an Internet connection in the classroom so I could get [www.yle.fi](http://www.yle.fi)

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<sup>9</sup> [http://www.kirkkonummi.fi/prime\\_370.aspx](http://www.kirkkonummi.fi/prime_370.aspx) (June 14, 2012).

(a Finnish public broadcaster similar to the BBC) and show students the news as it was presented during the Second World War and after. That would make the lesson much more contextual.”

By 2012, when I came back to this school, not only were Internet connections more common but the principal had also initiated a pilot program using iPads. Every school I visited in 2012 was much better equipped than in 2004, with various technological gadgets, and most having camera projectors and white digital boards. Teacher’s desks also looked much better equipped, each with a laptop, camera projector, printer, and management console for computer equipment. But teachers and the teaching and learning interaction seemed unchanged to me.

The comment made by the teacher about the Internet connection, back in 2004, might seem unimportant, but it encapsulates the positive relationship that teachers and schools should have when teaching and technology intertwine. My interpretation is, therefore, “this is what I have to teach, and this particular medium or technology can help me to do it.”

In response to my questions about the teaching profession, this particular teacher said:

In my day, being a teacher was not popular; it was not the choice. This was typical of my school, located in Helsinki at Ratakatu 6 (*Helsingin normaalilyseo*).<sup>10</sup> It was a school within the university for training teachers, also known as *norssi*. Being a teacher was not a prestigious career, and still isn’t among high school students. My friends’ parents were pushing them into other careers. I’m the only teacher from my graduating class. If you work as a teacher in the provinces, you are admired and respected, but in large cities, teachers are not respected. People will say that teaching is an important job but without status. However, some of my former colleagues who are now entrepreneurs or lawyers, they think I’m in a better position because I have more time to devote to my family. Although wages are not good, the complete package is attractive. And as all Finns, we have comprehensive health insurance. Besides, I pay only 200 euros per year for my son’s preschool. There are many things about being a teacher that contribute to a good life.

Next, I asked him about the reasons for Finland’s educational success. He told me:

For starters, it’s related to the high level of academic performance of many children. And although the profession is not the most popular, there is always a group of young, very talented students, among the best, who will eventually become teachers. The profession still attracts some of the best. Moreover, in this school, many teachers love the subject they teach, and are fascinated about sharing their knowledge with students.

It is true that such a large group of good students creates a large enough foundation of high-caliber young people who go to college, and the teaching profession is one of the options they will find there. However, in a way, the answer seemed circular: “The reason for Finnish educational success is high student performance.”

I was able to talk for a few minutes with six lower secondary students who were about 15 years old. One of the topics we talked about was their extracurricular activities. In summary, they said they spent most time with friends (“hanging out”), read a little, spent 15 min to an hour a day on homework, watched TV between 1

<sup>10</sup> <http://www.norssi.helsinki.fi/> (June 11, 2012).

and 5 h a day, and devoted some time to video games and Internet. Some of them said they helped with housework.

After I finished talking to the students, I asked Kati, the teacher, to tell me a little more about herself. Here is what she told me:

I studied at the University of Turku, and I also went to elementary school in Turku. At first, I really didn't want to become a teacher. I was admitted to the university to study both sociology and Finnish literature, and I studied both areas for some time. I had a couple of teachers in high school who were excellent, and I wanted to become like them. They were very close to students and created a positive ambience. I learned a lot with them. My classmates wanted to be doctors, lawyers or nurses, but not teachers. Only one boy from my class became a primary school teacher. My upper high school was one of the best known and most prestigious in Turku, with very good results in Finnish language.

Regarding the reasons for Finnish educational success, she said:

Teaching methods change over time and teachers mold them to the classroom. I think students learn better with changing methods. For example, I use drama when I see students tired or I notice that the environment is not suitable. This way, teachers try in various ways to maintain the best possible learning environment.

Then I asked: "What is the best learning environment?" Her response:

It's a situation in which every child feels physically and mentally safe. Drama exercises help because they learn to laugh; they learn that if someone else laughs at you it's not really that bad, and they learn to trust each other. And when we face difficulties with children, then we deploy a support framework that includes teachers, a psychiatrist and a nurse who all look carefully into the issues.

Impressed by this lower secondary school, I returned in 2009 and 2012.

I was sitting in a ninth-grade classroom on the 1st day of October 2009, from 8:00 to 8:45 a.m. A student sitting next to me made a call on his cell phone without being interrupted by the teacher. Another student just got up from his seat. The ten girls in the group of 23 students were sitting in the front rows. In general, the students' behavior was appropriate and the teaching-learning style was interactive: The teacher asked questions, and students responded in short phrases. The topic was: languages of the world and their relationship with Finnish history and literature.

Talking with two teachers, Jukka and Petteri, about the pedagogical methods used in the classroom, they tell me that teachers in Finland have the freedom to teach as they wish and that they are committed to doing a good job. According to these two male teachers, there is a generalized pattern: Lectures are used as little as possible; teaching should be something more than talking and listening; and the teacher's role is to motivate students to learn on their own, to read, and find the answers themselves.

One of the teachers specified:

I try to help students become interested in the subject by way of topics that are important for them, using current examples that tell them how their lives are being affected. For example, if we're studying topics regarding social welfare, I take them to the main national social welfare office. We go into the building so they can learn and see things for themselves.

"Are students changing?"—I asked.



It's hard to say. Last year, the seventh-grade class was really difficult. Actually, seventh-grade classes have been really difficult since 2002, but this year, the students in seventh grade are quite enjoyable. Students entering lower secondary school start out with insufficient skills. And problems with studying have increased. So, the main challenge is how to enhance their motivation, how to spark their interest and their desire to learn. I'm very worried about Finland. Families and students don't respect schools or school activities. There are increasingly more students who need special help. At the end of the school day, we give them extra help, but there are limits. If we think of special help and constructivism at the same time, one teacher would be needed for every student—and that's not possible.

“To what degree do you teach ‘learning to learn?’”—I asked. One of the teachers responded with the following:

Learning to learn isn't emphasized so much in lower secondary school, although there is some of this in the emphasis on how to be critical and how to read. Here, we don't have a course or strategy for developing skills. The skill I work hard for with my students is that they develop the capacity to understand<sup>11</sup> what they read—beyond what might be funny or fictional, but with a focus on the facts. Many students have problems discovering relevant information. In order to increase their ability to understand what they read, I focus on vocabulary—to increase their vocabulary and to increase their understanding. I observe the students, and if there is someone who's not making progress, then we go through the text together, dividing a paragraph into different segments and starting there. There has indeed been a major change in Finland in the last two decades. Teachers used to give us more information. What's popular now is teaching how to learn. Some young teachers have learned this focus more than I have—I consider myself to be of the old style. But we should also remember that we're limited by the national curriculum and the educational goals. We have some freedom, but that's the starting point. Change is taking place very rapidly, and we're unable to react quickly enough. If someone out there thinks we teachers need to change, well, that won't happen in a year. Sometimes it takes generations, because there's an obstacle: a matter of attitudes, basically the idea that “I'm the teacher.”

“If, as we have already seen, motivation is currently a major topic,” I asked Jukka, “how should students be motivated?”

The curriculum doesn't give us the answer. We need to focus on something. And this is a decision made by each teacher: skills or contents? A good teacher knows that when things are presented in a certain way, students will be motivated. There are no recipes. The focus is different for each student. If students are very intelligent and have skills for learning rapidly, there's not a lot to be done, since they already know how to learn. If students need help in basic skills or individual disorders, then the challenge is for the teacher, student by student. In my case, it takes me six months to get to know the students and decide what I'll do with each of them. In some cases what's needed is to teach them to read, in other cases, it's a matter of giving them more time for reading, and in others, they need help in understanding questions. In the end, it's very difficult for teachers to determine if the problem is due to a lack of skills or a lack of motivation.

Petteri, the other teacher, said: “I pay more attention to contents.”

To which Jukka responded: “It depends on the group. I can give freedom to certain groups, but with others, I need to keep them right next to me.”

Petteri continued:

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<sup>11</sup> Author's note: The emphasis added is mine, to underscore my agreement with the idea that learning must be based on strong contents of knowledge of the events and contexts of the information read.

The 1994 curriculum was very much based on constructivism, with considerable freedom. There was more freedom for teachers to decide how to teach, within the perspective that students learn on their own. In that curriculum, teachers didn't teach but rather brought information to students. Still, I think it was very idealistic. After a number of years, authorities realized there were some problems. Teachers went to classes, took materials with them, put them on the table, and told the students: "you need to find the meaning." The authorities forgot that we're the experts who can tell them what's valid and what's not. That's why they reversed things a bit in the 2004 curriculum. Instructions on what to do are specified a bit more in this curriculum. My impression is that what happens at the basic education level is not yet well understood. Almost all teachers realized that total constructivism didn't work. Furthermore, there is a strong tradition in universities to learn by topics and by subjects. At any rate, we're trying something out in the first year of lower secondary school (grade 7) as a test, to concentrate on the matter of helping students to learn. For example, we're working with: how to read, mental mapping, classifying and organizing—which is included in the textbooks. Teaching how to learn should be included within the realm of each subject. We're still very divided into subjects. If we could have two teachers in the same class, for example, to teach history and Finnish, that would be marvelous.

In terms of cutting-edge technology, the school is beginning a pilot project on the use of iPads and access to material by Internet. Aside from this, and an increased number of camera projectors and white digital boards, the school looks the same as in 2004, when I visited it for the first time. Changes tend to be gradual, unless you are looking at a totally new school. Thus, in the transformation of already-established schools, you can see computers and monitors from the previous century—right next to the latest camera projectors and laptops.

## **Norssi: University Training School for Teachers**

My next visit was to a different type of school. From a student's perspective, *Norssi* schools are like any others, but for teachers there's an important difference. These are training schools for student teachers. The school I visited was annexed to the Behavioral Sciences Department at the University of Helsinki and is known as *Helsingin normaalilyseo*.<sup>12</sup>

My plan was to meet with student teachers and with college professors responsible for monitoring the practices of future teachers for lower and upper secondary schools.

Minutes after arriving, I was speaking with Tinka and Tuuli, two young high school students at the school. They told me that it is difficult to get accepted into this *norssi* school (short for normal schools or *normaalilyseo*). The lower secondary GPA of students admitted in 2007 was 8.9 (on a scale from 4 to 10).

Sitting nearby was Seija, a university professor. She talked with me about teachers in Finland and said that the teacher's most important task is to motivate students. Many lower secondary school students are not motivated to continue studying, she

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<sup>12</sup> <http://www.norssi.helsinki.fi/> (June 4, 2012).

said. One way teachers can motivate them is to teach actively, to change teaching methods often to maintain students' attention.

According to Seija:

On average students can stay focused for two or three straight minutes. However, class sessions require concentration for 40 or 45 min. Teachers must change their teaching methods at least every 10 min. This motivates students. The changes in teachers' styles, methods and practice are the secret of educational success in Finland.

After this conversation, Timo, a university professor and science schoolteacher, was expecting me in his classroom. There, I met him together with about 15 students, all of them "subject teachers," with their ages ranging between 25 and 35 years. Many of them were professionals changing careers for various reasons. My question was what motivated them to embrace the teaching profession. Their answers, one by one were:

When you're 17, you think differently. If you ask a young 17-year-old, he or she will answer in terms of money; what the profession can give back in money.

Students who want to become elementary teachers respond differently than students who want to become subject teachers.

At the age of 17 or 18, most people do not really know what they want to study or do.

There are market conditions for professionals working in chemistry—for example—or working conditions that are not very interesting, that make you think about teaching.

One reason for being a teacher is to have more spare time.

I do believe that the teaching profession is popular: becoming a teacher involves much more than just teaching; it involves the development of social skills.

Later on, upon my request, there was a brainstorming session about the possible reasons for Finland's success in school education, and here are some of their ideas:

- It's society as a whole.
- Teachers educate children to question, that is, to think critically.
- It's an education without preconceptions.
- Teachers and parents allow children to play freely in nature, forests.
- Homes support schools.
- We respect our teachers.
- Our teachers are highly trained and have been so for many years.
- The quality of teachers is very homogeneous.

## **Viikin Normaalkoulu**

On a cold morning in March 2008 with a temperature of 23 F (−5 °C), and everything covered in snow, I took a 30-min train ride followed by another 30 min on a bus, traveling from the place I was staying, Siuntio, to my destination for the day: Viikin, Helsinki.

My visit that day was to another teachers' training school, this one on the outskirts of Helsinki. I was at the prestigious normal school *Viikin normaalikoulu*.<sup>13</sup> This normal school was also attached to a Behavioral Sciences Department at the University of Helsinki—but this one was located at the University's Viikki campus. This school had been the first Finnish-speaking school for women in all of Finland.

Students in both Bachelor's and Master's programs complete their required student teacher practice at this school. This is a training school, *Herttoniemen Yhteiskoulu*,<sup>14</sup> that includes all education levels: 1 year of preschool, 9 years of basic school education, and 3 of general upper secondary education. The school is located in a new (since 2003), modern, and functional building on the university campus.

Since 1970, the Finnish educational system has been based on a 9-year comprehensive education. This model replaced the "dual" or parallel education, in which students in the fourth or fifth grade were tested and tracked: The "best academically" were channeled to an academic track and the "less academically apt" were directed to a vocational track. The 1970s reform established a new preservice training for teachers. Normal schools were integrated into universities, and curricula fell under the responsibility of the latter. Thus, since the late 1970s, Finnish teachers have been required to complete a Bachelor's degree, then get a Master's degree, practice at a *norssi* school, write a thesis, and be hired by a school, before beginning to teach.

As we have seen, teachers are sometimes identified as the reason for educational success. Whether this explanation rests on historical respect, their role in building a nation, the popularity of the profession, or the strict and thorough teacher training system, teachers are indeed remarkable.

As I had arrived a little early at *Viikin normaalikoulu*, I waited in one of the teachers' lounges in this teachers' school. It was very pleasant, with a cup of coffee, enjoying some time in a colorful and peaceful teachers' lounge.

Lasse, my host, asked a dozen teacher trainees if they had time to talk to me about Finnish education and teachers. A couple of them agreed: Susanna and Hanna. Both were in the 3rd year of their education to become primary school teachers. And although they were only a bit more than halfway through the program, they were completing a practical, 7-week classroom practice.

Before they graduated as teachers, it would be necessary to complete another training session upon reaching their 4th or 5th year of college studies.

However, one of the students stressed to me that it was actually not uncommon to be a teacher without a teacher's degree:

When schools hire teachers, they have to select the certified ones first, if available. But if principals don't find any, they can hire at their discretion. For example, in this teachers' school, there are some students who have been working as teachers for ten years, and now they are here to get their degree as class or subject teachers.

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<sup>13</sup> <http://www.vink.helsinki.fi/> (June 11, 2012).

<sup>14</sup> <http://www.heryk.edu.hel.fi/> (June 11, 2012).

Susanna added: “Many people teach without a teaching certificate or degree. Therefore, certification is not the reason for educational success.”

This assessment sparked my curiosity, and I believed it deserved a more precise empirical investigation, so I started searching for statistics. I was not able to find the information in English, so I asked Professor Jouni Välijärvi. A few days later, he had the answer: 9% of primary and 6% of lower secondary teachers are not formally certified.

Back at the school, Sanma, another young teacher, joined in our conversation: “When we were students, the teachers’ methods were very traditional. And school culture is very difficult to change. We are trying to change it now. We teach teachers to be different, and use different types of activities during lessons.”

“Which methods are best, traditional or modern?”—I asked. The answer: “Both. You need to teach in many different ways, because students are different.” And Sanma elaborated:

Society has changed so much, that now children need different types of knowledge and skills. They need to be innovative. But, at the same time, kids are not as disciplined and respectful as before. They are not as obedient with society and families. Culture has also changed. Our parents used to read a lot with us every day.

“Do students read the Kalevala?”—I asked. The answer: “The reading of the Kalevala depends a lot on the teacher and the way he/she presents it to the children. It can be boring, unless you use play and drama—then their attitude changes. But most of the students think it’s boring.”

I was able to verify this in my conversations with young students. Every time I asked about this famous literary work, the response was negative. Whether through gestures or words, the answer was: “Boring!”

Around 11:00 that same morning, I went to observe a physics class for seventh graders. The class was taught by a student teacher and supervised by a faculty professor and teacher. The class had few students and was generally orderly and quiet. Some restless boys were controlled more by the supervising teacher than by the student teacher.

The lesson was about refraction and reflection of light. The practicing teacher used a lot of gadgets to demonstrate the way in which light changes according to different angles, crystals, and surfaces. The students were actively involved in manipulating the gadgets. At the end of the session, the supervising teacher, in a traditional fashion, asked the students to form in lines by their desks and to remain quiet, until they were allowed to go. Then, the supervising teacher gave feedback to the trainee on her lesson.

The practicing teacher is not the usual teacher for this class, the supervising teacher is. From time to time, and as part of her academic load, the student teacher practices in front of a group in “contact hours.” When this happens, the supervising teacher is, in addition, a mentor for the practicing teacher. He is responsible for giving her grades for her academic credits.

Anna Mari was the practicing teacher. She kindly agreed to a brief interview and explained:

I made my decision to become a teacher when I was very young, because everyone in my family was a teacher: my father, my grandmother and my grandfather. It was a natural choice. But on top of that, teaching is a secure and stable job, and I am certain that I will get a teaching position once I finish my studies. However, in the beginning I was not sure about teaching, so I studied mathematics. Since demand is low, the entry requirements are not as high. After two years I decided to focus on teaching. The profession is not really that popular. I decided to become a subject teacher because I wanted to study physics and math. Also, subject teachers receive better salaries.

The school is housed in a new building; “too modern for my taste” one of the teachers would tell me. A combination of different materials was used in its construction: There are glassed, wooden, and bright-colored walls, with some details in aluminum here and there. The complex houses four sections: preschool, elementary, lower secondary, and upper secondary. The vivid colors, wooden surfaces, long corridors, high ceilings, especially in common areas such as the library, dining room, gymnasium, and auditorium; the paintings and sculptures scattered everywhere, the long, wide staircases, the teachers’ lounge—large, modern, cozy, and colorful—and the playful combination of both natural and artificial light together give this futuristic school a museum-like feeling. The classrooms come in all types, horizontal, traditional, with conventional desks or modular tables, and all of them equipped with overhead and camera projectors.

A few years later, coming back to visit Finnish schools in 2012, I observed that almost all overhead projectors had been replaced by digital camera projectors and white digital boards. Taking that into account, along with wider Internet access and more technological gadgets on teachers’ desks, we could say that the use of information and communications technology (ICT) gadgets is the Finnish school’s answer to the second decade of the century.

## Back to SYK

In 2008, I arrived at *Helsingin Suomalaisen Yhteiskoulun kotisivut*,<sup>15</sup> or SYK, as this school is widely known, for the third time.

I remembered that Anja-Liisa, the principal, first told me, back in 2004 that the reason for Finland’s success was that “education in Finland is transmitted by breast feeding.” This time, my first question was: “Were you surprised by the PISA 2006 results for Finland?” She replied bluntly: “I was not surprised. Finland has a good educational system.” And she continued:

Recently, at an international meeting, two people (one of them French minister) asked me a similar question: “The Koreans did well in PISA and the French not so good. But how is that the Finns are so good? How can you get such good results with so little study?”

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<sup>15</sup> <http://www.syk.fi/> (June 11, 2011).

This is true. According to data compiled by the OECD through PISA's context questionnaires, students from Korea and France seem to study much more than Finns, but obtained similar results, in the case of Korea, or lower results, as with France.<sup>16</sup>

We talked about Professor Hannu Simola's writings and the idea that education is itself a value for the entire Finnish society. "All in all, Finnish mothers want their children to be successful in school," said the principal or *rehtori*, and she continued:

In addition, Finnish teachers are very well educated, and they care about their students. They are free to use the teaching methods that best suit their circumstances. School officials do not limit or hinder teachers. Ours is a system based on trust. Overall there is an atmosphere of serenity. I disagree with those who say that students are less disciplined now. In reality things are not changing much in that regard. When I went to school, we addressed our teachers as Mr. or Mrs. or teacher. Now the children address their teachers by their first names, but that doesn't mean that teachers' authority has decreased or that discipline has been relaxed. No need for military authority in schools.

SYK is a private school, in the limited sense of private education in Finland, and it is not typical in several respects. The school receives students at the start of third grade, that is, 9-year-olds. According to the school (and education authorities), this is the best age to start teaching a foreign language without affecting the consolidation of the mother tongue.

During this visit, the number of students per class at SYK varied according to the particular grade: 32 students for grades 3–5, 25 students for grades 6–9, and 15–40 students for grades 10–12. The average number of students per classroom exceeded the typical number in Finnish schools.

Admission to upper secondary school is the only case in which admission is based on previous academic performance. The GPA required for admission at SYK is around 9.2. SYK had 412 upper secondary school students and 1,100 in all, taking into account all levels and sections, including its famous IB. The following languages are taught: Swedish, French, German, Russian, English, Italian, Spanish, and Chinese.

In addition to Finnish and Swedish, the vast majority of high school students in Finland study English. Their next preferences are German, French, and Spanish (Statistics Finland 2009d, p. 174).

I entered a ninth grade classroom for 15-year-olds. In charge of the group was a substitute teacher, a young graduate of SYK. I talked with about 20 students. I asked them how much time they spent doing homework. Answers: "One hour, and one and a half hours; and during exams, from one hour to two hours." "What do you do the rest of the time?" I asked. Answers: "Hobbies, sports, boy scouts and girl scouts, music, hanging out with friends, walking in the city, going to youth centers, etc." "And how much time watching TV?" I added. Answers: "Between

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<sup>16</sup> OECD data show the time spent studying in and out of schools by PISA students, according to their own answers in context questionnaires. In all subjects (OECD 2004, p. 435; OECD 2005a, p. 339), Finns stand out for spending relatively less time studying in and out of school. On the contrary, Koreans are the ones who devote the greatest amount of time studying in and out of school. The French do not spend as much time as the Koreans, but they study more than Finns and their performance is well below both.

a half hour and three hours a day.” Two hours was the most frequent response for boys. Girls said: “between one and five hours.” One hour was the most frequent response. “What kind of programs do you watch?” The menu: Finnish comedy, *Salatut Elämät* [something like *Secret Lives*], American series such as *Desperate Housewives*, *Friends*, *The Simpsons*, and *Poker*. They used Internet for about half an hour to two hours per day. That included some sort of “chat,” e-mails, games, and sites like Facebook. They also used Internet for research projects. All of them said they enjoyed school and in the future would like to become doctors, lawyers, reporters, administrators, and the like.

One student said: “We all dream about a good life.” So, “What is a good life?”—I asked. “A life with a high income, like in law, medicine, business. A high salary can give you a good life.”

Then I asked their opinion on the “Kalevala.” Answer: “Boring.”

Minutes later, I joined an *International Baccalaureate* (IB) class for a small group of 11th graders. All the students were Finnish, but with several different origins: India, Philippines, Africa, China, and Germany. All of them displayed a great command of English. They would eventually study aerospace engineering, economics, international relations, medicine, or political science.

I asked the students about their activities outside the school: “We get out of school at 3:00 or 4:00, and we spend the afternoon with friends.” Three out of the six students in this class said they did not watch TV. They used the Internet from a half hour to 5 hours a day; with 4 hours, the most frequent answer. When I asked them where they planned to go to college, the answers were: London School of Economics, Technical University of Munich, Helsinki University, and Stanford.

These answers revealed that this was not a typical school. However, parents and students with high expectations seek SYK.

My next interview was with an elementary school teacher, Minna, who received her teaching certificate in 1997. She told me how she got into education, how many of her family members were or have been teachers (“like an epidemic!” she said), and how happy she was with her profession, even though she originally wanted to study law, medicine, or engineering. She invited me to her third grade classroom.

For the first time since the beginning of my visits to Finland, I interacted with a group of 9-year-olds, about 30 of them. They were excited, but well behaved and eager to participate in class, raising their hands. I found these little ones to be less shy than the lower or upper secondary students I had interviewed so many times before. The kids related to their teacher in a very positive way, from the beginning to the end. Their classroom was spacious, well lit, and divided in two different areas: one, with desks aligned in a traditional way, and the other, similar in size, with no furniture, desks, or chairs, and with lots of educational materials arranged on shelves along the walls.



## Jyväskylä's Schools and Their Intimate Connection with the History of Finnish Education

During my 2008 visit, I started out one morning at 5:00 on a suburban train bound for Helsinki, then continued on the *Pendolino* speed train to Oulu, stopping at Jyväskylä, my destination, amidst the worst snowstorm of the season. And I still think about my first trip to this city, some years ago, in late March and early April, 2004. Then, in 2012, I traveled once again to Jyväskylä, also during a big snowstorm, but this time on a bus ride coming from Tampere.

Snowstorms do not stop people in Finland. Life continues as usual! From the train or bus, I observed many children with backpacks on their way to school. Although this is changing, schools are usually close to residential areas, so the commute is not very long for most families. If the school is far away, the government provides transportation, usually through private taxis. One teacher ironically told me, during my round of 2012 interviews, that taxi drivers are those who have benefited the most from the recent changes in education policy in Finland—which have caused the closing of many small, remote schools.

Finland is a country orchestrated by two great symphonies: nature and education.

In the pages of schools are written the intimate chapters of a nation in which educational equity—effective opportunities for all and special opportunities for those in greater need—is a major trigger for success. Equal opportunities are not enough; equal outcomes are also required. Education is the great equalizer only if equity is the avenue of quality, and school attendance responds to intrinsic reasons rather than behavioral policies that encourage attendance through scholarships and stipends.

Jyväskylä, a city of about 130,000 inhabitants, is important because it is the site of the university (*yliopisto*) named after the city and the site of a teacher training school that is one of the most outstanding in the world *Jyväskylän Normaalikoulu*<sup>17</sup>—if only because it was Finland's first teachers' college, which eventually turned into the university where it is currently housed. This small city with rural origins is also relevant because it is the birthplace of the first Finnish-speaking lower and upper secondary schools in the nation, established in 1858. So, the history and quality of education in Finland has its origins in this bucolic town.

After crossing some city blocks covered by a foot of snow, I devoted the morning to visiting the lower secondary section.

Heikki, my host, had been intermittently a teacher trainer for 35 years. He was once the principal of an upper secondary school, from 1985 to 2005. He had also been an inspector and director of the regional education offices. In 2005, he partially retired, but he is the vice rector of this school.

"Tell me, what are the reasons for educational success in Finland?"—I asked, and he answered:

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<sup>17</sup> <http://www.norssi.jyu.fi/> (June 11, 2012).

We should not look at the numbers, but at our history and system. We are a nation that truly respects education. Originally, Finnish teachers were trained in Germany, France, Sweden and all around Europe. Therefore, our educational system has been linked to Europe. Most of the students were Swedish-speaking and attended Swedish schools, but about 150 years ago, some educators believed the Finns should have their own schools in their own language. So, around 1860 the first Finnish-speaking schools were founded. The first Finnish school was established in Jyväskylä. Uno Cygnaeus established the first institute for teacher training and the first Finnish school. The institute trained elementary school teachers.

Uno Cygnaeus is an important figure in Finland's education and is known as the father of the country's primary education. According to various biographies, Uno, who was a priest in the Lutheran Church, had significant exposure to other educational systems, such as the Swiss system. During his travels through Europe, he was impressed by the methodology of "work education through play" so much that he translated it and adapted it to "promoting work through work." And he could be considered responsible for the fact that Finland was the first country to introduce handicrafts workshops at schools. We see these today in all schools, beginning at third grade or earlier. Students work with wood and metal, create textiles, and learn to sew and knit. According to his private correspondence, Uno's educational ideas—based on theory plus handicrafts—were a result of four life experiences: his practice as a primary teacher, his travels to other systems, the educational philosophy of Pestalozzi and Froebel, and the teachings of his father, who took him around to different workshops at an early age, awakening his interest in manual work.<sup>18</sup>

Back at the secondary school, Heikki continued:

After World War II we built schools everywhere, in every little town. Because we needed teachers, special programs were designed to train them. New teachers who accepted positions in small, isolated, remote places were paid a little higher income. Many of these teachers traveled with their spouses. Schools offered them lodging in the same building, whether for individual teachers or couples. Schools spread across the country. Everyone learned to read, and learned history and mathematics, and little by little we built ourselves as a well-educated nation. During the 1940s to the 1970s we developed a selective and segmented educational system very similar to what is observed today in Germany. This system was known as the "parallel" system. It was divided into four or five years of elementary or primary education known as *kansa koulu*. Then, four or five years of *oppikoulu* and once it was finished, the system divided into two tracks, one vocational or technical known as *ammattikoulu*, completed in two to three years, and a three-year academic system called *lukio*, as a venue for university studies.

The Finnish education system is currently divided into two levels, open to all: (1) *peruskoulu*, extending from first grade (7 years of age) to ninth grade (15 years of age); and (2) upper secondary with three choices: (a) *ammattikoulu* (vocational), (b) *lukio* (academic), or (c) a combination of both. This comes to a total of around 12 years of education, without taking into account the 1 year of preschool. Almost all Finnish children go to preschool.

The combination of the two options, *ammattikoulu* and *lukio*, is not unusual. Perhaps it is a sign of a formal change to come, that is, where all secondary schools will

<sup>18</sup> See letters and correspondence, especially the Letters from 1881 at: [www.jyu.fi/tdk/museo/kasityo/UNOandOTTOenglish.doc](http://www.jyu.fi/tdk/museo/kasityo/UNOandOTTOenglish.doc) (June 12, 2012).

have a combination of the two systems. According to my interviewee, in Jyväskylä alone there are about 200 students enrolled in both modes (or courses from both modes) simultaneously.

Heikki explained:

The change was deeper. Before, we had a system based on pass/fail, according to grade level. The students who failed would have to start the entire school grade over from the beginning. Our upper secondary school program is not based on this model. We have a number of subjects, and that number of subjects must be studied and credited by students. But there is no fixed, annual schedule. For example, students must take at least one course on psychology, but the program doesn't say when. So, students can take that course during their first, second or third year. The only restriction is to complete the course before finishing their studies. Then, there is no curricular map or program. Each student, with counseling from one teacher, designs his or her unique course plan for *lukio*. There are as many course plans as students in the school. Some students take the option of extending their studies for a fourth year, to better accommodate their courses or to compensate for low academic achievement. This system of individual planning is much more limited in *peruskoulu*, where students have fewer options for planning.<sup>19</sup>

The curricular timetable in Fig. 5.1, for upper secondary school and with 3 or 4 years of duration, demonstrates the flexibility for individual education plans in this *lukio*.

However, in the case of comprehensive education (grades 1–9) and according to OECD, Finland is not the most flexible country in this regard. Australia is, by far, the nation with more optional curricular subjects (OECD 2009a, p. 367, 368).

After this brief conversation with Heikki, we headed to the dining room, where I was to meet with the principal and three assistant principals. In a special meeting room, tray in hand, and after receiving a very healthy lunch,<sup>20</sup> I asked: “What are the careers of choice for this school’s students?” The question was discussed among the *rehtori*, one vice rector or *lukion vararehtori*, and three teachers, one of whom was a student counselor: “Of a group of 90 students graduating this school year, ten will go into teaching, ten into medicine, six to law school, 15 into business administration, 20 into different engineering careers, and the rest still in doubt.”

We then discussed the reasons behind success in education:

The answer is an educational system that is open to everyone, with cooperation among schools. Our secondary schools have been co-ed since at least 100 years ago. And our elementary schools have always been for both boys and girls. Also, there is a high degree of trust, and no corruption at all. In 1970 a sense of equity developed in our society: we are all the same. But these feelings of trust and equity, and also always striving to improve, rest on a history of difficulties with our Russian neighbors, with at least 50 wars, some of them massive, such as the wars of 1808–1809, 1918–1920 and 1939–1944. However, in the 1960s and 1970s, we didn't harbor resentment about what had happened with our neighbors in the past, and we opened up to the world. We have had many good political leaders who discovered, 150 years ago, that education is very important. Here in Jyväskylä, the first

<sup>19</sup> After 9 or more years of comprehensive schooling, students have the option of extending their studies for one more year (grade 10) before going on to upper secondary education. In 2009, there were 1,263 students who chose to continue for an additional year of studies (Statistics Finland 2009c).

<sup>20</sup> See section entitled “A good school meal is an investment in the future” in Chap. 2.

**Fig. 5.1** Upper secondary school curricular timetable: 2006–2007 academic year. (1) Number of minimum specialization courses that a school must offer. (The dash after the numbers in this column, for example, 2-, means at least two courses on that particular topic). (2) One course is equal to 38 sessions of 45 min duration. It can be studied anytime within a period of 3–4 years. (3) 47–51 refers to the number of compulsory courses (47 for students opting for basic, short mathematics courses, and 51 for students studying advanced mathematics). (4) Each student must at least take 10 specialized courses. (5) The minimum number of courses is 75 in order to be eligible for graduation. But most students complete more than the minimum. (*Jyväskylän Normaalikoulun Yhteystiedot* [Information from Jyväskylä's Teachers' School or the upper secondary school for the training of teachers in Jyväskylä]. 2007. *Jyväskylän Normaalikoulun Vuosikertomus 2006–2007* [Jyväskylä's Teachers' School annual curricular program 2006–2007], XXXIV, p. 36. Translation by Professor Heikki Parkatti during the interview in his office, Jyväskylä, March 26 2008)

| Subjects                         | Compulsory courses | In-depth knowledge courses <sup>1</sup> |
|----------------------------------|--------------------|---|
| Finnish                          | 6                  | 2-                                      |
| Foreign Languages                |                    |   |
| English, German, French, Russian | 6                  | 2-                                      |
| Swedish                          | 5                  | 2-                                      |
| Spanish, Italian, others         | -                  | 16-                                     |
| Math                             |                    |   |
| Basic                            | 6                  | 2-                                      |
| Advanced                         | 10                 | 3-                                      |
| Science                          |                    |   |
| Biology                          | 2                  | 2-                                      |
| Geography                        | 2                  | 2-                                      |
| Physics                          | 1                  | 7-                                      |
| Chemistry                        | 1                  | 3-                                      |
| Human Studies                    |                    |   |
| Religion                         | 3                  | 2-                                      |
| Philosophy                       | 1                  | 2-                                      |
| Psychology                       | 1                  | 4-                                      |
| History                          | 4                  | 2-                                      |
| Law and Social Studies           | 2                  | 2-                                      |
| Art Studies                      |                    |   |
| Music                            | 1-2                | 3-                                      |
| Art                              | 1-2                | 3-                                      |
| Physical and Health Education    | 3                  | 3-                                      |
| Counseling                       | 1                  | -                                       |
| Compulsory courses <sup>2</sup>  | 47-51 <sup>3</sup> |   |
| Optional specialization courses  | 10 <sup>4</sup>    |   |
| Applied optional courses         |                    |   |
| Total                            | 75 <sup>5</sup>    |   |

Finnish-speaking school was established. At the beginning, it was only a secondary school for boys; twenty years later it was expanded to girls. It was perhaps one of the first Finnish-speaking schools for women in all of Finland. Also the first teachers' training school was founded in Jyväskylä.

“Why Jyväskylä and not Turku or Helsinki or elsewhere?”—I asked. Answer: “Maybe because in this part of the country there were not many Swedish people. Or, maybe because during those times, the father of elementary education in Finland, Uno Cygnaeus, lived here.”

## Success in PISA and Beyond Starts at Elementary School and Even Before

After a snowstorm, the day was calm and clear on March 28, 2008. As I was walking to the next school, I was thinking that the school success of children at the age of 15 really begins in elementary school and, even before, at preschool and in the home.

At the school, *Jyväskylän normaalikoulu 1 to 6 Alakoulu*,<sup>21</sup> an elementary school founded in 1866,<sup>22</sup> everything started as usual at 8:00 a.m. This school is very famous for many reasons, and the fact that it is a training school for class or elementary teachers at the University of Jyväskylä is actually reason enough. But we will discover other reasons together in the following paragraphs. At the time of my visit, this school housed 380 school students and 32 teachers, plus 30 student teachers at a time, with a total of 300 during the school year.

The school was new and sparkling with impressive, functional architecture: spacious, modern, naturally lighted, and colorful. The library, located at the center of the main hall, was large and wrapped in a huge, glassed semicircular wall that was three stories high. I could not have missed it, even if I had wanted to. It felt like the heart of the school.

Markus, a class teacher and assistant principal at times, was my host. (In 2012, he would become the *rehtori*.) We walked through the school before we sat down to talk. We visited the library, the ultramodern science laboratory, the woodworking place for children 9 years old and up, the textiles room, and the art studio. Nothing was out of place. There was even a performing arts room for the little children with costumes and a mini-theater-like stage.

About 1 hour before noon, all the teachers were asked to convene at the teachers' lounge—which turned out to be a beautiful five-star hotel-like parlor. When I arrived, teachers were singing the “Happy Birthday” tune for a colleague. They sang it beautifully, so nicely, that I asked them to sing it again so I could video-record

<sup>21</sup> <https://www.norssi.jyu.fi/alakoulu> (September 14, 2012).

<sup>22</sup> <https://www.norssi.jyu.fi/esittely-ja-yhteystiedot/info-1/university-of-jyvaeskylae-teacher-training-school-normaalikoulu> (September 14, 2012).

the celebration. And they did! I shared cake and coffee with them in a very cordial ambience.

Pedagogically, this school is arranged so the same teacher can teach the elementary students for 6 years. Markus is one of those teachers. Over time, students and teachers develop a close relationship. Students in Finland address their teachers by their first names. So, the students in this class called him “Markus” all the time; “Markus this” and “Markus that”!

Markus was also very cordial with all of the 25 pupils. He never instructed them in a monologue or theoretically. Since the room was very large, Markus and the children easily wandered around. The classroom’s physical and technological environment was unbeatable. There were many gadgets: two overhead projectors, one digital camera projector with two serial ports, a computer, an LED projector, a white digital boards, microscopes, wall clocks, school and play materials, maps, etc. (In 2008, it was a teacher training school that looked ahead of its time; by 2012, other schools all around Finland looked like this one.)

In the middle of a mathematics class, Markus utilized two things, an overhead projector and a wall clock. He was teaching distances, locations, and alternative routes with a local, homemade map on the white digital boards. Later he taught abstract thinking using the wall clock.

Markus never stood still at the same spot. Sometimes he was in the middle of the classroom, at other times in the back, and still others next to the desks of the most restless children. Children would follow him or come to him with notes, questions, or projects. There was noise, but it was constructive noise. Most of the children were wearing socks but no shoes, as if they were at home.

Markus was also an instructor-professor for the two young student teachers in his class. The two of them, also shoeless, came and went as they pleased. They helped, talked to children, and supervised children’s projects, such as a small greenhouse in a corner. Markus’ classroom had two rooms. There was the classroom proper, and Markus’ office attached at the back of the room. His office was small but comfortable and full of ICT gadgets, a printer, and other materials. He had a panoramic view of the classroom through a large window.

One of the students was a very restless boy. Markus paid more attention to him. He needed it. The boy was fidgety and slow to respond; it was hard for him to concentrate, and he was pestering a little girl in front of him, but Markus was on top of the situation. Since the boy did not come to Markus, he stood by the boy’s desk, overlooking his work and behavior. Markus was watching carefully, encouraged him calmly but firmly, and let him continue.

I visited several classrooms, including the music studio. I never observed a classroom session with absolute silence or order. Rather, there was spontaneous interaction between teachers and students with mutual respect.

“How different is this school from other schools in Finland?”—I asked. Markus replied:

From the point of view of the students, nothing; from the point of view of teachers, it’s different because it’s a training school for teachers. Teachers at this school, like me, have to take care of pupils but also student teachers. We have to monitor and guide them. Thus,

we work a little longer than a typical schoolteacher, between 24 and 25 hours a week. Our salaries are slightly higher, since we are also affiliated with the university.

The last session before lunch was a geography class taught by Pirkka, a student teacher. Markus and I stayed for the entire session. At the end of the session, the students stood up and prayed for a few seconds. I asked Markus about the meaning of his and the children's words, and he told me it was a thankful prayer for gifts and lunch, soon to be eaten, granted by God. As soon as they finished, the children stampeded to the lunchroom. Markus and the student teacher talked for about 15 min. Markus, with professor-like gestures and opinions, made suggestions to Pirkka.

I returned to this marvelous school later that same year, in September. This time my host was Sari, the principal. Sari had been a class teacher since 1985 and had been at Jyväskylä since 1995, with the last 9 years as principal. Following my research protocol, I asked Sari for her opinion on Finland's success story. She told me:

Equality. Children have the same opportunities regardless where they live. Teachers are highly trained. Furthermore, the teaching profession is highly respected by society, and previously, it was even more respected. Teachers are very proud of their profession. Students are active learners. Teaching is student centered. Finland is a very homogeneous society and we take special care of children with special needs.

Then we talked about the policy at the school and in Finland for dealing with children with difficulties or behavioral problems. To answer my question, Sari grabbed a small poster printed by OPH. The poster had a cartoon image of a child climbing imaginary stairs step by step. The title of the poster was: "I take my responsibility." The six steps were titled as follows: (1) Ok, I've done wrong; (2) I understand I did something wrong; (3) I apologize; (4) I have to do something nice for you; (5) I promise not to do this again; and (6) I accept my responsibility. The poster is displayed in all the classrooms.

## The First *lukio* in Finland

The last school I visited in March 2008 was an extraordinary school, the first senior high school or upper secondary school in Finland.

Jorma, who was near retirement, was the proud principal of this school, *Jyväskylän Lyseon Lukio* (JLL). The history of JLL is the history of Finland. This school "lit the light of Finnish culture."<sup>23</sup>

When Finland was part of the Russian Empire and its official language was Swedish, one of the topmost requirements for national awareness was to educate a Finnish-speaking academic class of society.<sup>24</sup>

And so, JLL was founded in 1858, as the first Finnish-speaking school; and 2008 was the year of the school's 150th anniversary. Before JLL, Finnish people were not

<sup>23</sup> <http://www.peda.net/veraja/jkllukiokoulutus/lyseonlukio/esittely/english> (August 6, 2012).

<sup>24</sup> <http://www.peda.net/veraja/jkllukiokoulutus/lyseonlukio/esittely/english> (August 6, 2012).

able to receive a school education in their own vernacular language and had to study in either Swedish or Latin. According to Jorma, there were no Finnish-speaking schools because people in the south of Finland were not interested.

The village of Jyväskylä was established in 1837, and by the end of 1838 it had a population of 189 people.<sup>25</sup> By 1858, it had grown to about 500 inhabitants. JLL and other lower secondary level schools admitted students from a very widespread area.

JLL started as an experimental school for boys and remained as such until 1973 when responsibility for the state school was transferred to the municipal authorities in the context of the national school reform of the 1970s. Since then, the school has been coeducational. Today, 64% of its students are women. JLL has 640 students, most of whom follow the national curriculum.

JLL is not only a historic site but also a high-performing school as well. The students beginning their upper secondary education at JLL in the 2008–2009 school year entered with an average GPA from lower secondary of 8.85.

In Jorma's words: "We have very motivated students. Their test results are excellent. Students and teachers challenge each other."

The internationally known architect Alvar Aalto was a student at JLL from 1908 to 1916, and this is a source of pride for the school and Jyväskylä.

The contemporary flavor of Alvar Aalto's architecture is in sharp contrast to the "Tudor-Moorish" style of the school's main building often referred to as the chateau. The school's *rehtori* stressed: "In 1902, when this building was opened, the school looked like a palace in the middle of the small town, surrounded by small dwellings." A palace; this was the importance attached to education by a nation-state yet to be born.

Jorma continued: "Imagine a huge building, painted bright yellow, standing out from the intense dark blue ceiling typical of Jyväskylä's nights. That was the image 100 years ago."

It seemed to me that Jorma unfolded before my eyes a contrasting landscape like a Van Gogh painting. Even today, in a city of 130,000 inhabitants, surrounded by hundreds of new and old buildings, the school grounds look wonderful. I can only imagine how spectacular they must have been more than 100 years ago. Today the building is located at the top of a street that runs up a small hillside, and the old now-out-of-service train station is at the other end of the street. Standing right outside the school's main door, I closed my eyes and tried to picture the scene 106 years ago.

The yellow facade is no longer bright. Perhaps the previous bright yellow was a tribute to the daily life vocation of Jyväskylä at that time, as suggested by the name of this village, which means "place or village where corn is traded."

Before leaving the school, I toured the premises, from the small but impressive library, with many incunabular books, filled with Finland's intimate secrets, to the long and beautiful corridors, adorned with old, well-preserved furniture. The school houses a small museum that features the history of the school, of Jyväskylä and Finland. The museum, located in the school's basement, displays collections of shirts,

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<sup>25</sup> [http://www3.jkl.fi/historia/short/1837\\_1880.shtml](http://www3.jkl.fi/historia/short/1837_1880.shtml) (June 11, 2012).



sweaters, and badges, some of them dating back to 1858. Jorma called my attention to some old photographs of the school from the early part of the twentieth century. At that time, there was a parking lot by the main building—the same parking lot as today. A hundred years ago, the patio was full of horses—today, the horsepower is still there, but in cars.

## Northern Finland, the Arctic Circle, and *Toranki Koulu*

Finland is more typically Finnish in the northern and central regions than in the south, where the Crown and well-to-do Swedish society, together with the official life organized around the Swedish language, kept native Finns out of elitist education for centuries. Therefore, a trip to the Arctic Circle lands and beyond was particularly appropriate. After a brief stop in Rovaniemi, the home of Santa Claus, I began my visit in Kuusamo, a beautiful winter town, where I stayed in an old-looking but modernly dressed cottage owned by the assistant principal of a lower secondary school that I would soon be visiting.

The Finns have a unique and cozy relationship with nature and forests. Many Finnish people own a summer cottage, often as small and rustic as it can get. Rich and poor (although there is no extreme poverty in Finland) own a cottage, humble in modern services, but complete with the typical sauna. People who live in modern houses and apartments in big towns or cities during the week, find seclusion on weekends or during summers in simple dwellings, surrounded by forests and near the sea or a lake.

At the height of this close relationship with nature is the *Juhannus* (Saint John) festivity. It is on the longest day of the year (summer solstice), and the celebration is known as *Juhannusyö!* The Finnish celebrate daylight on the shortest night of the year, with barbecue, salads, sausages, fish—fresh, fried, and smoked—plus deserts and lots of wine, beer, and vodka. This tribute to daylight is in response to the burden of the long dark days of winter.

The further north, the more extreme the seasons, and the less westernized the Finnish people are. In Lapland, people become attached to the land and nature. Some Lappish people are owners of land and forests but would never think of them as a means to become wealthy in monetary terms. Land is not something that can be traded for money. Being close to the forest is a way to enjoy life. This reminded me of a conversation I had with five youngsters from a media studies magnet lukio in Helsinki. To my question about reasons for success, one of the students said: “Our society isn’t interested in accumulating things.”

I write these thoughts inside a cozy cottage owned by my host, Jaana, and located in Oulu, one of Finland’s five regions. The *mökki* (cottage) is 20 years old and is right next to a beautiful frozen lake (*järvi*) or lagoon (*lampi*) known as *Petäjälampi*, named after the beautiful and leafy pine trees in the area.

Regardless of the relatively small local population of 17,000 inhabitants, the educational services offered by the *kunta* (municipality) are excellent. Judging by

the quality of teachers, facilities, equipment, and materials, you could not tell if the school was in a rural area or in the middle of Helsinki. This is central to education in Finland: Opportunities are equal or equalized for all, no matter where you live.

Students in the village of Kuusamo are culturally attached to the area. They hang out with friends and practice snow sports. Similar to other Finnish youngsters, they spend little time doing homework (OECD 2007b, p. 91–193). When I asked young people between 13 and 16 years of age how much time they spent on homework, the answer from the majority was a half hour a day, within a range of between 15 min and an hour.

On the day of my visit in Kuusamo, at 11:30 a.m., I was standing at the main entrance to *Toranki Periskoulu*,<sup>26</sup> one of the three lower secondary schools in this municipality.

On the outside, the school is an example of modern Finnish architecture: straight, simple, and delicate lines, lots of wood, and very functional. It is actually a combination of styles but in essence reflects Alvar Aalto's architecture. On the inside, the school looks new, and the walls, floors, and ceilings are brimming with a festival of colors. As most schools in Finland, this one is clean and tidy. The class size is small, ranging from 13 to 22 students between 12 and 16 years old.

*Toranki Periskoulu* has around 300 students of whom just over 20 are provided with special education for severe problems. And there are 24 full-time teachers in the school. One of these teachers, when asked about the reasons behind Finnish success in school education, said:

Schooling is for everyone, with the same type of school, the same education system and the same lessons. There is, however, special support for students with minimal to severe learning difficulties. Teachers are highly trained and students in general are highly motivated.

Jaana, my host, elaborated: "Each individual has the opportunity to take his/her learning as far as he/she wishes."

After completing their lower secondary education, half of the students from this school go to academically oriented upper secondary schools and the other half to those vocationally oriented. And some of them enroll in courses in both systems.

In Finland, there are more students in vocational (professional) schools than in regular upper secondary schools, but they include adults. Of a total of 393,660 upper secondary students (including both regular and vocational) in 2009, 281,572 (72%) were enrolled in vocational schools, and this latter proportion was 21 points higher than the level in 2000 (Statistics Finland 2011, p. 383). However, as pointed out by Professor Välijärvi for a total cohort of 15–16 years of age going to upper secondary school, around 52–54% go to *lukio* (academic) schools whereas around 45% attend vocational schools.

Jaana, two history teachers, and Maarit Rossi, the *rehtori* from a lower secondary school in Kirkkonummi, initiated a lively discussion on the historical reasons behind the high performance of Finnish schoolchildren. The next five paragraphs

<sup>26</sup> <http://www.kuusamo.fi/Resource.phx/sivut/sivut-kuusamo/toranginkoulu/english/index.htm?template=print> (June 11, 2012).

are based on this discussion, plus Kirby's book on Finnish history, some material provided by one of the teachers, and biographical plus Internet sources.

In 1866, authorities of the autonomous Grand Duchy of Finland, annexed to the tsarist Russian Empire, ordered a national law requiring the establishment of at least one Finnish-speaking elementary school in each village, town, and city, large or small. Before this, since the seventeenth century, schools had been organized under the auspices of the Lutheran Church. Persons seeking marriage or their first communion had to be able to read and write before the corresponding religious ceremony. One of the interviewed teachers said that because one of his ancestors did not know how to read, he had to learn the Bible by heart.

The grassroots establishment of Finnish schools was initiated as a reaction to the Swedish elitist education in Helsinki and Turku.

In 1919, after Independence (1917) and the civil war between the "reds" and "whites" (1918–1921), the newly born republic issued the Finnish Constitution. At the same time, the government decreed that schooling would be extended to all social classes. Stahlberg, the first president, took this mandate very seriously. Stahlberg was of Swedish descent, but totally Finnish. He thought education should be available to all people and endeavored to stabilize the country from the fights between all ranks from the right and the left. Before Stahlberg's arrival (1919–1921), a rightist Senate (representing the "whites" who won the civil war) ruled the country without a president. Mannerheim, a Finnish military leader who headed the "whites" and was the leader of the Finnish army during World War II, did not take political responsibility and ruled under the parliamentary government.

Those were difficult years in which the nation was completely divided between two extreme ideologies. In the end, the parliament of "whites" annihilated the "reds" by prison or death. At that time, there was an attempt by conservative "whites" to turn Finland into a monarchy with a king imported from Germany. Attempts never became reality. And although Mannerheim was not president, he became the real ruler by the parliament's decision. The national presidency was established in 1919 by constitutional mandate, but the Constitution gave the people all of the power through the national parliament.

Upon Stahlberg's arrival as president, with the support of the government, the following measures were taken to stabilize the difficult situation: (1) amnesty for all "reds" who were still in prison, (2) distribution of land to rural people, and (3) education for all. This was the beginning of twentieth-century Finnish education. Nearly a century later, Finland absolutely shines in the area of education.

## ***Aurora School***

I arrived in time and on time at the Kauniainen train station on the 4th of September, 2008. There, I met again with Martti Hellström, the principal of *Aurora Koulu*.<sup>27</sup>

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<sup>27</sup> [http://www.kolumbus.fi/auroran.koulu/englanti/index\\_eng.html](http://www.kolumbus.fi/auroran.koulu/englanti/index_eng.html) (April 9, 2009).

*Aurora* was founded in 1957 as a public neighborhood school. In 1987, the school reached its peak with 400 students. It is an elementary school, with the first six grades, plus grade 0 for 6-year-old preschoolers. *Aurora* is a different school in which contact between teachers and students is noticeable.

My first questions for Martti were: What makes *Aurora* different? And how the school is organized?

We have 319 students, organized in 15 groups, led by 40 adults. There are three special education classes, plus two more groups for aggressive children, although there is one really aggressive student treated in a hospital school. In the special classes there are six children with one teacher and one assistant teacher. (I visited one of these groups temporarily housed in the school library. During the class, children were interacting freely and individually with the two teachers. Two of the children were lying down on the floor and reading; another child was working on a desktop computer; two more were talking to the teachers). We have something new in Finland and Espoo (*Aurora's* municipality). At *Aurora* the time schedule for the school day allows for a 75-minute recess, so that children can engage in hobbies, music or the arts. In addition, children have afternoon clubs, most of them free of charge. This is an experiment to find out if it is really wise to keep children at school all day long.

A year later, in 2009, I had the opportunity to ask Martti if there were any answers to this experiment, and he said: “The experiment continues. My opinion is that there is more benefit to the pedagogical well-being of the children than to their learning. It is also a good idea to grant this opportunity to families.”

Returning to our conversation in 2008, Martti explained:

We have a five-person leadership group: the principal, assistant principal and three teachers elected annually by the teachers themselves. The group supports the principal in decision-making. In addition, we are organized in four teams: one to serve grades 0 to 2; another for a group of seven-year-old children with difficulties, and two groups dealing with grades 3-4 and 5-6. The school staff, including myself, meets once a month, and teachers once a week. *Aurora* has a school curriculum that we developed in 2005. Our curriculum has one hour more in modern languages and mathematics than the Espoo curriculum.

“How does teaching and learning happen on a daily basis in *Aurora*?”—I asked, and Martti replied:

We develop the basic skills of all children so that no child is left behind. We love children by helping them find and reach their own dreams. One thing we do at *Aurora* in this regard is organizing a “Rock ‘n’ Roll Band.” We also promote an arts program so that teachers and students rehearse and perform together. We assess children beginning in grade 0. If there are difficulties, we have a school psychologist. We also have a group called “Blue Bears Group,” in which the teacher can work with one child at a time. There are eight children in this group. They are separated from the rest (for 10 lessons a week) in a special class so we can meet their special needs; here, they get peace and support. And the results are: learning and pride in their work. So that by the time they go to middle or lower secondary school, they will be in regular classes. Children have the right to special support, so we place them in smaller classes. This solution gives more opportunities to children who have difficulties. We also put on theater productions, and we are very proud of them. We’ve been doing it for 19 years. For example, we have performed “Ronja,”<sup>28</sup> a play about a bandit’s daughter. Summing it up, we integrate children into the arts, and help build connections between pupils and teachers.

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<sup>28</sup> Written by Swedish author Astrid Lindgren.

“What do you do to promote cooperation between teachers and parents?”—I asked.

Parents come to school and we have a very active school webpage, with a blog that I’ve developed. Many parents communicate with me through this blog. We have a school board with five parents and two representatives of the school staff, one of them being the principal. The board is informed about the curriculum and the budget. Most of the time the board accepts what the principal suggests. This type of board is mandatory for all schools in Espoo. We also have a children’s parliament with one boy and one girl per class. Our parents’ association donates 1,000 euros to the parliament, and the children decide how to spend this money. Once a month they decide what they want for lunch. They also discuss the behavior of teachers, and for instance, ask teachers not to yell. And they talk about activities for special celebrations. The principal and one teacher participate in the parliament as a secretariat. In Finland political elections are held in October; we schedule school parliament elections to coincide.

*Aurora* is a school where the atmosphere is pleasant, friendly, and tight-knit; it is “in the air” as Howard Gardner would put it. Teachers and the principal treat each other with respect and collegiality. Most of the staff is very stable with little turnover.

Martti is a leader in Finnish education. He helps education authorities provide professional training for teachers and principals on the topics of learning and leadership.

There is a new idea in leadership for learning. Leadership for principals means promoting energy and strength but also lightening the burden on teachers to make their tasks easier. For example, my role as *rehtori* is not to control but to help teachers find their own way of teaching so that they enjoy their work and their work with pupils.

“And for teachers?”—I asked.

Leadership for teachers consists of supporting students so they find their own way, with some autonomy and some freedom. Children will do their work by doing more things. Teachers should help students find their own dreams. This is the real meaning of the word *opetus* [education]. In this school we include everyone. For instance, the person who cleans the school has a hobby: painting. Well, we organized a special event to display his paintings. We enjoy and share everyone’s talent. Our task is to help everyone to find his or her way.

Uma is an elementary class teacher and also a special education teacher at *Aurora*. She has a group of seven children with learning difficulties in mathematics, Finnish, and English. In theory—Uma says—these children can perform at very high levels, but they need strong support.

Uma received her training in another small but historic place, with lots of art and music, called *Savonlinna*.<sup>29</sup> She has taught at *Aurora* for 25 years. At first, she did not want to become a teacher, but instead a singer or musician. “And then?”—I asked.

Well, after awhile I said it might be good to try teaching. I started teaching and I liked it. In addition, what I was teaching was my passion: music. I still practice music as a hobby. My grandmother was a teacher, but it was my mother, who was not a teacher, who always told

<sup>29</sup> Internationally known for its summer opera festival; see [http://www.operafestival.fi/In\\_English/Front\\_page.iw3](http://www.operafestival.fi/In_English/Front_page.iw3) (June 12, 2012).

me that I would make a very good teacher. I am truly happy as a teacher; I enjoy teaching this challenging group.

I asked Uma, “What is the secret to teaching these children how to learn?”

Openness to learning. When they realize they are slower in learning, they close their minds, and, for example, don’t do their homework. The first thing I do is to calm them. Once they are calmed, they open up to learning. I do it very gently and politely, nicely. Then, when they make mistakes, instead of closing themselves off, they open up. These are children with low self-esteem. So my goal is to make them think they’re okay. These children do not have severe learning difficulties, but rather, they are slow learners, and therefore, they have problems with skills and attitudes. For example, with regard to attitudes, they say, “I don’t need or have to read all my life because it’s difficult and school is boring, I have to come to school but I don’t like it.” I don’t force them, but rather guide them toward a better attitude. When this occurs, many positive things happen.

“How do you open up their minds?”

With lots of patience, and by treating them in a pleasant and calm manner. I’m not their friend, but their teacher. I don’t get angry, but I’m a guide and a leader. I give them my affection, and yet I am strict: “you must behave well; you must do your homework; and you must be kind to others.” In many instances they behave in different ways. When they are in large groups they behave very quietly, but when sitting in a small group they become very noisy and restless. It is important that they show their emotions and their inner personality. I intervene to correct, but I let them show their emotions because if I do this, then new strong connections arise that facilitate learning. This is what they think: “If something is important to me, then I would like to learn about it.” The same theory applies to children in regular classes; what changes is the level or degree of intensity. But since regular children have generally had good learning experiences, they don’t need smaller groups or special support.

“Would you elaborate more about your daily work?”

My daily work is to develop learning skills in my pupils. I start with basics in math and language, and try to instill a strong sense of self-esteem in my students and the belief that life is wonderful even though there are and will be difficult times, and that the skills and knowledge learned at school will help them to cope with them.

“How is your interaction with parents?”—I asked. Her answer:

At the start of the school year I invite them to come so we can meet. We talk in the child’s presence, about lessons, books, schedules and then specific things that I should know (wake-up time, hobbies, siblings, eating habits of both the child and family, homework time, TV time and habits, video games, sleeping habits). I talk to parents about the importance of good sleeping habits, a timetable for tasks, a schedule of events. I write this up and share with parents, they read my notes, and we exchange emails and phone calls. In exchange I offer to contact them as soon as any problems or difficulties arise, or when I need their help. I don’t usually pay visits to their homes, and I don’t think that is a habit among Finnish teachers, although some teachers do. Some parents tell me their children go to bed at 10:30 p.m. If that’s the case, I tell them that’s not good (Uma has children between 8 and 10 years of age). But the most important thing about all this is to open up communication with parents, so they’ll express their opinions and attitudes toward the school. When parents have a negative attitude toward the school, their children will have a negative attitude toward the school.

Aurora is an extraordinary school, so I decided to return two more times, in 2009 and 2012.

In October 2009, I began my visit, observing teachers discussing a new policy for confronting bullying or mobbing, based on a model developed by a researcher at the University of Turku.<sup>30</sup> Basically, the model consists of two methods for confronting this problem. One is very gentle and implies approaching the individuals involved and expressing empathy by saying things like, "we're very worried about you and the student who is being bothered." In the other method, the language used is more interventionist, firm, and emphatic: "Don't do it!" "Stop right now!" Most teachers use the gentle method, which requires a written record of what happens with each occurrence, and determining whether the matter will be resolved on its own, or if intervention will be required; whether it is a severe case or not; if action or intervention by a work team or work group is necessary; how to discuss the matter with the parents involved; how long the team's intervention will be required; and how to involve other students who were "bystanders" in supporting the victim, instead of encouraging bullying behavior.

Teachers and parents used to resolve this type of problem on their own. Now, it is a matter of teamwork and defining strategies. At any rate, it seems the working group dedicated to studying this topic at *Aurora* decided to adopt the "worry" philosophy, which signifies "waking up" students' sense of responsibility. This focus is based on the idea that if students are not accused of bullying, it is more likely that they will change their behavior. The strategy is, therefore, to ask the students doing the bullying what they would do to resolve the problem and, in this way, attempt to involve them without accusing them. The students are asked to write out their proposals. If there are many students involved in bullying, there is a conversation with each one of them separately, and each one will be required to write out his/her solution. Then, everyone is brought together in a type of conference during which each will present his/her proposal to the group.

In order to present the new policy, the teachers' group decided to bring all the students together and talk to them about the new measures. This strategic decision on the part of the school was made by the teachers, since they felt statistics indicate that children are increasingly mocking other children, and it is necessary for schools to take a proactive approach.

At the end of this morning discussion session, the teachers addressed the situation during the lunch hour, specifically looking at ways to reduce the noise level and create a more pleasant atmosphere. As part of the solution, a traffic light system was installed to monitor the noise level.

During my first interview with Martti in 2009, we discussed the educational philosophy in schools. He told me:

We don't identify ourselves within the religion of social constructivism. This is because social constructivism is associated with the construction of a strong information structure. We are more focused on emotions, on motivation, and on direct contact between children and teachers. The religion we subscribe to is all about caring for children.

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<sup>30</sup> Professor Christina Salmivalli, who works in the KiVa program, which is currently financed by the Ministry of Education. <http://www.kivakoulu.fi/extranet/content/view/56/171/> (June 13, 2012).

According to Martti, there is no such thing as a typical school in Finland. And a school system is good for managing information but not so good in emotional or motivational aspects.

The *Aurora* school implements a focus known as “creative learning.” I asked for an explanation, and this was the answer:

Students need to learn about the world. But each one of them must ask themselves: “What do I want?” and “Who am I?” The arts can be helpful in this process. For 20 years, we’ve used our art project in this way. Art education involves more than only lectures in a classroom, but also the interconnection of topics covered by the teachers. This is why we have a 75-minute break in the middle of the day, so that art happens in the life of the school. Creative learning is aesthetic integration in schools. We want our children to like being here. The entire school is involved in a theater production in which 200 persons are participating in all types of activities. Not long ago, a student who graduated from our school—she’s 21 years old now—told me that her participation in our theater productions changed her life. She had been the victim of bullying, but never told anyone. Her idea of herself changed from her experience in theater. If children receive something for themselves, they can give to others. So, they see happiness in the eyes of others and they say to themselves: “I have worth because someone else enjoys being with me.” Parents are so busy they don’t have time to give feedback to their kids. That’s why we need to do this in our schools. School is not just a place for learning results, like in exams. School is also a place for enjoying and sharing life, celebrating how fantastic life is and how great it is to be alive. Life in schools is not a path toward real life—it *is* real life! We need to prepare children for becoming adults, but at the same time place value on their years in school. This is actually what Dewey thought.

“How do we set the stage for this to happen?”—I asked.

By helping students to develop the skills they’ll need to realize their dreams. Of course, we work on mathematics, language and sciences, and everything else, but there’s something extra in *Aurora*: children can realize their dreams, like playing in a rock band, for example. It’s a combination: dreams plus hard work. Dreams are an important source of energy. Leadership is helping you find your dream. Students should feel that the principal and the teachers help them achieve their dreams. We should also be concerned about the future. What you do now should be connected to what your future will be. Children are changing in ways that we don’t know or understand. We have to accept that children and young people learn in informal contexts; schools will lose their power. When you ask today’s children, they say that what they learn, they don’t learn in school. When do the most important things in schools happen? Not when teachers are teaching lessons, but rather when they stop and help children resolve a problem, when they help them to concentrate, when instead of teaching, they become concerned about kids. The children’s answers regarding what they learn outside of school opened my eyes, helping me to realize the importance of the informal activities that take place in schools, such as the opportunity for a teacher and student to talk about a problem. It’s very important for children to have the opportunity to talk about themselves—“who am I?” and “what do I want?” After that, they can concentrate. When students are at school, if they think “I can be here, I’m accepted, I get help, I’m not the victim of bullying, and we’re not always in a hurry,” then their development will be enhanced. School is life, like I said. It’s not the path to life—life is here, too.

“What’s different about school education in Finland?”—I asked.

There’s a new concept in Finland: pedagogical well being. Not only learning is important, but also feelings about learning. It’s not only important to learn well, but to enjoy learning and enjoy life. We need to have a clear idea of what to do with our lives. It’s not enough



to obtain excellent academic results; we must also have energy for life. Life is much more than high-level results.

My next question was, “Is it possible to teach and to learn to be more intelligent?” “Intelligence is good, but wisdom is better, because value is inscribed in wisdom. And this is the direction I’m looking—that children find their place in society with wisdom.”

At the end of our conversation, Martti concluded with a series of short phrases than can serve as mottos:

- Do things better.
- Do better things.
- Do things in new ways.

Martti had to leave for a meeting with the municipal authorities, but I was able to chat with the mathematics teacher. The first thing she told me was: “Here, all the parents think math is important.” I didn’t miss the opportunity to ask: “What does it take to learn math?” Her answer:

Motivation, attitude and willingness to work, to handle and resolve problems on your own. From the teacher’s point of view, what’s needed is assistance, special lessons, concrete use of materials (cubes, weights, scales for weighing and scales for measuring, dice, games, cards with numbers). It’s also necessary to practice. It’s necessary to practice how to resolve problems, how to find what the problem is, how to translate a story problem into a math problem. The most important of all is to work toward children becoming interested in math, and to achieve this.

“How can students’ interest be captured?” I asked, and she responded:

Teachers must prepare their teaching method. We must be always demonstrating new ways, using support materials and using games; in this way, one can observe how the unknown becomes something known. We need to have the courage to think; but it seems that parents are not helping children to think.

“And how can you help children in preschool and elementary school to think?” I interrupted.

With the help of didactic material. By dividing the topic into units and tasks, making it necessary for them to use their own brains, to think. For example, with puzzles, Sudoku, classification of objects, geometric figures, etc. In pre-elementary or preschool, the curriculum must be oriented toward play.

When Martti returned, he talked to me about teachers’ influence on education and high performance:

Since the 1870s, teaching was a job for women. At the same time, a nationalist sentiment emerged in Finland, against Russia and later against the Soviet Union. Women were instrumental in this process, as the administrators of social change. Women who are teachers come from the middle class, not from the working class. They can be compared with professions such as lawyers, doctors, and administrators. They are independent thinkers.

Now, in 2012, the *Aurora* school looks just as active as before. There are currently 330 students and 40 adults, of whom 24 are teachers. However, it has become more modernized, and one of the collective projects is filmmaking, in the greatest tradition of the big screen.

### According to Martti:

The whole school is taking part in making art, we are making movies now: Aurora Productions. It is not only lessons. We are also creating joy for parents and small siblings. We are building a feeling of coherence in the whole school. We like to do things with children not only for academic performance, but also to enjoy life and to learn through different forms of arts. We value the growing personality; not only brains, but hearts too. We still do the school play for Christmas involving 200 pupils and have done so since 1989. But now in the spring we produce a movie, which is easier than the play. As per teaching and learning, we started since the early 1990s with two teachers in every classroom; many schools do it now. Better to have a large class with two teachers than a smaller class with one. Furthermore, we see better results if there is one male teacher and one female, since there are boys and girls in the same class. In this school we do things together, because we live together, and we care about each other. We not only teach. Children get pedagogical love; they need adult support in their studying. Without stigmatizing, there is a lot of integration.

Apart from having more ICT gadgets than 3 years ago, including white digital boards, and camera projectors, the school looks the same, although it is beginning to show some wear and tear. There are plans for rebuilding the school in a couple of years. "I shall be back, then," I told Martti; he smiled back.

## Aurinkolahti Koulu

On September 5, 2008, I arrived at this great modern school. I was so impressed that I returned in 2009 and 2012.

The *rehtori's* secretary greeted me. She spoke to me in Spanish (my mother tongue) and is also fluent in three other foreign languages. After a few minutes, I met the principal and assistant principal of *Aurinkolahti Koulu* (AK). And very quickly I learned that AK is a magnet school, and technology is the magnet.

AK has 650 students from preschool (grade 0) through lower secondary (grade 9). Special education is strong in this school, with 19 classes. There are 45 full-time teachers, 8 part-time teachers, and 10 assistant teachers, with the latter having 1 year of training. AK's curriculum requires more school hours and more technology than the standard Helsinki curriculum. In lower secondary education, grades 7–9, AK has two tracks with two different curricula: *tekno* and *logos*.

According to Pirjo, the assistant principal and teacher, AK is a partially selective school. Only students wishing to enter the technological modality in grade 7 must take an exam prior to admission. There are four groups in grade 7, and one of them is for these applicants. The other three groups are open to neighborhood children without academic testing. In any case, each of the four groups has a certain focus: one in ICTs, two in workshops, and one in science. In subjects like mathematics and languages, children are mixed.

The school seeks ways to enhance learning through technology. To that end, AK has organized several PLCs with these points of focus: (1) thinking skills based on the educational philosophy of Reuven Feuerstein ("Instrumental enrichment")<sup>31</sup> for

<sup>31</sup> <http://www.icelp.org/asp/main.asp>; also see: [http://education.jhu.edu/newhorizons/future/creating\\_the\\_future/crfut\\_feuerstein.cfm](http://education.jhu.edu/newhorizons/future/creating_the_future/crfut_feuerstein.cfm) (June 11, 2012).

developing critical thinking and independent learning; (2) technology in school life; (3) ICTs and media; (4) multicultural life in schools; (5) unified and comprehensive schooling; and (6) active citizenship school.

*Aurinkolahti*<sup>32</sup> became, in 2008, a magnet school in technology and cognitive skills under the cognitive modifiability theories that define intelligence as something that can be learned and taught.

Technology means: “techno”=art and “logos”=study. So, at AK, there is a *tekno* curriculum for pupils who want to learn by doing and a *logos* curriculum for students who prefer theoretical-based learning.<sup>33</sup> The *tekno* curriculum emphasizes the following: language (communicative and cognitive skills) and handicrafts (product design, technical drawing, industrial design, multimedia).<sup>34</sup>

The emphasis in technology is different. The purpose is to utilize technological means or inputs in areas such as the woodworking and metal shops, home economics, physics, and the arts. To this end, there are four types of teachers at AK: elementary or class, subject, special education, and ICT teachers.

AK works closely with other schools and with technological centers throughout Finland in order to be on top of solutions and research. The school is organized to develop and find new ways to apply technology to learning, such as teaching foreign languages with new technologies.

I asked Leena, the school principal, about the school’s approach to learning. She responded:

We have to teach children starting at the beginning. Through self-monitoring, we offer them clues of what to do, how to learn. And since children haven’t developed social skills, we have to teach them that too. For example, we teach them how to study through the help of counselors, tutors and vocational guidance counselors for the older ones; so we teach them basic skills in studying and in technology, such as self-monitoring and progressive research for finding information and analyzing it, and how to do homework. In all of this, we support them through hobbies and extracurricular activities that we call clubs. Children can have many problems, such as poor behavior, a lack of concentration, bad language and a lack of respect for others. But there are also positive characteristics. Their brain architecture is changing, and they have the ability to carry out a number of activities at the time, with the use of computers, networks and mobile media. Here, we think that “how to learn” is more important than “what to learn.” In the end children learn to construct knowledge together with their classmates. This is possible because we have a peaceful atmosphere with minimal social problems. Our challenge is to use all one’s faculties to learn, step by step.

At AK, “thinking skills” are actively taught through two programs: “bright start” (BS) and “instrumental enrichment” (IE). These are programs that are promoted commercially, and one of them, IE, comes from Israel, based on the ideas of Reuven Feuerstein. These programs rely on the use of many educational materials, and difficulties arise because of schools’ budget restrictions.

AK concentrates on thinking skills and technology. Consequently, there is a specific PLC of teachers organized to study and suggest new ways to bring these two goals into daily schoolwork.

<sup>32</sup> <http://www.hel.fi/hki/auripk/fi/In+English> (June 11, 2012).

<sup>33</sup> <http://www.auripk.edu.hel.fi/> (April 21, 2009).

<sup>34</sup> <http://www.auripk.edu.hel.fi/> (April 21, 2009).

There is a leadership group at AK comprising the principal, two assistant principals, and the leader from each PLC. The group has been professionalized with financial help from Helsinki. Since many activities in the leadership group and PLCs take place during school hours, assistant teachers are hired temporarily.

Minna, a teacher, participates in a PLC that is responsible for learning and technology at AK. This PLC tries to find a link between technological gadgets and software, on the one hand, and physics, art, chemistry, workshops, etc. on the other.

As I was touring the school, in one of the hallways of the atrium, I met some students (around 10 years old) and a teacher working on a science, arts, and robotics project. They were building Lego bridges, architecturally designed and electromagnetically manipulated at a distance with a laptop computer.

According to Minna: “We try to obtain ideas, creative schemes, innovations and experiments for using technology in different fields of knowledge. Grades 7, 8 and 9 have their own technological subject class—and this is something new in Finland.”

For prospective students interested in the technology track, they have to take an admission exam focused on the following areas: problem solving, design, and computers.

“How are technology and art interlinked?”—I asked.

Technology in art means focusing on creativity. We work in groups to build ideas. Technology does not only imply the use of techniques, gadgets or tools. It is part of a learning process, of learning by doing. We need to develop plans and models based on things that are unknown to the learner. Students make their own decisions, make plans and innovate. We don't make plans for traditional projects or tools such as painting and pottery, but with unconventional materials like garbage, for instance. In addition, we seek cross-fertilization in subject areas like crafts and physics. In physics we would talk about the properties of materials, and in handicrafts we would use paper, glass and plastic to make a sculpture.

Minna graduated from the University of Art and Design in Helsinki. In 2008–2009, this university merged with two other universities, the Helsinki School of Economics and the Helsinki University of Technology, to create a new university, in 2010, named Aalto University<sup>35</sup> after the famous architect, Alvar Aalto.

## Mediation for Learning and Thinking Skills

Tanja, a 1993 graduate from the University of Helsinki, was an elementary teacher for grades 1 and 2, organized in a single group. As she said to me:

Multi-grade groups are very popular in Canada and the US. In my experience these are interesting and challenging arrangements. Regardless, I meet with each grade separately for four class-hours per week each. In this way I try to get to know them better. I gain information about their unique abilities. From this knowledge I plan the rest of my lessons and my personal contact with each student.

“Which textbooks do you use?”

<sup>35</sup> <http://www.aalto.fi/en/> (August 13, 2012).

Well, first we use the ABC alphabet book, which is an extension of Mikael Agricola's first ABC Finnish book or AAPINEN. Many Finnish adults treasure their AAPINEN book for years. AAPINEN is the first book we read and learned to read. I still keep mine. It's something symbolic and emotion-packed in Finland. It shows our willingness to learn. As for textbooks, class teachers in Finland are free to choose the textbooks we prefer.

“What kind of relationship do you have with parents?”

Right at the beginning, I ask the following: “What kind of a learner is or could be your child? How does your child learn?” I try to show them that children learn many things in life before they come to school for the first time. The question that all of us, as parents, most ask ourselves is: How does my child learn? Learning is on a continuum; we are constantly learning throughout our lives. If children learn to talk, walk and ride a bicycle, it's because of their own learning abilities. But even these abilities can be taught and learned. I have visited some of my pupils' homes, specifically when they need special care. I did this more at the beginning of my career as a special education teacher. I invite parents to open their home to me or come to meet me. It depends on each family. My perception is that in Finland, teachers and parents typically meet at school.

“What is the secret of a good school education or the secret to learning?” She said, “Human beings evolve by sharing. We need to build connections between children and adults. My secret is the way I connect with my young students: it's a kind of mediation between children and adult.”

One year later, I continued this conversation with Tanja. I visited her second-grade classroom. It was a classroom full of children. The two second-grade teachers had brought all the kids together for a session of manual activities. Although Tanja noticed I was there, she did not even say anything to me. When we were able to talk later, she explained:

Yes, I noticed when you entered the classroom, but at that moment, I was attending to the children. And it's very important for me to show them that nothing or no one is more important than the interaction taking place with them in moments like that one. They should know that the time I'm here with them is very important. It is in the smallest moments that they learn, enjoy and feel happy. And in this way, they like to learn. They learn something when they learn. It's a moment that requires concentration and persistence: to keep on trying. It's something associated with cooperating with the teacher. They should give themselves over to the idea of learning together. In the beginning, they don't know how to do a certain task—how to weave, for example—but they do it with you, we work at it, and practice, and in ten minutes, they've learned it. For children, learning something new isn't enjoyable. But just when they're ready to give up, the teacher rescues them by saying that she's right there with them in the learning process.

Tanja is the teacher the most connected to the BS approach, which actually originated in the USA. According to Tanja, the idea of these approaches is to develop children's cognitive functions. In the BS approach, these functions are developed by identifying things by names and order, and in the IE approach, through comparison and classification. The BS approach is more concrete, involving playing together, and discussing something like a cube, a cup, or an animal. In the IE approach, students work with a paper and pencil, doing something and then discussing it. During her discussions with students, Tanja does the “bridging” work of helping them use their own family, school, and social experiences to approach the topics, which are discussed from different points of view. One example might be cultural

differences in relation to food. The point is not who is right and who is wrong, but rather to listen to different viewpoints, and observe the same problem from different viewpoints. In Tanja's words: "When I started this work, I didn't expect anything to happen. But, over the years, I changed my way of thinking. Now I see the process and I offer feedback and support to the children. I work with them."

"How do you measure the results?" was my next question. "Through direct observation," she told me. "When I finally see that they can do certain things on their own."

"And children really become more intelligent with these approaches?" I asked. Tanja's response was the following:

Everyone has potential. The point is to increase this potential. In reality we don't help children enough. We produce children who don't learn because we don't teach them what they need. We don't give them enough. Their minds are difficult and thus they need an adult mediator, because they don't have any idea of what time and space are. In schools we have the instruments but not the time. Progress is slow. I tell the children's parents: "this is what I'm seeing—are you seeing it, too?" I can't be the children's mother, father or therapist. But children need an adult who is concerned enough about them, and this is possible in schools.

Nina, a teacher of several elementary grades, applies the IE approach. The first task, according to Nina, is to compare and classify objects and subjects with the help of IE materials. In the beginning, very simple things are used: closed eyes/open eyes and concepts as simple as the differences between a hospital and a church. However, when you have children with many difficulties that prevent them from grasping even these differences, the teachers use photographs or images. And the teacher's work is "bridging" between the different objects and subjects. Bridging is one of the main ideas behind IE. Nina explained that teachers "bridge" by using examples that help children find a connection with their own lives and the knowledge they bring to school. For example, if the topic is space, east–west orientation, teachers ask: "Where would you need this information? How would you use it?" Thus, according to Nina, the idea behind IE is that students discover ways to use skills and thinking. And gradually children learn basic concepts, acquire basic skills, and begin to use language in a precise manner. "Children learn—said Nina—by observing each other."

Nina offers one IE class per week to children in third grade who learn to see shapes by connecting points that are gradually more difficult to observe, until reaching the point of tridimensional shapes. They learn to make precise observations by carefully studying models. Children in the third grade use "dots" (points used to discover patterns); in fourth grade, they locate north, south, east, and west; in fifth grade, they classify and compare; and in sixth grade, they analyze.

According to Nina, there is a municipality in Finland, Heinola,<sup>36</sup> which is attempting to apply the IE approach throughout the entire jurisdiction.

In this school, all the children should complete the BS and IE approaches with one or two sessions a week. From preschool to second grade, the BS approach is used, and from third to sixth grade, the IE approach. The school is in a planning

<sup>36</sup> [http://www.heinola.fi/ENG/Services/Education\\_department/](http://www.heinola.fi/ENG/Services/Education_department/).

stage for seventh to ninth grades. The idea of these approaches is that through specific methods, children use their brains more and use their intelligence to activate and maximize their capacity and potential. “Are good results obtained?” I asked. Nina responded that the results have not actually been measured.

“Do teachers agree or like these approaches?” I asked, and she responded: “It depends. There is more acceptance among teachers in preschool to sixth grade. They see the approaches as something normal.” But subject teachers say they do not have time for these approaches, because they barely have enough hours to teach their subjects.

## Special Education in the Classroom

Tuuli teaches children in grades 3–9 in alternate sessions of 9 weeks each.

“By which criteria are children placed in special education groups?”—I asked.

For one of the following reasons:

- Behavior problems (in most cases).
- Lack of concentration.
- Health problems and therefore long absences from school.
- Psychiatric problems.
- Problems at home.
- In addition, I teach an ethics class for children with atheist parents.

“How do you change the attitudes of children with behavioral difficulties?”

I train them for total success. The children have a deep feeling that they are not “good” after a long history of failures. So, I lower the teaching and learning threshold to a level where they are comfortable. We also keep the group size small, between six and seven students.

“Do you succeed in changing their attitudes and behavior?”

Yes. The main thing is to change their mindsets from “I am a failure” to “I am successful.” We do not have to follow a great plan. They are undisciplined children. So, we have to approach them in ways in which they are familiar and feel at ease. We use computers, small-group work, and step-by-step vocabulary; first we ask them to write the words and then read them aloud. The most important thing is for them to know that there is an adult person who cares. They know that I will follow them even to their homes if they don’t do what they are supposed to do. In this way I keep close contact with parents. True, some parents aren’t very interested in their child’s education. If they don’t follow the school information provided by an ICT solution called Wilma, then I call them by phone. But most parents react positively one way or the other.

“Do you have bullying problems at AK?”

Yes, and this is one of the reasons we try to maintain smaller classes. We continually discuss the children’s behavior: What’s going on? What’s not going well? They can’t escape our supervision. Yes, bullying is a big problem in general, but not so severe at AK. The older the children, the bigger the problem. Bullying is connected to less visible problems. They are

not bullying just for the sake of bullying. Finally, not all children involved in bullying end up with me, since there are other teachers at the school working to resolve these difficulties.

“Is it more difficult to handle older than younger children in cases of bullying?”

It is more difficult to work in special education with younger children than with older children. Specifically, it is more difficult to get parents’ support. Parents’ instinct is to protect younger children. When we tell parents: “Your child is aggressive at school,” the answer is “My child? No way!” This makes the solution more difficult, from the very beginning. But I have to find a way. And over time I’ve learned to do so. I’ve learned how to reduce expectations and withdraw a bit, especially if the child is at the brink of explosion. At times like this, adults can be very important. I usually have an assistant teacher to help me with the younger children. I am never isolated.

AK is an extraordinary school in every way. It is new, modern, friendly, and architecturally amazing, like in Escher’s world with a huge agora or atrium and long up-and-down stairs, with many places for rendezvous and used for many purposes.

The school is majestic! AK is full of light and at the center of the several-story atrium. There is a huge lobby that sometimes serves as an auditorium, sometimes as a lunchroom and sometimes as a meeting place.

Preschool and lower elementary pupils are located in an adjacent building. Their classrooms are filled with options for learning through play. The climax of this visit was seeing a preschool classroom that was a round-shaped room with two large glass concave-shaped doors. The small room looked like a Miró painting with a sparkling, lighted ceiling.

AK is located in a relatively high social level neighborhood, but there are also residents with fewer resources. Social integration is not by accident. Residential integration is public policy: rich and poor, white and blue collar, national citizens and immigrants live in the same area, buildings, and neighborhoods, and they share and go to the same schools. Municipal development throughout Finland is planned so that subsidized dwellings are integrated into areas where there is also higher-status housing development. Social segregation is not allowed and schools reinforce this policy. You could say that all social policies walk in the same direction.

Therefore, children at AK might come from very well-to-do professional families or from African immigrant families, for instance. When children walk into a school, all social and national barriers disappear.

In 2012, the school looked very similar as in 2009 and in 2008. There were perhaps more digital camera projectors, more white digital boards, and new computer equipment. The teachers’ desks were a bit more equipped with devices aimed at giving them more independence and versatility. But in essence, I saw the same leadership, the same educational–technological intentions, and the same high-quality teaching staff. I have noticed more concern in schools as immigration increases, because teaching–learning becomes more challenging.



## Turku and an Idyllic Elementary School

On September 8, 2008, I visited *Kähärin Koulu*<sup>37</sup> (KK) for the second time. It was early in the morning and Kirsti, the principal of KK, and me were driving to school. On our way, we talked about the importance of daily school life; of guiding rather than pushing students; and of a fine balance between suggesting and imposing.

Despite the boost given to schools by Finnish society, there are many daily problems that must be confronted and resolved: human, operational, and financial problems. If situations are pedagogic, psychological, or behavioral, schools rely on a strong network of collaboration. All schools have access at their facilities, or through municipal authorities, to a team of psychologists, social workers, counselors, physicians, nurses, and psychiatrists to work with before problems become explosive. They prevent problems through: (1) communication among teachers; (2) cooperation between teachers and parents; (3) collaboration among specialists, local authorities, and schools; and (4) proposals for strategies to address difficult cases, i.e., depression, bullying, violence, apathy, slow learning, and dysfunctional families.

The 2011 amendment to the 2004 curriculum stresses the relevance of learning environments (physical, social, and mental). It emphasizes the role of schools in providing differentiated learning for diverse students. Children have different learning styles, different starting points, and different cultural backgrounds. Schools must now work to identify problems or barriers at an early stage for each child. Children are entitled to receive the necessary support from the time a problem is detected or apparent (Finnish National Board of Education 2012, p. 7).

Education in Finland is a *modus vivendi*. From here, one can understand the complex web of trust, obedience, respect, and cordiality among teachers and student in schools. As an educational expert from France once told me: “Going to a Finnish school is like visiting a fairy tale.”

KK serves 120 students in a neoclassic, Victorian, 90-year-old white and yellow building, and breathes a positive ethos everywhere. It is a small school in every way: students, teachers, and personnel. The principal is also the Swedish and English teacher. Nevertheless, the school is well resourced: gym, art studios, wood-working shop, teachers’ lounge, ICT gadgets, and plenty of light.

The school does not have a library, but there is a mobile library that visits the school every Friday. The school does not have a swimming pool, but teachers take children to the municipal swimming pool. Local providers hired by the municipality bring lunch to the school every day.

Each classroom displays its own personality; and each teacher has his or her “own” school in every classroom. This is autonomy. And even though education is the same for all, it is also different among schools. “How are schools autonomous?”—I asked Kirsti, and she replied: “In the way they teach; the methods they use; and the schedules. And even though we’re told that a constructivist

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<sup>37</sup> <http://blog.edu.turku.fi/kahari/koulu/> (June 11, 2012).

approach is the best, we have pedagogical freedom. We are free to decide how to evaluate students and to choose our textbooks.”

There was a nice, comfortable teachers’ lounge, and that’s where I interviewed Päivi. She is a young, part-time student counselor at the school, helping students who might need help.

“What does a student counselor do in Finland?”—I asked, and Päivi said: “We deal with students’ problems and problem students: behavioral situations, lack of motivation, bullying, depression, stress, anxiety and perfectionist attitudes.”

One could easily ask, *prima facie*: “What kind of problems could these well-to-do children have? After all, they come to a small, nicely resourced school, surrounded by excellent teachers, in an upscale community.” Well, that is not the whole story, according to Päivi, because their parents, who have a high socioeconomic status, expect a lot from them. “Last Friday,” Päivi said, “I ran into a crying seven-year-old boy. When I asked him what was wrong, he said: ‘I can’t fail.’”

“What is the best strategy with children to prevent behavioral problems?”: “The more the children are involved at school, and the more receptive the school is, the less the bullying. The more we tell students, ‘no, no, no, no, don’t do that, etc.,’ the more divided the school community will be.”

“What should be done with difficult bullying cases?”

We must involve the students and their families when bullying cases are severe. All parties must work to reach an agreement. Then, we follow up, and families meet again. Two years ago, I had a case of two children fighting all the time. I talked to them separately, and found out that one of them wanted to be friends with the other. So, I got them together. I asked them to tell each other what they had told me. They behaved well and were kind to each other. One month later we met again and they were friends. Sometimes I take risks, but sometimes problems are so big (as in the case of alcoholic parents) that they extend beyond the counselor’s reach. In these cases, parents need professional help. But in every case we need to develop a strategy to follow.

“What is your strategy?”—I asked.

First, the school becomes aware of the problem and gets information. Then we work to develop an understanding between the involved parties. We call the parents, and then we talk with the children again. If bullying persists, we call the parents again to attend a meeting with their child’s teacher. If the problem escalates, we call the police.

In my meeting with Kirsti, I had learned a little more about the school.

In this school—she said—teachers teach 24 hours a week. At other schools the teachers’ load may be different since it is negotiated with the principal. More hours a week means more income but also more work. Teachers at this school have agreed to 24 hours. On top of that we are paid three more hours a week for teachers’ meetings and contacting parents. We are not paid extra for the time required to prepare lessons, since that is considered part of the job.

Sanna, who, besides Finnish, speaks Swedish, English, German, and French, is a young class teacher who graduated in 2007 from the University of Turku. When she was in high school, Sanna wanted to study photography and acting. After a while, she decided to become a class teacher. She explained her teaching load: “We are hired for 27 hours per week. But I work many more hours. The hours in class are

the tip of the iceberg. I work much more here and at home in planning, preparation, teaching methods, project design and assessment.”

I asked her opinion about Finnish success in education. Sanna said: “We have a good attitude, respect our teaching work and take it seriously. We are passionate about teaching.”

And for Kirsi, another teacher, who wanted to become a gymnast, teaching was her dream as well and “still is.” Her teaching load is 21 hours in class, 3 in gymnastics, and 3 in contact and teamwork.

While Sanna takes a lot of work home with her, Kirsi does not. “What I have to do, I do here; I don’t take work home”—Kirsi said.

Kirsi is a middle-aged, active teacher in a colorful classroom filled with boys and girls. There are 17 children, first graders; half of them have taken off their shoes and are casually dressed, since none of the children in Finland use uniforms. Pupils sit, two by two, on binary desks with backpacks scattered next to their desks.

About Finland’s education success, Kirsi said: “I don’t know. It’s difficult for me to think that we’re the best. Maybe we do things differently. Here, we work hard and are committed. We think and plan everything in advance.”

Although the school building was being remodeled, it looked clean and tidy. I stopped briefly at the teachers’ lounge. Around 90 square feet in size, the lounge had a kitchenette, an ICT corner, and a *Kantele*. As an old building, the school had many nooks and stairs that led to classrooms, to dance, art, and music studios, and to a woodworking shop. The *rehtori*’s office was moderate in size and technologically well resourced. Classrooms were similar in size and color but different in décor and desk arrangements—teachers leave their imprints!

## Back in Helsinki

Helsinki is a city of 564,000 inhabitants, with a little more than 10% of Finland’s total population (5.3 million), although I should add that Helsinki’s greater metropolitan area has 1.25 million inhabitants.

The capital city is full of history and architecture. It is a capital of both owned and imported styles. Three major names are identified with Helsinki’s architectural and cultural beauty: Carl Ludwig Engel, Eliel Saarinen, and Alvar Aalto, who have all brought great gifts to the city and the country: a fascinating combination of neo-classical styles, Art Nouveau, and modern and functionalist buildings that share the skyline with Russian-influenced buildings, scattered here and there, but large and prominent. Thus, Helsinki is a fusion of styles, several histories, and more than one Europe: eastern, western, and northern.

Something fascinating about Helsinki is that it is both approachable and cosmopolitan. One can find and experience culture, science, and technology as in any major city, but there is also the exquisite, almost archaic simplicity of life characteristic of a small place. The museums are great, and the network of national libraries, all very accessible, house almost limitless collections with personalized service.

Finland is, indeed, a country full of culture. Libraries and their use are part of that culture.

I visited *Koillis-Helsingin Lukio*, known today (in 2013) as *Helsingin Medialukio* (HML)<sup>38</sup> in 2008. At that time, it was the newest upper secondary school in Helsinki and one of the largest. HML was established in 2004 on the premises of an older, lower secondary school that had closed. HML was born by merging three other high schools. It is a magnet school, and the magnet is media studies in areas such as moviemaking, radio, TV, writing, video imaging, photography, digital imaging, communications and influence, psychology of influence, world politics, TV anchoring, editing and publishing, programming and webpage design and development, media production, multimedia, and play or game culture, to name some of them.

Youngsters 16–20 years of age have their own personalized educational plans that may be taken between 2 and 4 years as happen in the other *lukio* schools. They can tailor-design their own paths.

During my 2008 visit to HML, I learned that lower secondary students could that year—for the first time in Finland—apply to upper secondary schools by Internet. The lower secondary GPA for students admitted at HML was 8.0 for those entering the school in 2008–2009.

Sari, who was a teacher of English and French, had not known what to study when she was in *lukio*, as it happens with many young Finns, but she knew that whatever she pursued had to be connected to the French language.

Leena was a biology and geography teacher, but she also taught French and English. She had not known either what she wanted to study after *lukio*, but thought it could be anything but teacher education: “There were enough teachers in the family, and they worked hard. But while I was studying biology, genetics, and geography, I thought, ‘I have to do something with my life.’ So, I enrolled in pedagogy at a *norssi* school.”

I met with five high school students around 18 years of age. One of them was blind. None of them wanted to become a teacher: “The teaching profession isn’t popular; there aren’t many job options as a teacher”—they all said.

I asked them about Finland’s education success. They said: “The education we receive at school reflects the type of learning that PISA tries to measure.”

The last response suggested a hypothesis that could be worth researching. A comparison with other international tests could be important. As we have seen before (please refer to Chap. 4, under the section “A glance at results from Finland’s performance in other international studies on learning”), Finland has not ranked as high in The International Association for the Evaluation of Educational Achievement (IEA) tests as it has in PISA tests. But the very recent results from the Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS) 2011 do shed some very interesting findings about Finnish education referred to in that section.

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<sup>38</sup> <http://www.hel.fi/hki/khl/fi/In+English> (June 13, 2012).

The premises at HML have been refurbished, although there were still remnants from the lower secondary school, like the home economics room not being in use in this *lukio* as home economics. The hallways were wide and long, and every so often, there was a technology corner for using computers or an area for resting, reading, or rendezvous.

The architectural style was not at the cutting edge, but the buildings looked very modern in terms of furniture, light, and ad hoc rooms. HML was very tidy and clean. Cleanliness and white-colored walls, ceilings, and floors made the school very attractive and inviting. Classrooms were also tidy and better resourced in technology, materials, and furniture than a typical school.

On the day of my visit, the school lunchroom was full of students and teachers. The menu for the day was: lasagna, thick vegetable soup, lettuce salad, cooked mushrooms, boiled carrots and green peas, salad dressings, diet crackers, butter, milk, sour milk, and plain water. In spite of the number of people having lunch, the place was sparkling.

The school had a large, well-lit, glassed library. On my way out, I saw six girls in one of the hallways, with their shoes kicked off, one after the other, all of them studying, reading, or working, minding their own business. And at the end of the hallway, there was a row of individual restrooms, one after the other. All of them impeccably clean.

Like other schools, this one is not free of vending machines for soft drinks, juice, and water. The school has a modern auditorium, a gymnasium, and a fitness and training room, with all kinds of devices, including a boxing bag.

## **Strömberg and Preschool Education**

*Strömberg koulu*<sup>39</sup> has approximately 200 students in elementary school grades 1–6, plus one preschool grade regulated by the Ministry of Social Affairs in coordination with the Ministry of Education. The preschool grade has a different curriculum. Strömberg has two principals, one for the elementary section and one for the preschool section; the two sections share the same premises. Ten years ago, the preschool was also regulated and run by the Ministry of Education.

At this school in 2008, 34 of the 200 students were Islamic, most of them born to a Finnish mother. There were 11 teachers, two of them special education teachers. There was also the administrative staff, and a psychologist, nurse, and social worker who each visited the school weekly.

Preschool education in Finland is for 6-year-olds. In 2009, the enrollment rate was 99.4%.<sup>40</sup> In 2000, a new law made preschool education free for pupils living 5 kilometers away from the school premises. The 2000 preschool curriculum<sup>41</sup> is

<sup>39</sup> <http://www.hel.fi/hki/str/fin/etusivu> (June 13, 2012).

<sup>40</sup> Data from the Finnish National Board of Education (OPH): [http://www.oph.fi/english/education/pre-primary\\_education](http://www.oph.fi/english/education/pre-primary_education) (June 13, 2012).

<sup>41</sup> [http://www.oph.fi/english/sources\\_of\\_information/core\\_curricula\\_and\\_qualification\\_requirements/pre-school\\_education](http://www.oph.fi/english/sources_of_information/core_curricula_and_qualification_requirements/pre-school_education) (June 13, 2012).

designed to develop students' individuality, learning habits, a sense of group in the context of recreational activities, and a positive attitude toward life.

Previously, comprehensive schools were in charge of preschool education; today, only a few of them are under the school umbrella, although I have visited several schools that include the two sections. According to the official data from OPH, 78%<sup>42</sup> (2009) of preschool enrollment is under the jurisdiction of child care, and the rest is administered together with *peruspetus* (basic) education. Kindergarten and preschool services are administered by the Ministry of Social Services and Health in child-care centers. However, the academic curriculum is under the OPH's authority.

Enrollment in kindergarten in Finland (2008) is 68.5% for 3-year-olds; 75.4% for 4-year-olds; and 78.9% for 5-year-olds; compared to 59.7, 80, and 91.8%, respectively, for the OECD average. Enrollment for children under 3 years of age is 28.6% for Finland versus 30.1% for the OECD average (OECD 2009b, p. 3). In general, parents pay for kindergarten services, but for families in need there is a governmental income-based subsidy. These are very low enrollment rates; however, many small children stay at home with their mothers or small groups of children are also taken care of by private families or a mother whose services are paid for by the municipalities.<sup>43</sup> Small rates or formal preschool does not mean, in the Finnish case, that infants are left on their own. A study of kindergarten education in Nordic countries by the OECD concluded that these services are very good because they are integrated and combined.

At the time of my first visit (2008), *Strömberg* had a small special education group of 10 children from grades 0–6 with severe disabilities. Each child was taken care of by one adult. Usually, however, there would be one tenure teacher and six assistants for the group.

The pedagogical philosophy behind the Finnish basic education curriculum is based on Freinet's proposals, although he is not mentioned specifically in the curriculum text. According to Päivi, the principal at *Strömberg*, Finnish schools are modeled completely after Célestine Freinet's philosophy which, translated into daily life at this school, consists of:

- Communication between children and adults.
- Everything is arranged around the children.
- Parents cooperate.
- In every classroom, there are two adults: a teacher and a counselor or assistant teacher.
- Students live in a school atmosphere in which they can speak their minds.
- Learning by doing.
- By doing something, you can understand it.
- Things are very specific.
- Many small-group workshops are based on "learning by doing."
- Shared classrooms.

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<sup>42</sup> [http://www.oph.fi/english/education/pre-primary\\_education](http://www.oph.fi/english/education/pre-primary_education) (June 13, 2012).

<sup>43</sup> Professor's Jouni Välijärvi's comment on an earlier draft of the book.

The teaching and learning is organized by topic ideas: water, earth, fire, and air, and during the 6 years, the topics are studied twice.

“For this type of school you require highly trained teachers, don’t you?”—I asked, and Päivi replied: “Yes, at this school we have teachers with two degrees: class teachers and subject teachers such as arts, biology, etc.”

According to Päivi, *Strömberg* has obtained high marks in random performance tests. It is important for *Strömberg* to show high results because “we’re different,” she said. Päivi is a fan of Freinet, and, thus, *Strömberg* is a great opportunity for professional development. Since *Strömberg* was established 8 years ago, Päivi has been involved.

As part of my current research protocol, I asked Päivi the reasons behind Finland’s success in education:

We get the best and the brightest from among many women teachers. There are few men in this profession because salaries are low. We don’t dub foreign movies or TV programs. So, children learn to read quicker. We have excellent libraries and read newspapers more than in any other culture.

“What makes *Strömberg* a successful school?”

Cooperation.

Learning by doing.

We are very open to both accepting visits and visiting other schools.

Parent involvement. We have a school “evening” program in which students come with their parents, who are in charge of coordinating activities such as workshops.

The social environment in the class changes when parents get to know each other, but also when they contribute with their own skills.

The school opens in the evenings twice a year. Teachers are responsible but parents do the teaching in these evening open sessions.

We have developed a culture in which children perform routine work—real work and not just schoolwork. For example, older children help with preschool children who have severe disabilities; they also assist in the cafeteria or are responsible for some library work, collecting used paper, or helping with flowers and animals in laboratories.

In the middle of my conversation with Päivi, Leila arrived. Leila is a class teacher who graduated from the University of Helsinki in 1990. Before becoming a teacher, she wanted to be a lawyer. After a while she decided the latter was not really for her and she started to study arts and crafts at the Open University. In 1978, she became a preschool teacher. For years, she was a principal at an elementary school about the same size as *Strömberg*. Around 2003, she decided to only teach. She teaches first and second grades.

When we talked about the reasons behind Finnish success, she said:

We have a curriculum process in which all teachers participate. We reflect upon the curriculum and adapt it to our own perspective; we have room for adaptation. I have visited other countries and see that teachers impose discipline in a strict manner, even though this only works in very limited cases. Therefore, they don’t connect with all the students. We also give time to all the students so they understand the tasks they must do. It is very important not to teach or learn in a hurry.

“I see that your classroom is connected to another by glassed windows and doors. Isn’t that distracting for everyone?”—I asked. Leila replied: “I don’t find it

distracting, but children do at first. However, after the 1st day, they get used to it. This arrangement helps teachers to work together if we choose.”

“How do you relate with parents?”

We connect through a notebook for passing messages, Internet, and meetings with all parents and on an individual basis. In January we hold meetings between each student, his/her parents, and me. We talk about what he/she has learned and what we will do in the future. This is common in primary schools. It is not common, however, for teachers to visit homes.

Kirsi is a class and biology teacher from Helsinki University, where she studied for 6 years. “How did you become a teacher?”—I asked.

I was always interested in everything related to nature. That led me to biology. I did not know what job to take. My mother was a teacher, so I said to myself, “perhaps teaching.” After *lukio* I applied for biology, teaching and medicine. Biology was my priority. I tried to enter medicine because my parents were insisting. In the end I decided in 1978 on biology and teaching at the same time. With the new teachers’ college program, this is not allowed.

During my visit to the premises, Kirsi was conducting a constructivist class in a large laboratory room. I asked her to give me an example of the way they use this approach. “Gladly,” she told me. She invited me to one area of the laboratory where there was a microscope and some white bond paper. I would summarize her explanation as follows:

If the aim was is to determine the composition and structure of a rock, mineral, seashell or any other similar object, a traditional teacher would show the composition of the object with a textbook or monograph on hand. He or she would give a theoretical presentation on minerals with a microscope, showing the object to the children, who would approach to look and confirm the elements highlighted by the teacher.

In a constructivist class, students can choose a topic from among a preestablished menu, to study at a given time. For this, the students and teacher need different work stations, equipment and materials in order for different students to work on several projects at the same time. For the example of a mineral, a constructivist teacher prepares a blank worksheet with two frames: one rectangular and one round. Children are asked to draw the object with the naked eye on the worksheet with the rectangle frame. Then, on the one with the round frame, they draw the same object but seen through the microscope. Children must take note of and explain the differences between the two drawings. The same applies for different topics—magnetism, for instance. The teacher provides all the tools and gadgets; children, after the teacher’s instruction and supervision, conduct and record their work and findings, step by step.

This was a class for first and second graders in an ad hoc, laboratory-like room. At the center of the room, there were three large tables, one after the other, to accommodate around eight children each plus the teacher. All around the room there were tables with lots of space and materials for working on different topics at a time. The room had two aquariums. There were shelves everywhere for books, notebooks, project portfolios, and materials.

The teacher gathered with the students around one of the large tables. After instructions, children carried on with their subjects and projects. The teachers then wandered from one area to the next, monitoring the children’s work. The children were shoeless and in every possible position: sitting, kneeling, walking, or standing by their teacher, trying to capture her attention and gently tapping on her shoulder.

*Strömberg* has been installed in an old factory building. It is located in a Helsinki suburb, and is surrounded by office buildings. The premises have been totally



refurbished to serve as an elementary school. *Strömberg* is completely clean and tidy; it shines in silence, light, colors, and simplicity.

As in many other schools, the main entrance is not clearly marked or guarded by security personnel. It is a two-story building with long corridors and a cozy environment in general.

The upper-story corridor is very long; classrooms are located side by side. At the end of the corridor, there is an intense light that shines over a blue section on a yellow floor. The corridor on the first floor is also long and well lit, flanked by classrooms, studios, and workshops. Here and there in both corridors, small children, alone or in small groups, work or read at chairs and desks. Classrooms are not real classrooms in the accepted sense. There are no individual student desks. Instead, rectangular tables that accommodate four or more children are scattered in classrooms or laboratories. At one end of the upper-story floor, there are two classrooms united by an open corridor. There are no limits in terms of space, material, furniture, and devices in this huge learning environment.

Children wandered in an open, relaxed, generous environment with permitting teachers and a constructivist approach.

The wood and textile workshops and the art studio were nice and tidy, as usual. Tools and materials were shelved or placed neatly in drawers, as if for an exhibition. I can say the same for the gymnasium, teachers' lounge, the small but well-resourced music room, and even the section for special education children with severe disabilities.

The music studio was my last stop, small in size, however big in instruments and technology. The music teacher was conducting a session for first graders (7 years old). The young teacher kept the restless children under control. The lesson was divided into three parts: dancing, singing, and listening. It was a back-and-forth interaction between the restless children and the calm but firm teacher. She threatened several times to blow a whistle to impose order. By magic, called Mozart's Requiem, the children succumbed to peace and quiet; most of them lying on the floor, some face down, others face up, and almost all with eyes closed. They listened quietly and eagerly responded to the appreciation questions posed by the teacher.

## A United School

The school I visited one particular morning in September 2008 was not a typical school. It was a united school, "*Yhtenäiskoulu*" (YNK),<sup>44</sup> including elementary, lower, and upper secondary sections. This is unusual in Finland. However, the school was not very large, with 460 students including 220 elementary students, 100 lower secondary students, and 140 upper secondary students.

Two teachers, Heidi, an English teacher, and Ritva, a mathematics teacher, greeted me and hosted me for the entire visit.

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<sup>44</sup> <http://www.hel.fi/hki/yhtenaisk/fi/In+English> (June 13, 2012).

According to Heidi, the school does not have the students with the highest GPAs in Finland (rather, 7.6 and 7.8 for lower secondary students applying to *lukio*), but the culture of trust and friendship is extraordinary.

YNK was established as a private school in 1956, and in 1962 it was moved to its present location. Then, in 1977, it became a comprehensive public school in Helsinki. Philosopher Touko Voutilainen founded the school to provide education for his children, stressing friendship and trust as the main cultural values. He became the school's first principal.

"What makes this school different?"—I asked. The answer from the two teachers was as follows:

This was the first school in Finland to divide the lower and upper secondary schools' annual cycle into five or six sections.<sup>45</sup> This is now common in Finland. It's not a magnet school since we believe in a well-rounded, holistic education. There is good ambience between teachers and parents.

At the time of my visit, there were 45 teachers, 34 of them full time. The school ambience or ethos appeared to be very friendly and open. The teachers' lounge looked a little cramped for space, given the number of teachers at peak times. Students also came and went as they pleased, making the room noisy and crowded at times.

In Finland, high school or upper secondary school (*lukio*) is not divided by grades such as 10, 11, and 12 or 1, 2, and 3. Instead, students can develop their own personalized study plans, dividing their studies into 2, 3, or 4 years. For this purpose, there is a strong system of counseling and support services at this school.

Figures 5.2, 5.3 and 5.4 in this chapter's Appendix indicate the curriculum course schedule for this school with a specialty in languages. This is a useful way of looking at a concrete curriculum consisting of both competences and contents, under Freinet's pedagogy and guided by freedom, flexibility, and constructivism.

Krista is assistant principal in charge of timetables, schedules, and substitute teachers. She has been a teacher in Flanders, so her experience is multicultural. To the long list of success factors that teachers throughout Finland have emphasized to me as being the most important ones, she added:

It is an education system with all sorts of programs and arrangements to take all children through the comprehensive school. Finland is a country with little immigration, so most of the people speak the same language. Finnish people are very ambitious but silent. They would not acknowledge their ambitious impulse openly, and they don't brag about it. Children are not divided by ability. In Flanders if students don't perform high enough, they are not promoted to the next grade or are channeled to less academic technical or vocational tracks at grades 7 and 10. Furthermore, in Flanders the technical or vocational education is seen as second class; in Finland this is not the case.

After talking with her students in a class for 17-year-olds, I would describe their profile in this way: They do not read a lot, no more than an hour per day; and they think the teaching profession is not as popular as law, business, economics, and medicine. Many students turn to teaching later on in life after they have married

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<sup>45</sup> Each period consists of 37 or 38 school days.

and settled down at work and with family. “Why are you so successful in school education?”—I asked. A few answers were:

- Helpful parents.
- Our ABC’s or AAPINEN.
- It is not that we are better but others are worse.

Päivi was a French language teacher. She wanted to be an actress or a journalist, but a 2-year trip to France changed her destiny. She also has a multicultural perspective in education.

If I do some comparing, the Finnish system has less variety in terms of school types. At the early stages, students in France go to more or less demanding schools. In Finland, however, there is only one system. There is also a strong group of special education teachers in Finland.

Architecturally, YNK is not an exceptional school but, environmentally, it is. The human interaction between teachers and student is open; school space is generous; and children wander at ease. Long, wide, well-lit, open corridors facilitate the movement and encounters of students—where they hang around, sit at round tables, and walk or talk in small groups. At the elementary section, classrooms are typical, i.e., all the necessary things without any luxuries.

In lower secondary classrooms, things are a little more sophisticated. For instance, at a history session, the classroom was divided in two sections. On one side, there was a library-like room, and on the other side, a more regular classroom with tables and chairs. There were all the ICT gadgets typical of a Finnish classroom.

As in all Finnish schools, the premises looked nice and neat. And the art studio, like those in other schools, was large, well-lit, and full of artists’ materials and ICT gadgets. On a large screen on a wall, students were looking at the famous Finnish painting *Aino Myth*<sup>46</sup> by Akseli Gallen-Kallela, depicting a scene from the *Kalvala*’s story.

Jackets, coats, and several motorcycle helmets were displayed near one of the entrances. Not everything was in place: Shoes, backpacks, and jackets from lower secondary children were scattered on the floor with no order at all, but were very colorful, bringing life into the brick walls.

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<sup>46</sup> [http://upload.wikimedia.org/wikipedia/commons/1/17/Gallen\\_Kallela\\_The\\_Aino\\_Triptych.jpg](http://upload.wikimedia.org/wikipedia/commons/1/17/Gallen_Kallela_The_Aino_Triptych.jpg) or [http://www.niksula.cs.hut.fi/%7Exyu/kale-gb/pics/gallen/aino\\_myth.jpg](http://www.niksula.cs.hut.fi/%7Exyu/kale-gb/pics/gallen/aino_myth.jpg)

## Appendix

| Elementary and Lower Secondary School      |       |    |    |     |     |     |     |     |     |
|--|-------|----|----|-----|-----|-----|-----|-----|-----|
| Common Subjects                            | Grade |    |    |     |     |     |     |     |     |
|  | 1     | 2  | 3  | 4   | 5   | 6   | 7   | 8   | 9   |
| Finnish Language                           | 7     | 6  | 5  | 5   | 5   | 5   | 3   | 3   | 3   |
| English (A1)                               | 1     | 2  | 2  | 2   | 2   | 2   | 2   | 3   | 3   |
| Swedish (B1)                               | -     | -  | -  | -   | -   | 1   | 2   | 2   | 2   |
| Mathematics                                | 3     | 3  | 4  | 4   | 5   | 5   | 3   | 3   | 3   |
| Nature Studies and Environment             | 2     | 2  | 3  | 3   | 3   | 3   | -   | -   | -   |
| Biology                                    | -     | -  | -  | -   | -   | -   | 1   | 1   | 1.5 |
| Geography                                  | -     | -  | -  | -   | -   | -   | 1   | 1   | 1.5 |
| Physics                                    | -     | -  | -  | -   | -   | -   | 1   | 0   | 2   |
| Chemistry                                  | -     | -  | -  | -   | -   | -   | 1   | 2   | -   |
| Religion/ Ethics Science and Moral Studies | 1     | 1  | 2  | 2   | 1   | 1   | 1   | 1   | 1   |
| Philosophy                                 | -     | -  | -  | -   | -   | -   | -   | -   | -   |
| History and Social Sciences                | -     | -  | -  | -   | 2   | 2   | 2   | 2   | 2   |
| Music                                      | 2     | 2  | 2  | 1   | 1   | 2   | 0,5 | 0,5 | -   |
| Visual Arts                                | 2     | 2  | 1  | 2   | 2   | 1   | 1   | 1   | -   |
| Home Economics                             | -     | -  | -  | -   | -   | -   | 3   | -   | -   |
| Crafts                                     | 1     | 1  | 2  | 2   | 2   | 2   | 3   | -   | -   |
| Education                                  | 2     | 2  | 3  | 3   | 3   | 3   | 2   | 2   | 2   |
| Counseling                                 |       |    |    |     |     |     | 0,5 | 0,5 | 1   |
|  | -     | -  | -  | -   | -   | -   | 3   | 8   | 8   |
| Total                                      | 21    | 21 | 24 | 24  | 26  | 27  | 30  | 30  | 30  |
|  |       |    |    | +1* | +2* | +2* |     |     |     |

**Fig. 5.2** Curriculum schedule. Comprehensive school. Grades 1–9. (Number of hours or sessions per week). (<http://ynk2.edu.hel.fi/e/en/> (April 26 2010))

**Fig. 5.3** Curriculum schedule. Upper secondary or high school. (Number of compulsory courses: 45–49, number of in-depth courses: at least 10, students may choose any number of optional courses, number of courses: 75 minimum). (<http://ynk2.edu.helsinki.fi/e/en/> (April 26 2010))

| Upper Secondary                  |                    |                  |                  |
|----------------------------------|--------------------|------------------|------------------|
| Common Subjects                  | Compulsory Courses | In-depth Courses | Optional Courses |
| Finnish Language and Literature  | 6                  | 3                | 4                |
| English (A1)                     | 6                  | 3                | 2                |
| French (A2*)                     | -                  | -                | -                |
| Sweden (B1)                      | 5                  | 2                | 2                |
| German (B2)                      | -                  | 8                | 1                |
| French (B2)                      | -                  | 8                | 1                |
| Spanish (B3**)                   | -                  | 3                | -                |
| Spanish for Tourism              | -                  | -                | 1                |
| Mathematics (long)               | 10                 | 5                | -                |
| Mathematics (short)              | 6                  | 3                | -                |
| Biology                          | 2                  | 4                | 1                |
| Geography                        | 2                  | 2                | -                |
| Physics                          | 1                  | 8                | -                |
| Chemistry                        | 1                  | 3                | 2                |
| Religion (Lutheran)              | 3                  | 2                | -                |
| Religion (Orthodox)              | 3                  | 2                | -                |
| Ethics Science and Moral Studies | 3                  | 2                | -                |
| Philosophy                       | 1                  | 2                | 2                |
| Psychology                       | -                  | 5                | -                |
| History and Social Sciences      | 5                  | 6                | -                |
| Music                            | 1-2                | 3                | 2                |
| Visual Arts                      | 1-2                | 5                | 2                |
| Drama and Theater                | -                  | 2                | -                |
| Crafts                           | -                  | -                | 1                |
| Physical Education               | 3                  | 3                | 3                |
| Computer Science                 | -                  | -                | 4                |
| Counseling                       | 1                  | -                | 1                |

| Language        | Grade       |         |         |         |         |         |         |         |         | High school level         |
|-----------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------------------------|
|                 | 1           | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       |                           |
| A1<br>(English) | 1<br>Course | 2<br>c. | 2<br>c. | 2<br>c. | 2<br>c. | 2<br>c. | 2<br>c. | 3<br>c. | 3<br>c. | 6 Comp. + 3<br>ID + 2 Op. |
| A2<br>(French)  | -           | -       | -       | 1<br>c. | 2<br>c. | 2<br>c. | 2<br>c. | 3<br>c. | 3<br>c. | 6 Comp. + 3<br>ID + 2 Op. |
| B1<br>(Swedish) | -           | -       | -       | -       | -       | 1<br>c. | 2<br>c. | 2<br>c. | 2<br>c. | 5 Comp. + 2<br>ID + 2 Op. |
| B2<br>(French)  | -           | -       | -       | -       | -       | -       | -       | 2<br>c. | 2<br>c. | 8 ID + 1 Op.              |
| B2<br>(German)  | -           | -       | -       | -       | -       | -       | -       | 2<br>c. | 2<br>c. | 8 ID + 1 Op.              |
| B2<br>(Spanish) | -           | -       | -       | -       | -       | -       | -       | 2<br>c. | 2<br>c. | 8 ID + 1 Op.              |

Fig. 5.4 Curriculum schedule. Special languages program. (One course is approximately 38 h of lesson time). (<http://ynk2.edu.hel.fi/e/en/> (April 26 2010))

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## Chapter 6

# Journeys into Finnish Schools: Lives and Thoughts of Teachers and Principals II

### Another Idyllic Elementary School Nestling in a Little Forest, Surrounded by a Larger Forest

*Metsola*<sup>1</sup> was the next school on the agenda on that cold but sunny morning in October 2009. According to Leena, the principal at *Metsola*, the school has a learning approach that is oriented toward the children. Something unusual, in addition to the school's architecture, is the student council composed of one boy and one girl from each group. The council meets every month, and the objective is for children to learn to listen, cooperate, make decisions, exchange opinions, and work together.

In Leena's words:

In the next council meeting there are three topics that will be discussed: (1) the purchase of textbooks, and in this case, I ask them "what would you like them to be like?" (2) recycling, or what can be done, since any environmental topic is important in the school's agenda; and (3) extracurricular activities on Saturdays.

This school, covered in wood, blends into a forest, which is protected by another forest of ancient trees often visited by the children during recess or school activities. In this idyllic place, the school's focus is on learning, behavior, a good environment, cordiality, and concentration. Consequently, adults stay close to the children, because "kids are already alone many hours of the day, with media or Internet," according to one of two teachers sitting in the principal's small office, located right next to a space that serves as a teachers' lounge.

From an architectural viewpoint, the school is charming. It is so amazing that the outer buildings are designed in the shape of a dragon, although you cannot really see it unless you study a scale model or photo. The design conceals the school's size and respects the forest environment. It is as if the school fades into a dense forest. You do not notice the school's contrasting colors, because they are combined in soft pastel tones, with pink blending into lavender, white, blue, and a shade of orange something like a cantaloupe. The location of the windows is strategic, with the sun illuminating the school in streaks and flashes that paint the floors and walls. The

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<sup>1</sup> <http://www.hel.fi/hki/metsola/fi/Etusivu> (June 14, 2012).

sensation is like being inside a marvelous impressionist painting. The classrooms are exquisite, organized around worktables instead of desks; some have pianos, drum sets, and other instruments, plus white digital boards. One finds everything in place, attentive children, open spaces, and long hallways in buildings composed of modules, with roofs that are double sloped or connected at the center in an orthogonal shape.

### ***Tikkurila: More Courses than Students***

This *lukio* is one of Finland's largest upper secondary schools with 1,123 students, of whom 90 belong to International Baccalaureate (IB). A staff of 65 full-time teachers, plus the principal and assistant principal, teach this student community. What is impressive about this school, in addition to having cutting-edge installations, is the number of courses offered, specifically 1,150 in all. This makes it a kind of university, with a matrix scheme of courses that resembles a honeycomb in which each student can adjust his/her school plan to his/her interests in a university career.

At *Tikkurila*,<sup>2</sup> students may focus on the media, cinematography, and languages studies: Swedish, English, French, Italian, German, Spanish, Latin, and Russian, with the latter taken at a different school with which a cooperative agreement has been reached.

According to the school principal, one of the main characteristics of Finnish education is that there are only public schools. This is practically true. Actually, there are private schools in Finland, but they are not independent. Private schools are financed 100% by the government and are thus required to follow an administration and operations scheme similar to that of public schools. But at most there are only 2–3% students enrolled in private or dependent elementary schools.<sup>3</sup>

The school's immense lobby is reminiscent of the Museum of Modern Art in New York City. A spiral staircase with glass banisters takes you up to the mezzanine where paintings are exhibited as a prelude to a long hallway. The lobby floor is sprinkled with images of persons of different nationalities on electronic monitors projected from the floor. The scene created by this grand lobby—with its spiral staircase, stupendous high ceilings covered with skylights, a cafeteria with round tables that extend to the periphery, a very functional, modern library with its bright red floors, the immense pillars painted in black, in contrast with the white walls and glass banisters—gives one the impression of entering an architectural landmark.

Despite the school's size and student population, there is an impressive sense of order that permeates everywhere, from the regular classrooms with their usual furnishings and the art studio, to classrooms designed for using information and communication technologies, and topped off with an imposing, modern multiuse auditorium. The teacher's lounge has a minimalist style, with modern furniture of simple

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<sup>2</sup> <http://www.edu.vantaa.fi/tilu/etusivu.html> (June 14, 2012).

<sup>3</sup> Comment made by Prof. Jouni Välijärvi on an earlier draft of the book.



lines and light colors. The school, in both educational and architectural terms, offers an educational alternative with an unbeatable academic trajectory.

Before walking out of the school, I paused for a few moments at a huge window looking out to the street. The school was surrounded by a picturesque residential area that combined houses of various tones and double-sloped roofs with pine trees and other trees with leaves that were beginning to transform their green tones into a fiesta of autumn colors.

## **I Never Ask Them “What’s Two Plus Two?”—Never**

The *Hösmärinpuiston Koulu* is so attractive that it has been featured in an Organisation for Economic Co-operation and Development (OECD) publication on exemplary school facilities around the world.<sup>4</sup> This unique school has absolutely splendid facilities for young children in early and preschool education and the first two grades of elementary school. Children with learning difficulties may continue at this school for an additional year.

Although it is a school for young children, these facilities—which the municipal government is very proud of—also serve the community as a place for cultural and social activities for adults.

Since this marvelous school provides services in early, preschool, and elementary education, the administrative scheme and relations with national as well as municipal authorities is a bit complex. Child care and early education services come under the jurisdiction of the Ministry of Social Affairs and Health (MSAH, its acronym in English).<sup>5</sup> Preschool and elementary school services correspond to the Ministry of Education (OMH, its acronym in Finnish)<sup>6</sup> and to the Finnish National Board of Education (OPH, its acronym in Finnish), depending on the case. However, if children in preschool or elementary education receive child care services at the school before or after school hours, then the responsible government entity is the MSAH. This explains why the school actually has two principals.

In an attempt to understand in more detail the way in which childcare services and preschool education operate, the topic deserves a digression. Therefore, I interviewed the person responsible for preschool education at the OPH, and I analyzed information available in the literature. Following is what I learned.

There are national guidelines for preschool education, and municipal authorities make decisions about how they are adopted on a case-by-case basis. Municipal authorities tend to follow most of these national guidelines and use them to develop their own guidelines for both preschool education and child care services.

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<sup>4</sup> <http://www.oecd.org/dataoecd/62/23/36931195.pdf> (June 14, 2012).

<sup>5</sup> <http://www.stm.fi/en/frontpage> (June 14, 2012).

<sup>6</sup> <http://www.minedu.fi/OPM/?lang=en> (June 14, 2012).

The national guidelines for early and preschool education<sup>7</sup> have been prepared by the National Research and Development Center for Welfare and Health, known in Finland by its acronym in Finnish, STAKES, which falls under the MSAH mentioned above. STAKES is currently part of a larger entity<sup>8</sup> that has been named the National Institute for Health and Welfare (THL, its acronym in Finnish). The THL is a center for research and development, for promoting welfare and health, for preventing diseases and social problems, and for developing social and health services.<sup>9</sup> The THL falls under the administrative umbrella of the MSAH.

There is a national curriculum prepared by the OPH that should be followed by schools and child care centers when services are offered to 6-year-olds. However, when the children of this age attend child care centers outside the schools, these centers must also follow the guidelines developed by STAKES or the new THL. Consequently, if the same entity offers the two services, both preschool and child care, it must follow two curricula. For this reason, OPH and THL work in a coordinated manner.

I asked Hely Parkkinen, who works at the OPH, if there is discussion around changes in preschool education for the future, and this was her response:

People aren't talking about changes at this educational level. Preschool education was completely reformed in the 2000–2001 school year, when it was determined that children would have the right to this level of education completely free of charge. From that point on, it was established in legislation that the preschool education curriculum should consist of 700 hours per year (four hours a day, or a maximum of five hours) during one year of education occurring prior to entering school. However, local authorities have the option of offering more than one year if they have resources additional to those provided by the national government. In the end parents are the ones who decide whether or not children attend preschool education. And while many parents think children of this age should be playing instead of going to school, most six-year-olds do attend preschool. Children's rights to no-cost transportation, school lunches and books (very few at this level) are extended to preschool-age children. In special cases, parents may bring their five-year-old children to preschool, meaning these children will attend two years of preschool education. However, in this case, children must be given a diagnostic assessment. If this local assessment determines that a child is ready for school, then he or she should attend preschool. And in the opposite scenario, some children may begin their school education at eight instead of seven years of age.

This is a system that requires the following: coordination among various national entities; cooperation between different levels of authorities (municipal and national); orientation toward children's needs, not the needs of schools, institutions, or organizations; a location near where children live; and an emphasis on play-oriented methods.

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<sup>7</sup> The curriculum for preschool education, as well as more information and materials on early and preschool education, may be consulted at: <http://www.stakes.fi/EN/Aiheet/childhoodandfamily/index.htm> (June 14, 2012).

<sup>8</sup> Interview with Hely Parkkinen on October 16, 2009 in the magnificent, reinaugurated OPH offices.

<sup>9</sup> [http://www.thl.fi/en\\_US/web/en](http://www.thl.fi/en_US/web/en) (June 14, 2012).

Preschool education, attended almost exclusively by 6-year-old children, is aimed more at socially preparing small children to go to school than at teaching specific topics in a formal manner. For example, the focus is not to teach these children to read and count, but to be ready to learn to read and count. Thus, generally speaking, teachers do not formally teach preschool children with paper, pencils, and books. However, some teachers do so, if the class is very advanced.

By law, the number of preschool children per teacher cannot surpass 13. If the number of students extends beyond this limit, additional staff must be provided and may come from the same school, nearby schools, or the municipality.

During my 2009 visit, Tilly, the English teacher, who was also the special education teacher, escorted my visit. She had a group of nine children. Even though this was a small group, an assistant teacher helped her 4 h a week.

Preschool and early elementary education is important for developing skills for learning or “skills for learning skills.” I asked Tilly her opinion in this regard:

One should study to learn more. One should work and gain knowledge. As a teacher, it is important to see that children are different—and to know that young children learn by playing. Much of mathematics is taught sitting on the floor. We should treat children as persons, get to know them, know what their needs and skills are, and work step by step, like in gymnastics. I never ask them “what’s 2 plus 2?” I show them by playing with objects in a way that allows them to distinguish units. In other words, I’m preparing them to be ready for more formal education. I’m preparing them for school. The first step with children is to capture their interest, and then give them feedback. This will spark their desire to participate in any and all educational activities. Something very important at the preschool level is to develop sociability—to learn to be in a group and make decisions in a group. All of this will help children develop self-esteem. And in our modern times this is especially important because families don’t have time to be together. Each member of the family is very busy with his or her own activities. This is why it’s more difficult for today’s children to be taught and to learn.

*Hösmärinpuisto* was built with local materials, proudly erected in a small neighborhood near the Espoo train station. After a 20-min walk from the train station, and taking a turn a few streets and crossing a major street intersection, the school appears in the distance at the top of a small hill. It is surrounded by green areas and a residential zone. Much of the construction is in wood, with walls and ceilings painted in colors, especially blue, and the building design allows light to enter from all directions. The walls and ceilings are not just painted, but are part of an architectural design that is beautiful and inviting. Every color, and every combination of colors, has been the focus of thought and aesthetic detail. Colors, wood, and design bring us this marvelous gift of harmony, art, and tranquility. Typical schools in Finland are not as new and ad hoc as this one, but plenty of them, if not most, are tidy, lighted, clean, and peaceful.

The hallways and classrooms are filled with modern equipment and furnishings with many playful themes and including spaces that simulate rooms in homes, such as kitchens, living rooms, and playrooms. Bathrooms have been adapted for children and are impeccable and more than adequate in number. The school has a large, impressive, and inviting central patio that I will attempt to describe later.

It was a pleasure to tour this school on two occasions, in 2009 and in 2012, especially with first a teacher and then the principal as my hosts and guides. This school is really a piece of natural and human-made art. An exquisite combination of wood and colors—highlighting blue, apricot, delicate tones of yellow and green, as well as the almond, mahogany, and ochre tones in the wood that can be found everywhere. Wood is intensely and abundantly combined with ingenious architecture that has both a modern and cozy effect. Even the white fireplace on the lower floor, in a multiuse room used primarily for manual arts, offers a feeling of comfort. This room is right next to an immense patio—together creating a scene belonging to a movie-like set. The combination of very high ceilings, with a charming, attractive patio, with walls made of large windows, with children working in an organized manner, with any noise absorbed by the wood or the immense space, and with semi-open hallways that allow a glimpse into the school's common areas, makes this school a fascinating place.

The school's patio is perhaps the most beautiful one I have seen around the world. The approximately 250-m<sup>2</sup> (820-ft<sup>2</sup>) patio is encapsulated in a two-story quadrilateral building. It is completely covered with maple-colored wood with one of the second floor walls painted in sky blue. The four double-high walls are covered with windows framed in wood and topped off with a cornice along the perimeter, sustained by long, slender, square columns that stretch 6 m (20 ft) high. The patio floor is covered mostly with wood and, in smaller areas, by cobblestone. The patio is asymmetrically divided by a small island surrounded by a low wall made of natural wood that can also serve as a bench for sitting on. The design within the island is simple but harmonious, with river stones forming two small paths that allow for access from one section to the next. Within one of the patio's two sections, the smaller one, there are plant beds with clumps of different types of plants and flowers, contained within short walls made of thick, natural wood and about 30 cm (1 ft) high. The other section of the patio has no other elements but the wooden floor. The asymmetry between the two sections reflects the entire site, because it offers two views and two settings for different uses. The view from the open section is not disappointing because the floor is covered from one end to the other with earth-toned wood that contrasts very nicely with the much lighter tones of the wood covering the walls. I did not have the opportunity to see the patio at night, but judging by the way light fixtures are placed at different heights along the walls, together with the small-stylized lampposts, one can only imagine the dream-like atmosphere created.

One can only admire every little corner and unique space created in this school—like the solid wood bridge that beautifully joins the two sides. The special furnishings, the colors of the fabric covering chairs and sofas, the shelves full of materials and games to help young children learn and socialize, the sizes and colors of tables and desks, the classrooms, the rooms for taking naps with even little bunk beds that fold up behind tiny doors, the miniature kitchens in the classrooms—all of these elements take the visitor as well as children and teachers to a world of fantasy.

This is a new school—a magical place in which the Finnish demonstrate the importance that society places on young children's education. But there is no doubt

that what is most attractive about *Hösmärinpuisto Koulu* is its human environment, its ethos.

Marjut, the school principal, welcomed me back in April 2012, with information and stories about the school and about learning environments. The findings from this research are reported in Chap. 7.

## That's How Far We Go

Ivalo is not as far away as where I would be going the following day, and it is a small village, but not as small as where I would be the next day. It is a village in the Inari municipality,<sup>10</sup> located in a region in northern Finland known as Lapland. My friends, principals of a lower secondary school in Kirkkonummi and a hospital school in Rovaniemi, accompanied me on parts of these visits in October 2009. In Ivalo, I visited a lower secondary school, *Ivalon ylästeen koulu*.<sup>11</sup> It was in the middle of an unexpected snowstorm that we arrived at this school for grades 7–9, and the option of an additional year.

Ilkka Roininen has been at this school for 27 years, with 13 of those years as the principal. Also, meeting with us was the principal of the *lukio* school located in another building only some meters away from the lower secondary school.

Because of my interest in learning more about the cultural and educational differences between northern, central, and southern Finland, I asked four principals of different schools about the differences between these small, mostly rural schools in communities that barely survive from winter tourism, and the schools in metropolitan areas such as Helsinki, Jyväskylä, Rovaniemi, Tampere, and Turku.

Generally speaking, rural or semi-rural schools are smaller. This school, located in Ivalo, has a lot of support from the municipal government. One of the principals of the two schools in Ivalo emphasized that this particular municipality has been fortunate to have good leaders who have made good decisions and have provided resources to the school. However, the other principal pointed out that the number of children in his school has diminished.

“And the curriculum—what’s different about it?” I asked. According to their responses, the difference is a curriculum in which support for special education is emphasized. There are three special education teachers here, and this is unusual for a school of this size, with only 208 students. The two local principals said that schools do not typically have the same amount of resources. This particular emphasis on special education here can be explained by something that happened 6 or 7 years ago, when social services took control of a very high number of special children, nearly 20, for such a small community. The municipal government reacted, and the solution was special education or special learning support in the school. An extra social worker was even hired to work closely with the families. “The decision,” said

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<sup>10</sup> <http://www.inari.fi/web/index.php?id=3> (June 14, 2012).

<sup>11</sup> <http://peda.net/veraja/ivalo/ya> (June 14, 2012).

one principal, “was to attend to each person on an individual basis.” And it is true: My assessment from everything I have seen is that Finland has an education and social system designed to attend to each child, and in a differentiated manner, as is currently required by the 2010–2011 curriculum reform.

Something different in Lapland is the teaching of the Sami language in its three dialects: Northern Sami, which is the most common, plus Inari Sami, and Skolt Sami (in the east). One of the two local school principals underscored: “Our municipality has four languages that we need to address. In addition, our students should study Swedish, plus a foreign language that is usually English.”

While the school is prepared to respond to students who ask that their education be provided in their native language, only five students have made such a request, and it has been Northern Sami in all five cases. However, students who study Finnish as their native language may opt to study Sami to fulfill the requirement for a foreign language, in addition to Swedish as their second required language. The school does everything possible to offer a course in Sami, even if only one student makes such a request. For example, there are students who wish to take history courses in Sami, and the school is prepared to offer this. “That’s how far we go,” one of the principals said. Still, everyone acknowledges that it is far from easy to find Sami teachers.

“What are the challenges in pedagogical terms?” I asked. The principal of the lower secondary (middle) school pointed out that his first observation would be that the motivation in the children in this region is not as high as in large cities. In his words: “For those who want to continue their studies and have more options available, they need to travel far from here. But in my opinion, that inclination is not a cultural characteristic of this rural population.”

Consequently, according to the principal, many students remain in the *lukio* school located nearby, or attend vocational schools, or, in some cases, extend their lower secondary education by attending the optional tenth grade. This last option can be attractive for young people who do not yet know what they want to do, or for those who are lagging behind. In the tenth grade, long-distance courses are offered, some through the use of videos. In some cases, young people opt to stay for tenth grade to become prepared for making good decisions for their *lukio* (high school) education.

In this exchange of ideas and concepts, one of the principals mentioned that most of Finland’s schools could be characterized as traditional in pedagogical terms.

My next question was whether it is more difficult to teach today’s children and more difficult for them to learn. One principal responded that today’s children do not have the same positive circumstances that children had in the 1980s. More students need special help, he said, and, thus, require special services. Children have changed, but so have the methods used. According to this principal, children are more individualistic now, and influence from friends can cause them stress.

“Is it your impression that there is more bullying in schools than there used to be?” was my next question.

Thirty years ago the role of teachers was to teach, to transmit knowledge. Today, only 50% of teachers’ time is spent on these activities, and the rest is spent on other things such

as addressing concerns around behavior, learning, how to teach, how to evaluate, how to learn, etc. This doesn't necessarily mean that the number of difficult or special cases has increased, but rather that we are now more actively involved in thinking through these problems. These matters are discussed openly, while previously they weren't discussed. Also, now we have more knowledge about these problems and issues. It's important that teachers are working in the same direction to resolve problems and make decisions. Now we have a system with open teacher's discussion regarding everything or nearly everything. After the discussion, decisions are made, and the ideal situation is that everyone follows the guidelines agreed upon. Still, in order for people to work together, consensus is needed.

In response to this last comment, one of the two local principals in the meeting said she had attempted to reach decisions by consensus, without being able to accomplish this in many cases. She said it was therefore often necessary to bring the discussion to a close with a decision from the top. The other principal commented, however, that the best situation is when the majority agrees on the path to follow.

"Do you work in teams (*tiimit*) or what is known in the literature as professional learning communities?"—I asked. They responded affirmatively but added that not in the theoretical way described in the literature. Ulla, the principal of the *lukio* school in Ivalo, commented that she rather supports the idea of teaching partners, when two teachers who teach the same subject work together to prepare their materials, the topics to be covered, and exams. She added, however, that two working groups were formed last year, one to review rules for operation and coexistence, and the other to study the issue of equity in the school. The truth is, she said, that these issues are not addressed in a theoretical manner in schools. Yes, there are teams, but it depends on each school and its leaders.

Then, the principal of this lower secondary school commented on a unique and positive agreement reached between the teachers' union and the municipal government. Previously, class teachers received additional wages for every extra hour worked. Now, since the economic conditions in this community are favorable, it has been agreed that class teachers may dedicate up to two paid extra hours per week in order to give additional attention to students, contact families, and so on. As a condition for receiving this payment, teachers must conduct detailed individual interviews with the students at least twice a year.

Ulla Hynönen has been the school principal for the Ivalon *lukio* or upper secondary school<sup>12</sup> for 8 years. This school, which has 125 students, is unique, not because of its location, but because, like the lower secondary school we have been talking about, it has children of Sami origin or interested in the Sami language. The number of students in a group is 18 on the average, ranging between 1 student (typically in Sami language courses) and 27 students, although the normal range mentioned in the school's website is between 17 and 27 students. However, what is particularly noteworthy about this school is that it is the only upper secondary school in the entire country that teaches the three dialects of the Sami language. Since the region survives on tourism, this small school also teaches English, German, French, and Russian, and it has its own biology courses aimed at understanding and living in harmony with the area's particular eco-biology. Another unusual characteristic is

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<sup>12</sup> <http://www.peda.net/veraja/ivalo/lukio/english> (June 14, 2012).

that it offers a specialized course on “good manners.” The courses offered at this upper secondary or high school are divided into required, advanced, and applied courses, with “good manners” falling under the last classification.

According to Ulla, this *lukio* school is pedagogically more oriented toward knowledge, because “we must provide students with the knowledge for entering higher education.”

This relates to an issue that I spoke about with an OPH official: that despite the success of Finland’s basic education, the country’s universities complain that young people arrive at their doors without the knowledge required for higher education.

I have noted—Ulla emphasized—that increasing numbers of students come to school with problems at home. There are times when it feels like young people seek an adult role model in their teachers. Actually, I think it’s very positive that students feel free to talk about their problems with teachers, who then refer them to the school nurse or psychologist.

Things are changing in Finland. One of these changes, since about 2007 or 2008, allows school principals the possibility, depending on the resources in each municipality, of granting small salary increases, of between 50 and 100 EUR per month, to teachers with more demanding jobs or outstanding performance. These increases are granted through a complicated mechanism of self-assessment and interviews with the school principal. When Ulla mentioned this topic, she said that municipal governments have encountered difficulties when attempting to define which teaching jobs were more demanding. For example, a demanding job is determined by not only the subject or course to be taught, but also whether there are support materials available in the school, the country, or the market for the particular subject or activity. Thus, in the Inari municipality, a set of seven or eight criteria have been established for granting the salary increases. This new policy has arisen from a global agreement between the State and the teachers’ union, but the way it is applied is different in each municipality. The municipal governments receive money from the State but also revenue from local taxes or contributions. Thus, the ways in which this policy is applied and the amount of these salary increases vary greatly, depending on the economic situation in each municipality.

Ulla’s school participated in the PISA tests in 2009 with only two students. It was a lot of work for such a small number of students. “Why only two?” Because they were the only *lukio* students with the age required for participating in the PISA rounds.

My tour of the lower secondary school confirmed to me that no matter what the location, rural or urban, far away or downtown, all the schools in Finland have the basics—and the basics are enough and, in general, are standardized, that is, high-caliber teachers, thoughtful pedagogies and curriculum, nice and lighted premises, national goal and minimum hours of study, and necessary information and communications technology (ICT).

This is not a lower secondary school with astonishing or modern facilities, and the interior colors and a snowstorm make it look darker than it would have been on a sunny day. The tour was a bit rushed, but we did not leave the school without



tasting the raw trout caught and prepared the day before by the school principal to be ready for the five of us.

We left the school at about 4:40 p.m. in the midst of heavy snowfall, and we started our journey to Saariselka, one of Finland's most beautiful winter areas and retreats.

That night, before falling asleep, I, of course, enjoyed a sauna, read a bit, and waited a few moments for the aurora borealis, but I was not that fortunate.

## The Most Remote School in Northern Finland

Around 10:00 in the morning on October 8, 2009, Asko (the principal at one of Finland's 28 hospital-schools) and I left for northern Lapland en route to Utsjoki,<sup>13</sup> the location of the school farthest north in all of Finland—and perhaps all of Europe: *Utsjokisuun Koulu*.<sup>14</sup> The physiognomy of the landscape in the north changes in terms of the type of trees, mountains, and hills. On the drive north, the only thing you see for miles and miles are beautiful pine forests with immense, blue lakes, and then suddenly, tundra—endless prairie with shrubs and stunted trees tucked into the gently interwoven hillsides that fade away to the distant horizon; an amazing, vast outstretch with sparse forests rising up above the silhouettes of interminable hills and small mountains.

*Utsjokisuun Koulu* is a zero to twelfth (all-through) grade school, or preschool through upper secondary school or *lukio*. Enrolled in the school are 62 students, of whom 46 are in preschool (grade 0) and *peruskoulu* (grades 1–9), and 16 are in *lukio*. There are 19 teachers including the principal and assistant principal. Only one of these 19 teachers works with students only in *lukio*, while the other high school or upper secondary teachers also teach in *peruskoulu*. The school facilities were built at different times. Some constructions date back to the 1920s, while the most modern building was constructed in 1977. According to those I interviewed, the school has been operating since the mid-eighteenth century.

In the municipality with the same name as this small village, there are 1,300 inhabitants and three schools in all: this one and two more, one with grades 1–6 in Nuorgam and another with grades 1–9 in Karigasniemi. There are only 16 students at the *lukio* level in the entire municipality. Some of these students live in the village with their families, but those who live farther away stay during the week in special boarding houses paid for by the municipal government. Approximately 500 people live in the small village of Utsjoki. The economy in this remote region of the world depends on tourism, border trade, wild salmon fishing, and livestock farming, with both cattle and reindeer.

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<sup>13</sup> <http://www.utsjoki.fi/en/home.php> (June 15, 2012).

<sup>14</sup> <http://www.utsjoki.fi/fi/palvelut/opetus-vapaa-aika-ja-kulttuuripalvelut/utsjokisuun-koulu/koulun-esittely.php> (June 15, 2012).

This school cooperates bilaterally with a small school on the other side of the border, 25 km away in Norway, in a small town called Sirma located in the Tana municipality. Sirma has only 50 inhabitants, and 13 of them are children in grades 1–10. The school is so small that the children in grades 1–4 have the same teacher all of the time. The exchange program with this school, taking place on Wednesdays and Thursdays, has been in operation officially for 3 years, but the nonofficial co-operation began a decade ago.

Children on both sides of the border speak Sami, in the Northern Sami dialect. Their families are of Sami origin, or this is true for at least one of their parents. Sami families in Utsjoki speak Finnish, but children have the opportunity to study Sami as a native or foreign language at school. The exchange between the two schools along the border was initiated because children on both sides have relatives, language, and cultural characteristics in common, bringing them together. From the schools' viewpoint, the exchange is a formal one. Children on both sides of the border receive instruction in the two schools. For example, music and gymnastics are taught in the Utsjoki school.

And children on both sides of the border use Finnish books translated into Sami. An important difference is that children in Norway begin elementary school at the age of 6.

“Is Norway’s education system very different from Finland’s?” I asked a teacher from Norway who participated in my interview. He told me that the Norwegian education system is less formal. For example, children are taught less grammar when they start school. The emphasis is on speaking first. “Teaching methods in Norway are more gentle and experimental, and less intense than in Finland,” he said. In addition, education goals in Norway are not as strict as in Finland, where such goals must be met during 189 class days.

Teachers in this school in Utsjoki work in teams, and meet every week, something typical throughout Finland.

“What languages do students learn here?” Finnish, Sami (native language), English as their first required foreign language beginning in third grade, and Swedish, also required starting in seventh grade.

Since the matter of vernacular and foreign languages is a bit complex, Arja, the school principal, took out a sheet of paper and started to outline the scheme that is applied similarly in all of Finland. The two following paragraphs reflect my understanding of her detailed explanation.

This topic is divided into two from the beginning: children whose native language is Sami and children whose native language is Finnish. I’ll begin with Sami children. During the 1st year of school, Sami children are required to study Sami and Finnish, with the additional option of Norwegian. In general, Sami children choose to study Norwegian because of the exchange program with Sirma. From this point on, these children can discontinue their study in Norwegian at any time. Their studies in Sami and/or Finnish, however, continue to grade 12. The teaching of English begins in third grade as a required subject and continues to grade 12. In seventh grade students should begin to study Swedish, as a required subject, continuing to grade 12. Beginning in eighth grade, students have the option in this particular school to also study one or two additional languages such as German, Russian, French, or Norwegian, and this option continues to grade 12. At the *lukio* level, students

may choose to study these additional languages as long as the requisite teachers are available, continuing throughout this entire level.

For children whose native language is Finnish, the story is not very different. From first grade on, students are required to study Finnish, and they have the option of taking additional courses in Sami or Norwegian at any time and discontinuing at any time. The rest of what the teacher explained for Sami-speaking children also applies here.

“What makes this school different from other schools in Finland?” I asked. Arja, who is also the head of education in the entire municipality, and also principal of the municipality’s other two schools, as well as a teacher, answered:

Even though we are so far away, teaching in this school is the same as in the rest of the country. Our teachers have the same profile, with the same education, most of them having graduated from universities in Oulu, Jyväskylä and Helsinki. Sami-speaking teachers have studied in universities in the northern part of the country. What is different in this school is the emphasis on the Sami culture, which we try to incorporate into all subject areas.

The school principal, several teachers, and I continued to talk a bit more about today’s children and the children in this region of Finland. The questions I asked to spark some debate were: “Is it true that children have changed? Is it true that today’s children are more difficult to teach and have a harder time learning?” Here are the answers I was given.

Maybe that’s the case in large cities, but here children can’t be out in the streets. There’s nowhere to go, at least at night, and even less so in the middle of winter. But in reality children’s problems come and go, and the number of children in special education goes up and down. Some years ago we had a lot of kids in special education, and now there are fewer. Fifteen years ago, the older kids were more aggressive (even breaking in through windows to steal computers), but the problems ended when we bought security cameras. Now, there are fewer aggressive kids. And as you can understand, the school here is not disconnected at all from the community.

“Where do the children go when they’ve finished here?”

First of all, not all of our students who complete basic education go on to the *lukio* level. Some go to Inari to continue their *lukio* studies there, and others go to vocational schools. We’ve followed their steps, and most do continue their studies. Global tendencies are found here, too. Our young people want to travel around the world, and we have exchange programs with schools in China, Thailand and New Zealand. Some ninth-grade students go to Rovaniemi.

I did not leave without taking the opportunity to look around and see the resources and facilities characterizing this particular school—more remote than any other could possibly be. I will state it simply. If I would have been taken to the main door of this school blindfolded, knowing nothing about the location or surroundings, and if I had been allowed to tour the entire school, I would have the same impression as in any other school located in any of Finland’s large cities. In terms of the amount and quality of resources, equipment, and facilities, it is the same in this school as in the typical urban Finnish school. It is true that the buildings are not as modern as those in new schools, but this is the case for most Finnish schools.

I started my tour of the school in the small but respectable teachers’ lounge/meeting room, where I conducted my interview with the principal and four or five other

teachers who took turns while fulfilling their teaching responsibilities. The room had a small kitchenette, a coffee maker, microwave oven, and half-size refrigerator. Next to this small room were the administrative offices with all their furnishings, copiers, and so on. From there we walked to the main lobby, which led to the rest of the school. The walls and ceiling of the lobby, about 70 m<sup>2</sup> (230 ft<sup>2</sup>) in size, were painted white, and so was the floor, but the latter was decorated with small squares of green and blue, giving it a sense of greater space. As in all Finnish schools, the lobby was sparkling clean, reflecting the splashes of light that entered through the windows and that radiated from the fluorescent lights suspended from the ceiling. On the walls were various paintings representing the children's work, as well as posters on different topics. Near this lobby was another smaller one, where the main door to the school opened. If you were standing in this lobby and looking toward the street through the main door, you would see a place to hang coats, jackets, hats, scarves, etc., on the wall to the left, bringing life to this place without concern for appearances.

There were backpacks everywhere, as well as shoes, boots, and tennis shoes, giving it a unique sense of purpose. It could not be better! But it was! Straight out of a fairy tale woven with pleasant surprises, a couple of girls, 7 or 8 years old, had chosen this place as a temporary refuge for studying and doing their homework. Sitting under an array of jackets and amidst a sea of backpacks and shoes, the two girls exchanged opinions and secrets from the books they were balancing between their legs and arms. They did not even notice that we were there; we just walked around them and moved along, so they could continue in their own unintended library.

Not far from there was the gymnasium, with all of the necessary elements such as basketball hoops plus bleachers on one side for spectators to watch the different activities that took place there.

After that, we passed through the library, which was packed with books that could also be borrowed by members of the community. Books were perfectly ordered by different categories on wooden shelves, and the librarian's desk was more impressive than those I have seen in universities—and this is in a village of 500 inhabitants.

From there we walked down a long hall leading to the various classrooms and laboratories. Like the rest of the school facilities or even more so, the hallway was squeaky clean. We passed through a doorway and entered a large classroom illuminated by a generous row of windows. There, five middle school students were demonstrating their culinary arts in an incredible home economics classroom, with drawers painted apricot and white, with double sinks, stoves, and refrigerator—and for the instructor, a chalkboard and desk with a built-in stovetop.

From there, we visited the classrooms, first those for the early elementary grades. Nothing was missing: there were student desks with drawers, placed asymmetrically according to the children's preferences; a simple desk for the teacher—but not without its camera projector—plus a small coat rack, a whiteboard, and a typical sink to wash hands. In another classroom, student desks were replaced with small tables, but even so, the chairs were wooden, and the teachers' desk was in the left corner together with a whiteboard and some small bookshelves for textbooks. The other

classrooms were similar, of moderate size for small groups, with diverse but similar classroom furniture, with modern-looking desks, tables, and chairs, mostly made of wood, and easy to move around. The classrooms were not identical, and they were not spectacular—they were, again, typical Finnish classrooms. Something that could not possibly be missing from this litany of classrooms was an ad hoc space for making music. Larger than the other classrooms and mid-sized in comparison to others I have seen in Finland and around the world, this musical space was so packed with instruments that it seemed small, with everything squeezed together. I saw several students: one at the piano, another with a guitar, a couple others wandering about or talking with the teacher, and one more, a singer of modern Sami music. In fact, one of the teachers gave me a CD this student had recorded together with her sister under her father's direction.

After passing through hallways and classrooms, then more classrooms, some with science and media labs, we reached a small cubicle for about five students, with all kinds of equipment, from flat-screen computers, white digital boards and Canon projectors, to camera and overhead projectors. There was a broadband connection to the Internet, and a student in his last year of *lukio* school was totally concentrated on an advanced long-distance physics course. The school offered this alternative for young people who wanted to take advanced courses, or courses for which there were no teachers in the region.

Before leaving, I paused for a few moments at Arja's office. Her office was small, with modern bookshelves and furniture, with a 19-in. or larger flat-screen monitor, with a trophy cup on one of the shelves, plus papers and documents everywhere—and a window at her back as a constant reminder of the closeness of nature. I could not leave without taking a photo with the principal and two teachers, Annikki, an English teacher, and Eeva, a Finnish teacher, who accompanied me on my visit. This memorable photo was taken at the school's entrance, right next to the highway, and under a triangular structure symbolizing a Sami tent for nomad families and tribes, known as a *lavvu*. The lovely structure is crowned by a triangle inserted at the top with the colors of the Sami flag displayed in vertical, symmetrical stripes in blue, green, yellow, and red, from left to right. The *lavvu* tents are known for being easy to set up, and very resistant to the inclement weather in the northern regions of Sweden, Norway, Finland, and Russia inhabited by the Sami population.

## **The Secret Is Not a Secret: It's Work, Work, and Work Together with Equity**

It was a sunny, but freezing day, with the thermometer registering  $-15^{\circ}\text{C}$  ( $5^{\circ}\text{F}$ ), and with views that revealed works of art—a lovely tree showing all its splendor, sparkling with the sun at its back; a lake emitting a gentle, foggy mist that partially concealed a series of rolling hillsides in the background; and a couple of double-slope roofed cabins in shades of red, burgundy, and yellow. It was October 9, 2009, and I was walking to the Lapland school located in Hetta, in the beautiful municipi-

pality of Enontekiö,<sup>15</sup> sometimes referred to as the “arm” of Finland, because of the way this strip of land extends from the rest of the country. The village of Hetta is located between borders with Sweden and Norway, in the middle of a beautiful, dense forest.

My visits to Finnish schools became a nice routine. I would find children with their shoes kicked off, backpacks tossed about, winter boots scattered on the floor, and teachers walking busily down the hallways of another remote, lovely, inviting school. On this occasion, I stayed at the home of a Lutheran minister who, together with his wife, an English and art teacher at the school, are friends of Maarit Rossi, the school principal and a cowriter of internationally known mathematics textbooks, who arranged my schedule.

The Hetta school center<sup>16</sup> or *Hetan Peruskoulu* (grades 1–9) plus preschool (grade 0) and *lukio* together have a total enrollment of approximately 130 students. To be more exact, the numbers of students in the 2009–2010 school year were: 109 in grades 0–9 and 25 in *lukio*. Actually, the school is known as *Hetan yhtenäiskoulu*, which means the “Hetta unified school” because it brings together the services in basic education (*peruskoulu*) and upper secondary education (*lukio*). Other unified schools have already been mentioned here.

This is not only a modest number of students, but it has been decreasing over time, reflecting the region’s demographic patterns. Previous enrollment has been as much as three times as great as this. The 130 current students are taught by 18 full-time teachers. The school building was constructed in 1962–1963, but it looks new and it is the largest, most outstanding architectural complex in this small community, as happens in many small towns and villages in Finland. Despite its remote location, when Finland’s new comprehensive education system was initiated, the authorities decided to begin in Lapland. Consequently, Hetta witnessed the birth of one of the first in the new generation of schools. According to one of the teachers, the children at this school come from families who are or have been reindeer farmers or hunters or, more recently, work in tourism. There is practically no industry or technology in the region, and unemployment problems are frequent. The population in this capital of the Enontekiö municipality is nearly 800. The students in this rural region come from even smaller villages or communities. The student who comes from the farthest point, a place called Karesuvanto, must travel 70 km to school.

Another teacher told me that the socioeconomic level of her students is middle or just below middle.

Actually, the school’s strength is its limited enrollment, since this allows for more individual attention. In seventh grade, for example, which is the 1st year of lower secondary school, only 11 students are enrolled. The quality of education at the *lukio* level is also very high for the same reason. Nearly all the students who complete their upper secondary education at this school go on to attend a university.

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<sup>15</sup> <http://www.enontekio.fi/en/home.html> (June 15, 2012). Enontekiö, according to the municipality’s web site, is “the true Lapland.”

<sup>16</sup> <http://www.peda.net/veraja/enontekio/heta> (June 15, 2012).

The size of the school and the village allows for intense interaction among teachers, families, and students. Here, literally everyone knows everyone else. They go to the same school, to the same Lutheran church, to the only supermarket in town (K Supermarket), and the only liquor store (Alko Oy), which is managed as a state monopoly in all of Finland.

Education in Hetta and Enontekiö is not very different from education in the rest of Finland. What is especially worth noting, perhaps, is the emphasis placed on the Sami language and culture. For example, children in grades 0 (preschool) and 1 may receive education offered in the Sami language. Another distinguishing element is the recent specialization offered in tourism together with international relations. This is because Hetta has become a tourist center for inhabitants from Great Britain who take charter trips to northern Finland for one winter day a year, in order to experience “genuine” snowfall and a typical Christmas day with reindeer included and, of course, Santa Claus, too. This has become such an important activity that this small village of 800 inhabitants has its own international airport.

The British tourists who travel miles for a single day come on different flights normally during the month of December, and when their flight arrives, they are welcomed by well-trained students from lower secondary school and get to take a ride in a sleigh pulled by reindeer or motorized “reindeer.” The winter visitors arrive at 1:00 p.m. and leave by 8:00 or 9:00 p.m. It is important to note that this is very unusual tourism. It turns out that the British arrive with their own Santa Claus, eat their own food, and bring their own gifts to exchange in Finland. They come in search of scenery, snow, reindeer, and snowmobiles.

What are the school's weaknesses? The school is located far from large cities—approximately 1,100 km north of Helsinki, for example. In contrast, one teacher had this to say: “It's a very safe place. It's marvelous living here, surrounded by nature.”

Like other schools in Lapland, students may choose education in the Sami or Finnish language, depending on their native language. In all, students take English as a required language when they are 9 years old (third grade), Swedish when they reach 13 (seventh grade), and Finnish or Sami as their native language, plus German or Sami as optional courses. Consequently, each student comes to master at least three languages—Finnish or Sami, Swedish, and English.

In response to my question as to whether teachers in this school work in teams or groups, one teacher responded: “Each teacher does his or her own work. We, language teachers, work together, but not in formal *tiimit*.<sup>17</sup> All of us meet together nearly every week. This is a school in which we all know each other well.”

One weakness in this part of the country is the lack of a vocational school, signifying that lower secondary students who want a vocational education have to look farther away. The closest vocational school is 80 km from here, in another commu-

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<sup>17</sup> Although collaboration among teachers is a value that seems to be found in all Finnish schools, each school decides how to organize such collaboration. In some schools, professional learning communities or groups are organized formally, and in others, the organization of cooperative efforts or working groups depends on spontaneous initiatives by teachers. This is evidence that schools and teachers have autonomy in designing and implementing different organizational or pedagogical arrangements for promoting learning.

nity called Muonio. Nevertheless, given this weakness, the school offers students the possibility of taking their 1st vocational year in the upper secondary (high) school, in a general studies program shared with the *lukio* program. According to Tuula, one of the teachers here, this solution is not at all common in Finland, but it was made possible here due to an agreement between the municipal government and Rovaniemi. “What is the secret to Finnish education?” I asked Tuula. She responded: “The secret is not a secret: it’s work, work, and work together with equity. It doesn’t matter where a student comes from; all students begin at the same point.”

After talking with Tuula, I interviewed a Sami teacher, Anne-Mari. She is a young teacher whose native language is Sami and she was born nearby, some 50 km away in a community called Muotkajärvi. Anne-Mari is the daughter of a Sami mother and a Finnish father. She was born here, grew up here, went to school here, and then attended the university in Oulu. According to Anne-Mari, there is only one school in Lapland where everything can be taught in Sami, and that school is in Utsjoki—precisely the school we visited earlier and discussed earlier in this chapter. Anne-Mari teaches students in seventh to twelfth grade who take Sami as an optional language.

When I asked Anne-Mari about the difference between Finnish teachers and Sami teachers, she told me:

I’m not sure if I’m different than other teachers in Finland. What’s true is that I teach the Sami culture, or in other words, the relationship between reindeer and life for Samis, Sami music, the traditional crafts and textiles or *doudji*. Family is very important in the Sami culture. I know my entire first, second and third cousins. In the Finnish culture only first cousins know each other.

Paula Alatalo, the *rehtori* (principal) of this school at the time, was also the *rehtori* of the three other schools in Enontekiö, and the head of the education department in the municipal government. This department is responsible for not only educational matters but also the child development center and library services in the region which are housed in this school’s facilities. Paula was a young principal facing great challenges. “What’s different about your school?” I asked. Her answer:

We don’t have a lot of children—it’s a small school. Like the other three schools in this municipality, we have small groups, and thus teaching can be totally individual. For example, in upper secondary school we might have two students in each group, and there is a competent teacher for each group. Nearly 100% of the teachers are qualified. There is only one teacher who doesn’t have his qualifications, but he has been teaching for many years.

My next question was whether the children here are very different from other Finnish children. Her response:

I’m from Kemijärvi, a community 360 km from here. I arrived in Hetta a year ago. I’ve visited schools in the south. The children here are very open and very curious to learn new things. This gives us a lot of space to implement new ideas. The children here want to be a part of everything, and this even includes planning school lessons. Farther south, school is part of normal life. Here it’s something newer. The children don’t have a lot of social interaction outside of school, so school becomes their center for interaction and curiosity.

“Do you have learning problems?”

We do, and many of them. For example, we have reading problems, and so we have a psychologist who works both in Muonio and here, and she diagnoses problems. Together with



the psychologist, our special education teachers can also do some testing and make some inquiries in order to propose alternative strategies. We also have behavior problems. Some teachers say that today we have more problems than before. To some degree this reflects the greater number of diagnoses of children with problems. When problems are very serious, we ask for assistance from Rovaniemi and a hospital-type school that is highly specialized. There they do more testing and make the final diagnoses. It's very expensive to send children to Rovaniemi, but we do so when it's necessary.

“How challenging is your work here in Lapland, and given the influence from the Sami culture?” She said: “Before coming here, I taught in an upper secondary school in Rovaniemi for two years. In 2008 I applied for this position as principal. I arrived without being able to speak Sami. But the most difficult aspect of directing a school is providing leadership to people. The Sami culture is new for me, too.”

“Have you been accepted here?”

Yes, the school is more Finnish than Sami. And because I'm from the outside, it's more likely that I'll be accepted. I know and I don't know the culture of the school and the region. But if I had come from within the culture, it would have been more difficult. They know I'm interested in them and in their culture. At the child development level, we have two centers, one Sami and one Finnish. And we maintain them that way because they're a little afraid of total integration at those age levels. In this regard the younger parents are those most opposed to integration. The older traditional parents are more open. These two groups continue to be separated in preschool (grade 0) and in first, second and third grades in elementary school. But all the children have recess together, and there they integrate and play together. In the next school year, this separation will be extended one more year, that is, it will cover grades 0 to 4.

“What is your main challenge?” I asked, and she responded:

The combination of the two cultures, and at the same time, working as *rehtori*. Also, coming to a small school in a small community is challenging because everyone knows everyone. When I confront problems with some of the children, I have to be very careful what I say, to whom I say it, and how I say it. First of all, I'm limited by law in terms of what I can say about children's problems, but here, because everyone knows each other, it's even more difficult and subtle. Since I'm not from here, and I don't have family members here, it's a little easier than if I would be from here.

“How much importance is placed on school education here?” I asked. Her answer:

School is something very important in their lives. Everyone talks about school all the time, in the street, in stores, and when decisions are going to be made, they participate in making them. For example, the community's politicians attempt to participate in concrete issues; they want to influence the normal practices in the school. Parents—without a doubt—if they're very concerned about something, they call the politicians, so they'll make it their job to see that things get worked out. In southern Finland, they don't have these problems with the schools, so politicians can dedicate their efforts to other matters, and they don't influence or try to influence the schools. But here, the community is so small that they want to participate and give their advice on school activities. The culture here is that everyone is interested in everything. They are open to learning. They have their own theories and opinions, and want to be sure they are heard. That's why they're so active.

The school is large for the size of its student population. The teachers' lounge is generously sized with modern, simple furniture. There are comfortable chairs in royal blue, a worktable for 10 or 12 people in the middle of the room, windows everywhere, and a kitchen at one end, large and well equipped. Nearby is Paula's

rectangular office, of a good size, with modern modular furniture and, of course, a desk computer with a flat-screen monitor. Her desk, the bookshelves behind her chair, and her worktable—everything is in perfect order. As always, both places are full of light. From her office, Paula has a direct view of the school's main central patios, most of the buildings, and the community's main street.

During the tour I was given of the facilities, we took a short break for lunch. We ate a special thick Finnish soup, with peas and chopped meat: *Hernekeitto*. It was served with the typical whole-grain bread with a slice of cheese and another of apple, and milk, water, or a yogurt-type cultured milk. As always, the cafeteria and kitchen were sparkling clean. The president of the municipal government (in this case, Paula's boss) and two municipal officials had lunch with us.

From the cafeteria, we went to see the classrooms in the preschool area—classrooms that do not look like classrooms, but are. The first one was rectangular shaped, with an octagonal table and its eight chairs around it in the middle of the room. Along the sides, there was a simple desk for the teacher, a kitchenette at one end with all of the basics, refrigerator, sink, dishwasher, microwave oven and, also, a small bookshelf with a radio and CD player. Then, along another wall, more bookshelves, and on another wall, a large chalkboard, a piano, a broom and dust pan, a typical sink, a computer area in a corner, and table games everywhere. Finally, illustrations with the letters of the Finnish alphabet were hanging all around the classroom.

The next preschool classroom, not very different from the first in terms of equipment and furnishings, was decorated very differently. Here, what immediately caught my eye was the children's work tacked on all the walls. Instead of alphabet letters, the numbers from 0 to 9 were displayed in this classroom. And instead of an octagonal table in the middle, students had modern desks with desktops that lifted up to provide space to store things.

Our next stop: the gymnasium with a large basketball court. Actually, on the day of my visit, the gymnasium had been transformed into a disco. Decorated discretely with lights and balloons, there were some young people dancing, others talking in small groups, and a few others, just watching—an orderly disco, with moderate games, dancing, and noise.

Then, before going from one building to another, when we stopped to bundle up with jackets and scarves before going outside to brave the elements, I noticed groups of young people with faces pressed to the windows along the hallway—a slight disturbance, but nothing too outrageous. The reason: a police car was traveling very slowly around the school. When I asked Paula why there was such a fuss over this, she said it was so unusual to see a police car there that the students saw it as a big event. In fact, there are only two police officers for the entire municipality. That is how safe the region is.

Of course, I had to see the library—and what a place! This library is open to the entire community at certain times of the day. It is located within the school facilities and filled with two things: books and light. Some of the aisles seemed to go on forever, and everywhere there were shelves and areas for tables and chairs, as well as cushiony chairs, to meet the needs of all readers—whether demanding or impulsive. There was, of course, a librarian's desk, plus cubicles for special uses,

copy machines, computers, a second floor, a section for magazines and newspapers, walls of different colors. But perhaps, what was most abundant in this library was silence, inside and in the surrounding environment.

From there, we went on to visit a number of classrooms, all furnished with the minimum, typical of Finnish schools, whether urban or rural, large or small, centric or remote, Swedish speaking, Finnish, or Sami. Something noteworthy in this school was not only the reduced size of the classrooms but also the versatility with which each teacher arranged the space available. The computer room, not surprisingly, was replete with flat-screen monitors; each computer was located on a spacious desk in an L shape to allow students to both work on the computer and work at the desk space, or observe the teacher at one end of the room, with the basic furnishings for conducting classes. It is important to recall that both Hetta and Utsjoki are in remote regions, where very small, rural, indigenous communities are being served, and where standards of living are modest, where people live close to and are dependent on nature, with its extreme conditions, and where winter temperatures can reach below  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ).

In all these visits to schools, I always found science labs, art studios, sewing rooms, and, of course, an auditorium with isoptic designs. I should underscore that in many of the schools I visited, the architectural perspective of some of the auditoriums is panoptic in design.

And the woodworking and metal workshops are more like those I have visited in specialized vocational schools around the world than what you would usually find in basic schools. The machinery is impressive, and even though these are workshops, everything is clean and all the tools and equipment are in order.

At nearly the end of my visit, we peeked into a classroom where Anne-Mari was teaching a single student in Sami.

## Turku's Comprehensive School

After some fabulous, cold, and absolutely white days in Lapland, I was in southern Finland, traveling through magnificent landscapes painted with green and yellow tones, on my way to Turku, Finland's former capital city. This particular city marks the connection between the Swedish past and the Finnish present.

Only now, after traveling through the country from south to north, and experiencing the amazing, majestic scenery in white, green, brown, orange, yellow, blue, and all the possible nuances of these colors, am I able to appreciate the symphonic, poetic, clamorous, and harmonious language of Sibelius, torn between the calm and the storm, between silence and perplexity.

I have visited different places in Finland in an attempt to extract the inseparable combination of elements that leads to such high education results. Yes, Finland has its own *sampo* (a magical machine from the Kalevala) that does indeed produce marvelous results in education. I have learned here, as with nature's secrets, that we cannot separate all the elements, one by one, that produce quality in education. We know they are mixed together, and we hope the mixture can be reproduced, but we are not sure, and that is why education is an art and a science.

I was staying in an apartment reserved for teachers visiting Turku, located in the facilities of one of the schools with the most noble of lineage. This is a prestigious Swedish-speaking school. The apartment where I was staying was previously the housing unit for the school's caretakers, a position no longer common but still important in some European schools, with or without boarding houses. The apartment's traditional feeling has been preserved and it has not really been adapted to modern life. It is wonderfully located along the Aura River that divides the city of Turku in half, and very close to the city's center, to the famous University of Turku, to its grand cathedral, full of history, architecture, and Lutheran tradition, and to the city's majestic, recently reinaugurated public library,<sup>18</sup> which connects three eras, 1818, 1903, and 2007, in three buildings brought together as a single entity, in utmost fusion.

The library is impressive and its services are first class. It is used by great numbers of people—it has about two million visitors a year—and it has a million collections (counting books, journals, videos, and audio).<sup>19</sup> The library displays amazing architecture in its buildings and furnishings, with spaces for the different motives of all types of users, with a special area for children, and an inviting patio where part of its café is located. And all of this for a city of 176,000 inhabitants—quite impressive.

*Topelius Koulu*<sup>20</sup> is a Finnish comprehensive school in Turku, with a student population of nearly 400 students divided evenly among the groups corresponding to grades 1–6 and 7–9. There are 34 teachers. Tenth grade is not offered, and unlike other schools, preschool education is not offered either, since all education at that level in Turku is provided by the Social Services Office and takes place in child development centers.

Something special and attractive about *Topelius Koulu* are the foreign languages offered, with the intensive French program in grades 7–9 as its key component. In addition to Finnish (native language), the other languages taught are English (required) beginning in third grade, French (optional) beginning in fifth grade, Swedish (required) beginning in seventh grade, and Spanish and German (optional) beginning in eighth grade. We might recall here that all Finnish schools have required foreign languages in their curriculum.

According to the teachers I interviewed, Meri and Sanna, the students are generally most enthusiastic about English.

I had a conversation with these two teachers in a sitting area in a beautiful, colorful, modern teachers' lounge or meeting room, with all kinds of accommodations for spending time or talking.

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<sup>18</sup> <http://www.turku.fi/Public/default.aspx?nodeid=12503&culture=en-US&contentlan=2> (June 15, 2012).

<sup>19</sup> To give an idea of the dimension of the collection and use of the Turku library, a simple comparison can be made with the enormous Vasconcelos Library recently inaugurated in Mexico City. The latter's web site mentions that it has a collection of 575,000 classified books (<http://www.bibliotecavasconcelos.gob.mx/Vasconcelos/Biblioteca.htm> (February 16, 2010)). The web site did not offer any statistics on the number of visitors when consulted on February 16, 2010.

<sup>20</sup> <http://info.edu.turku.fi/topelius/english.html> (June 15, 2012).

I asked Meri and Sanna about the school's pedagogical orientation. Both responded that the school does not have a specific orientation in this regard, such as Steiner's, for example, but with approximately 15 new teachers in the school, the orientation favors interaction. The school does not have any teachers who still use old-fashioned discipline measures. Communicative learning is promoted through working groups, such as in mathematics and English, and teachers cooperate spontaneously, to prepare tests, for example.

"What kind of results does the school have in terms of performance indicators?"—I asked. One of the teachers gave me this response:

We don't make comparisons between schools, but I've worked in many different schools, and from my experience, I can say that we have very good students. We give our own exams, and the students' performance is high. Our students also receive good results when we participate in national and municipal tests. We don't publicize the results from these standardized evaluations, but if parents are interested in seeing the results, we openly share them. And although ranking lists aren't made public, there is a kind of silent awareness, based on what people hear, as to which schools are the best.

"What is necessary for a child to learn?" was my next question, and Meri responded:

What's necessary is motivation—which is encouraged through an appropriate environment and good materials, books and computers. If a child has special needs, he or she receives special services, because we want each child to express his or her individual potential. In order to help each child, diagnostic assessments are conducted within the school. Actually what happens in schools is that we respond to everyday needs in the best way possible, that is, to make progress every day. And we talk about this at school. Teachers talk about the problems in the school's everyday life, and not so much about whether they use a competence-based or knowledge-based approach.

"What do you mean when you talk about an appropriate environment?" I asked both of the teachers participating in the interview, and this is what they said:

The place where children learn needs to be an enjoyable place: healthy, clean, and with nutritional food. In the Finnish culture, it's a matter of ethics to do things well, in an appropriate manner, all the time. Students feel bad if they don't do things well and on time. Sometimes, Sanna said, I think the culture can be very stressful and it would be better to relax a bit. Regarding a pleasant environment, interrupted Meri, this is really a matter of a mental environment. This means an environment in which unnecessary tension is avoided, and stress is kept to a minimum. In an environment like this, it's okay to make mistakes if you're working hard, and doing the best you can, but in a relaxed environment.

Meri and I went to eat together at the cafeteria. We sat down at a table with mostly other teachers. The kitchen and dining area looked new or rebuilt, with modular furniture, and instead of chairs there were benches, which slid out on rails from under the table. This left more space open, facilitated the daily floor cleaning, and kept things orderly. That day, unlike at other lunch times, I observed, to my surprise, that in addition to a menu of healthy, nutritional food, something else was added right on the central counter, where food was picked up—two enormous containers of ketchup.

I arrived in Turku during a time when, for financial reasons, the city's authorities had made the decision to require school principals and teachers to take "forced" vacations without pay. All teachers had to take 4 days off. Principals were required to take 2 weeks off, and for this reason, the principal was unable to meet with me

and, instead, Meri agreed to be responsible for my visit. According to those I interviewed, this type of solution has been used very infrequently in Finland.

Before observing another class, we walked through parts of the school facilities. We visited the section for grades 1–6. The classrooms in this section had more students. The classrooms were more decorated, with more colors, with more materials, gadgets, and furnishings. One had a piano, and both had monitor screens, LED projectors, sinks, light everywhere (both natural and artificial), speakers attached to the walls, and children dressed in every possible color. The teachers' moderately sized, L-shaped desks looked like mini-offices, each with a computer and camera projector. In one of these classrooms there was an abacus, about  $50 \times 50 \text{ cm}^2$  (1.6 ft<sup>2</sup>) in size.

The woodworking and metal workshops were very impressive, as in other schools in Finland. I am amazed at these facilities every time I see them, not only because of their size and the variety of machines and materials available, but also by the fact that these workshops are included as part of basic comprehensive education.

It was 1:55 in the afternoon, and I was sitting in Meri's sixth-grade English class. There were 21 students, 10 of whom were girls. The teacher was sitting at her desk, following the textbook in English but speaking in Finnish. She was using a photographic projector with different phrases about Australia and its aboriginal peoples. Meri placed up on the screen some questions about the text being read with forms of the verb "to be." The class was a little disorderly, with a boy in a corner throwing things. The teacher raised her voice and asked them to take their pens; they held them up and showed them to her, and they calmed down and returned to work. Meri started to write on a white sheet on the overhead photographic projector and, at the same time, the students began to copy what appeared on the screen. Almost immediately, the students started to whisper again. They were very restless, talking among themselves, throwing pieces of paper across the room, whispering, laughing. The bell rang, and the girls in the back said: "yesssssss!"

Meri continued with her class, asking the students about the subject (S) and predicate (P) of very simple sentences like "He (S) is (P) singing. I (S) am (P) walking. He's running. I'm not laughing." Finally, she wrote the homework assignment on the board, while the children put things away in their backpacks. The whispering and the noise got louder—and at last, they were on their way! And me too!

## Together and Individually

*Luolavuori Koulu*<sup>21</sup> is truly a special school in Turku. It has nine grades, from 1 to 9, plus a preschool section, so its students are between 5 and 16 years of age. The school was established in 2009 from two different schools. One was called *Vuorela* and it served children with especially demanding needs. The other one was for regular basic education, and it had the same name as the new, integrated, inclusive

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<sup>21</sup> <http://www.tkukoulu.fi/~luolav/linjat.html> (February 18, 2010).

school has now. The transition, according to those I interviewed, required 2 years of preparation, but when it happened, it went very well. The two schools had always been working together. The school actually has five campuses, and the one I visited was the main one, with about 340 students, half of whom were in special education. This campus and the others, too, offer education to children who have serious disabilities such as severe autism and other severe learning disabilities. However, the children with the most severe disabilities receive services at one of the five campuses in particular, *Hepokullan*.<sup>22</sup> A total of 430 students attend the five campuses.

I met with the school principal Hannele, an assistant principal Riitta-Maija, and a special education teacher Eva, in a small meeting room. There, I experienced a pedagogical session, which made it easy to understand this school's unique educational model.

When I asked if they had one phrase that succinctly explained their pedagogical model, this was the response I received:

Individualism, both for those who are very talented and for those who need assistance. In other words, "individualized learning." We have a phrase that describes our school: "Together and individually." We've worked to create a safe environment in the school for growing and learning while looking to the future at all times. We don't have a specific pedagogical project, but instead we build one piece after another, one idea after another. We base our work with children who have severe disabilities on Piaget's studies. Teachers have a lot to say in this regard. We meet every Tuesday to discuss these ideas and these steps. Teachers also work in smaller groups (*tiimit*) on different topics such as evaluation, individualized learning plans, curriculum, everyday issues, security, education for new teachers and for community members, special projects and educational methods. Based on this work, we develop our own models and curriculums for special education that may also be used in other schools. In fact we have a teacher advisor who goes to other schools to help them.

They provided me with a document with the following key phrases, which are part of their pedagogical mission:

*Cooperation with families Concentration on interaction that is fair and confidential. Activation of each child's individual potential for learning. Increase in pupils' participation in the learning process. Use of individual and cooperative experiences as the basis for learning Shared distribution of Experiences. Education in reflective skills*

"How do you put these ideas in practice?"—I asked. The response:

We have a project we call "combined learning." Children who have been diagnosed with Asperger's Syndrome study with children in regular [mainstream] education in the same classroom. This combination lasts nine years for the children in regular education and ten years for those with Asperger Syndrome. Some very talented children have been able to finish in eight years. For the children with Asperger Syndrome, we have special activities plus individualized learning. We also have special activities and clubs for the other talented children. We do this through music, for example, in which some of the children are very talented.

Since this is a special school, a large staff is required. There were 59 full-time teachers in the five units (including the principal and two assistant principals), plus 105 teacher assistants, 45 of whom were responsible for helping out in the afternoons

<sup>22</sup> <http://www.tkukoulu.fi/~luolav/hepokulta.html> (February 18, 2010).

and during vacations, and they also helped on the days when the children remained at school in order for their parents to have a chance to rest (respite care). These parents are allowed at least 3 days a month to rest, according to the law, while their children are cared for in substitute homes. In addition, children with special needs are sent to their homes in taxis especially contracted by the city government for this purpose. In fact, on the day of my visit, taxis of all types were waiting their turn to take children home at the end of the morning school session. The school has its own doctor and two nurses, one full time and the other part time. There is also a psychologist and a counselor who visit the school periodically.

With the help of some schemes that outline the school's orientation, my three hosts explained the learning environment concept for their school.

Above all, an appropriate learning environment depends on a school that is secure for children. Secure in terms of people, friends, and education. Students must feel secure coming to school. This means that we must pay attention to aspects as simple as group size in order to have sufficient capacity to give them the help they need during the day. At this school, it is fairly often that we receive children who have had bad experiences at other schools. Here, we accept them as they are, and we make them feel valued. The children know that they are accepted at this school, that this is a school where they can feel good, and no matter who they are, they're "good enough." This is also a school for having fun. To accomplish all of this, we pay a lot of attention to educating and training personnel—we form study groups and promote different activities such as exercise, dancing, and field trips. In this way, teachers and the rest of the school personnel are better prepared to provide an enjoyable environment for children. A learning environment also refers to the appropriate materials, equipment, and furnishings. And a learning environment also involves a supportive attitude by city or municipal authorities toward the school.

Toward the end of the interview session, and enthusiastic about the practical explanation of learning environments, I asked them: "What makes children's learning possible? What makes us learn?"

Learning is an adventure, particularly for children in special education, because we really don't know what will happen. In any case, what produces learning is a healthy, safe environment. Learning also comes from motivation.

"How can children be motivated?"

With the idea of an adventure; teachers who are intrinsically motivated, with adventures promoted in an environment that is safe and healthy for kids. And, with the energy that comes from discovering. That's why we're very constructivist at this school. This means rest and recreation for teachers and students. We need to accept the fact that learning is possible when there is rest and recreation. We have great challenges in our work. Teachers need to know that there are different paths or routes for children to learn, and they implement them. This is our work every day, and we know it—we do it every day, and that's why we don't spend a lot of time thinking about this—we're doing it. We attempt to have an impact on children to enable them to become competent in all aspects of their lives, including how they manage their free time.

Close to the end of the interview, this was the conclusion:



Something that describes our school is that our work is never done. We're never actually finishing—we always begin new processes. This is a school with a challenging environment. That's why we're always developing something new.

This is a large school in terms of the facilities. It has a completely renovated building, full of color, with open, multimodal spaces for different uses, and full of modern furnishings and gadgets. It is a school with the longest hallways.

The first classrooms I visited were elementary classrooms, and by now my readers most surely know what I saw: individual student desks in natural wood tones, with a desktop that lifts up to store all kinds of notebooks, pencils, and secrets inside; LED and overhead projectors, sinks, and lots of light, cleanliness, and orderliness. So, that is what I generally and typically found. But beyond that, each classroom was different according to each teacher's likings, with ideas from the children. There is also a school policy on how classrooms can be decorated and which colors can be used. There is basically an extensive set of factors at play, and in the end, one is bound to fall into contradiction, between the typical framework and the unique classroom.

The doors on these classrooms lead to one of the school's endless hallways. As long as the hallway was, as numerous and varied were the classrooms. We randomly peeked in some of them. Generally, the classrooms are similar but one of them had a rather different arrangement. The teacher in this elementary classroom arranged a section at the back of the classroom that was separated by a small bookshelf, with four student desks joined together to form a square table, as if it were a small board meeting room. This changed the appearance of the entire space. Also, some of the walls were covered with the children's paintings, and another section had a white banner painted by hand with a yellow-orange sun and some swans in full flight. Basically, it was a different, colorful classroom with some decorative plants added.

And so, we continued down the long hallway, passing more coat racks and shoe racks, plus ultramodern sofas, scattered here and there, where students can rest during breaks or between activities. Along this endless hallway, the colors of the wall would change, and I cannot help but mention that despite the immensity of the hallway, I did not see a single piece of trash on the floor.

It was not long before we arrived at a huge gymnasium, with a professional basketball court and all the furnishings, plus bleachers that folded up along one of the walls. At one end, there was even a theater stage with bright red curtains.

As we toured the facilities, we passed by the school's main entrance—which seemed more fitting for a museum or an elegant modern office building. The lobby was a combination of generous spaces, high ceilings, cubic figures on walls, pillars, and ceilings, in gray, black, and white colors, with enormous windows, a couple of plants, and some hanging tiny figures dressed as children in many colors. At one end, there was a modern comfortable chair in the form of a silhouette painted bright green. This scene, together with some children with their backpacks, and multicolored drawings tacked on a black wall, offered an attractive prelude to the project about to be witnessed.

We turned at one of the intersecting hallways and came across the teachers' lounge or staffroom, in perfect order and looking brand new, as if it had never been

used. The room was about 15 m (50 ft) long by 8 m (26 ft) wide. One corner was set up like a tiny room; a rectangular table extended across the room, big enough to seat at least 20 people; to one side, there were two oval-shaped tables for seating ten people each, and in one of the corners, the essential tall, black piano, as in many teachers' lounges.

The school's patio was surrounded by a lovely forest of pine, conifer, and evergreen trees, not only offering a spectacular view of nature but also serving as a laboratory for learning.

The school had everything: colors, hallways, and numerous classrooms; a library for different uses; labs; a gymnasium with equipment for lifting weights and other various exercises, including a climbing wall and boxing bag for sparring; a pool table for students in a lobby that extended from a long hallway and two large rooms; multifunctional classrooms, at the same time connected to and separated from other classrooms by doors or halls, to allow for diverse recreational, academic, cooperative, or specialized support activities; furniture of many types and colors that allow imaginative arrangements in nearly all the spaces; extremely artistic staircases that use colors, sizes, illumination, and decoration; and work rooms for teachers with different arrangements for working at a desktop computer, reading an entertaining magazine, meeting in a small area, or drinking a cup of coffee to pass the time or just enjoy. Classrooms for lower secondary school had less artwork on the walls, but more electronic equipment and their own libraries. Unlike the desks in elementary classrooms, those for lower secondary education were simpler. In this area of the school, the hallways were even more packed with jackets, shoes, backpacks, and drawings. The school had impressive woodworking, metal and painting workshops, and an ad hoc room for music.

## Swedish-Speaking School in Finland

To arrive at this school—which I did on October 14, 2009—I walked out of my apartment (described earlier in this chapter) and crossed the main patio.

This is a school with enormous history and great tradition—if only because it is associated with the establishment of the Turku Cathedral in 1276—and, in fact, the name of the school is *Katedralskolan i Åbo*, which means Turku Cathedral School.<sup>23</sup> Today, however, it is a small- to medium-sized upper secondary school with about 270 students.

In perfect English the principal welcomed me. He invited me to observe a class about health of 20 young people, of whom half were female and sitting at the very front of the classroom. The group followed what the teacher was presenting, paying attention in silence. All the students took notes at nearly the rhythm of taking dictation, and once in awhile raised their hands to ask a question. With the teacher's permission, I interrupted the class to ask the students about their activities in and out

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<sup>23</sup> [http://www.tkukoulu.fi/~katedral/in\\_english/mainpage.html](http://www.tkukoulu.fi/~katedral/in_english/mainpage.html) (February 19, 2010).

of school. To my surprise, they were very shy about responding. For example, only a few responded to my question regarding how many hours they read for enjoyment in a week and, finally, after some effort to extract the information, their answer was a half hour a day on an average, including reading the newspaper. Few of them had decided which field of study they wanted to pursue, but most of them will go to the university. Three said they wanted to become teachers, others planned to study economics or political science, and a couple of them planned to study medicine. When I asked for their opinions regarding the reasons for the success of Finnish students, the teacher said perhaps it was because Finnish students have more time off. A female student responded that it might be because students are involved in other extracurricular activities. I asked the students what kind of things they did outside of school, and they said they spent time with friends, played sports, and spent a lot of time on the Internet.

Then the class continued.

Later I interviewed the principal, and I asked him, “What’s the difference between this Swedish school<sup>24</sup> and a regular Finnish school?” He answered:

The language. Textbooks and class sessions are in Swedish, except the classes for teaching Finnish as a second language. In general we follow the same curriculum in both systems, we have the same type of exams, the same matriculation and the same number of school grades. Students in both schemes graduate at 18 or 19 years of age, after between two and four years in upper secondary school, with three years the most common. Each student designs his or her own program, like in a university, and thus, as in other upper secondary schools, each student can choose an accelerated or slower rhythm for his or her studies. We had one student who completed his studies in a single year. Some students progress more slowly because they are very active in music or sports. Another difference between the Finnish and Swedish systems at the upper secondary level is that the ten other upper secondary schools in Turku are Finnish and have an average of 350 students, and we have 264 students, which is the average for other Swedish schools in Finland.

“How many courses are offered at this school?”

Just over 100. Each course consists of 38 sessions that are 45 min each. Courses are like the pieces of a mosaic in which each student can design his or her own work of art. While in theory each session lasts 45 min with a 10-min break, there is a new tendency in *lukio* schools to compact two sessions into one 75-min session with a 10-min break. In addition to other advantages, this means that students don’t have to carry so many books to school.

“How good are the performance results from this school?”

Some of our students are sons or daughters of university professors, so one can assume they have an academic orientation. There are other students who also take their studies very seriously, so the school has a very positive environment and things are handled in a pleasant manner. When the media, like commercial television or newspapers, releases ranking lists of all the schools in the country, we rank between 26 and 30. These lists are based on results from matriculation exams, so they only reveal part of the story.

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<sup>24</sup> Swedish schools have the freedom to teach the Finnish curriculum but in the native language of Swedish-speaking children. It is the same with Sami schools. In this way the Finnish education system not only acknowledges and demonstrates its appreciation for plurality but also gives all children the opportunity to be taught in their native language.

After going to a music class and observing the beginning of a new session with students practicing loud rock music, I went to a philosophy class given by the school principal. The entire session took place in a small computer room, and each student had a laptop. The students, like the teacher, attempted to connect by Internet with students from other schools who had created an intranet together in order to provide continuity to sessions taught in the two schools, alternating between one and the other. Thus, the entire session took place with a dozen students doing individual work while sitting in front of computers. Both the teacher and the students were working on their computers, seeking to communicate with other students at a distance. The teacher was doing the same side by side with the students. It seemed more like an interaction among peers, than teacher and students, with the students highly interested and motivated, and each one knowing what he or she needed to do. From my viewpoint, it was an example of the best classroom interaction at this educational level.

*Katedralskolan I Abö* opened its current doors in 1830, but there are vaulted constructions at the basement level that date back to the Middle Ages, perhaps from the thirteenth and fourteenth centuries, according to the school principal. In fact, this building is a fusion of architectural characteristics from the Italian Renaissance, Swedish imperialism, and Greek classicism, and it stands out rather conspicuously in the middle of what was the main public plaza in the medieval era. The school is located not far away from the center of everything, the Turku Cathedral. According to the principal, data indicate that the school dates back to 1279 when the cathedral was established. All cathedrals had to have a school, and Turku would have been no exception. There is nothing certain about the school's ancient history, but in 1977 it was renovated and reopened. Since then, the school has been waiting for another renovation. In the room where the music class was being held, I saw a major crack along one of the walls that had been temporarily covered with construction material. When I asked the music teacher about it, he told me the school was anxiously waiting major renovation work because the building is actually sinking. The school basements are adjacent to what was formerly the old city of Turku, as demonstrated in the *Aboa Vetus* museum<sup>25</sup> located only a few meters away. This small but fascinating museum displays some of the constructions in stone and brick, and the *modus vivendi* of medieval Turku.

The school is rather modest in terms of facilities and furnishings, typical anywhere in the world for this type of upper secondary school with an academic orientation. The architecture, however, and the historic flavor of the place are nothing short of fabulous. The classicism and sense of antiquity give the school a special touch, as a place for knowledge and intellectuality, as its principal would say. And as he emphasized, "it's a happy place and I'm a happy principal."

The school does not really have any problems. The young people are interested in studying, and they do so diligently.

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<sup>25</sup> <http://www.aboavetusarsnova.fi/en> (February 21, 2010).

## From Turku to Kirkkonummi: The Beginning of the End

The train was nearly packed, since it was the 1st day of autumn break, which was Thursday and Friday, October 15 and 16, 2009. (Winter break would be the week of February 22, 2010, for the southern part of the country, and the following week, or the 9th week of the year, for the central part, and the 10th week for the northern part.) It used to be that winter break was the same for all of Finland, during the 8th week of the year, but several years ago, the government decided to space out vacations so they would not all be concentrated in the same week. In this way, tourism services and activities could remain more constant.

With the creaking and rattling of the train, I reached the end of my 2009 visit to Finland—but not the end of my project. Traveling through this marvelous country, visiting its schools and, above all, interacting with the Finnish people, has forever changed my conception of education and learning. My frequent journeys through these lands, and what I have learned from my persistent reading and interviews, confirm to me that the path toward quality in education is equity.

## Three More Remarkable Schools!

### *Kemijärvi: Suffering Economically; Thriving in Education and Culture*

The train from Helsinki to Kemijärvi broke down in Rovaniemi. Through the hubbub among the passengers, more than through the language, I found out that a bus would take us to our final destination. And the bus arrived in Kemijärvi at the exact time and place as the train would have. I arrived on time! Ten minutes later, and thanks to my friends in Kemijärvi who were waiting for me at the train station—not even knowing that anything out of the ordinary had happened—and in the midst of heavy snowfall, I visited my first school during this seventh trip to Finland, after 40 h of traveling.

With 8,000 inhabitants, Kemijärvi is neither a city nor a village. It is the most northerly place in Finland with the status of a town. This will change because Sodankylä, a place already larger than Kemijärvi and farther to the north with a growing population, has not yet received town status, but might soon.

Around 2000, Kemijärvi was home to 12,200 *kemijärvenses*, but when a number of companies closed, many families were forced to migrate, reducing the school population to half, or 650 students in grades 1–9 (*peruskoulu*). Municipal authorities have closed ten small schools, something local inhabitants view with great sadness. This, in fact, seems to reflect a structural change in Finland.

In 2000, according to data from the Statistics Office,<sup>26</sup> there were 1,263 schools with a population of 49 or fewer students. By 2011, the number of schools in this category had been reduced to less than half, or 591 schools. In addition, the total number of primary schools (for grades 1–6) dropped from 3,056 to 2,020 during the same time period. Of the 149 schools with 19 students or fewer in 2000, only 52 remained by 2011. This is a very important structural change, and it appears this tendency will continue. Not only did I visit one of these schools with fewer than 19 students, located on the outskirts of Jyväskylä in April 2012, but also while I was eating lunch at an extraordinary upper secondary school, municipal authorities were meeting at a nearby table and discussing the possibility of further reducing the number of schools. The fear expressed by the only two teachers in that small school was precisely that the school would be closed. This is a case when public policy clashes with pedagogy. From the viewpoint of public finances, it may be hard to justify maintaining a school that is so small, but the logic behind teaching–learning considerations is beyond question: In particular, small children in preschool and the first four grades of elementary school should be as close to home as possible.

Commercial services in Kemijärvi have diminished, and the entire city is struggling to survive. However, the city’s cultural complex—with a remarkable, recently inaugurated music school, plus a magnificent library and an area for youth to get together and engage in creative activities—stands there in the city’s center, with a great view of a majestic lake, and confirming that education and culture are social values, even in the face of economic decline.

Life in Kemijärvi, as in other places in Lapland, has a different rhythm. Silence, space, respect, extreme concern for the environment, absence of traffic, plus fresh and pure air, rivers, trees, and lakes everywhere, and very, very cold temperatures. On the last day of March 2012, for example, we woke up in the morning frozen at  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ).

*Särkelän Koulu* is one of three elementary schools in the community. Its physical learning environment is an old, but clean and more than decent building. The classrooms have a bit of an orderly disorder to them, and the colors of the walls vary according to each teacher’s preferences. For example, in the fourth grade classroom, taught by Ilpo, who is also the school principal, the wall at the back of the classroom is painted in royal blue.

This school is similar to the classrooms and facilities I observed in various schools in 2004, but with one innovation: document camera projectors, which have replaced the famous overhead projectors used in Finland’s schools for decades.

The school is small, and does not have a library, but classrooms have their own corner libraries, and sometimes even cozy nooks for reading that make you feel as if you are in your own living room. Exactly the way desks and furniture are arranged, and the “extras,” like comfortable chairs, sofas, and rocking chairs, are determined by the teacher, who also defines the teaching methods and pedagogy he or she will use—even though there are attempts at centralized intervention, according to some of the teachers I interviewed.

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<sup>26</sup> Information provided directly to the author by the Statistics Office in May 2012.

The school's best "decoration" is, without a doubt, the winter landscape that can be glimpsed through the classroom windows and that has no pity for those studying inside. It is nearly impossible to avoid being drawn into these marvelous natural paintings—as otherwise captured by the Lappish Pekka Halonen, who painted the people of his country in their special and everyday relationship with nature. When I ask teachers if they take field trips or plan activities outside the school grounds, they often mention visits to the forests and lakes to be found everywhere around them.

The Finnish take very good care of their environment and their surroundings. I have started to take photos of places I used to think inappropriate, due perhaps to cultural bias or considerations, and those places are school toilets. Every toilet I have seen in this country's schools for both smaller children and young people, for both students and staff—all or nearly all are notable for their impeccable cleanliness and hygiene. They are never dirty or defaced or malodorous. How is this possible? What does this say about the Finnish culture?

In a private, countryside, family-like environment, Finnish people can live for weeks in cabins with the most minimal modern conveniences without water facilities and sometimes without electricity. The only sources of comfort are silence and nearness to nature.

In a meeting in 2012 with a professor-researcher at the University of Jyväskylä, I mentioned the topic of school toilets as a reflection of the Finnish cultural environment, and she commented that a Russian delegation that came to visit the country's schools also mentioned their surprise at the meticulous cleanliness of the bathrooms.

*Särkelän Koulu*, the school is covered with snow, and right next to it, a barely discernable sports field covered by a thick blanket of snow. In this place surrounded by fields and lakes, it is not unusual to see children playing freely out in the open among the densely packed pine trees and in cold.

*Särkelän Koulu* is not new or large. In fact it has lost students and buildings. But the teachers' morale is high, and the school's daily activities do not in any way reflect the population change. Evidence of this is the music center and the impressive public library a short distance from the school.

The library is not only attractive, well lit, and packed with collections of both books and audiovisual materials, but it is also well used. The total number of collections or items in 2010 had risen to 72,736, of which 15,374 were children's books and located—as in other public libraries—in a special area for young readers, or artists or writers. The total number of books borrowed during the year had increased to 65,593 for adults and 22,397 for children. And even though the community is small and decreasing in size, the library collections continue to increase: During 2010, a total of 763 fiction books for adults were acquired, plus 420 for children, and 1,408 non-fiction books for adults and 67 for children. Also, during the same year, the library registered 76,746 visits. In more concrete numbers: the library received an average of nine visits per inhabitant, and lent 18 books per inhabitant during the year. Librarians from all the local libraries around the world can benchmark with this library. Kemijärvi is alive and kicking!

Fifty years ago, schools were even smaller, completely local, and based on a different pedagogical scheme, according to my hosts and friends, Inkeri, Helena, and Ensio, the latter two being retired teachers (see their comments below).

In rural areas like this one, schools operated in small premises, like family houses. They were home for the people living in the houses. There was only one classroom, and teachers lived there. The owner of the house lived on the premises, too. The size of the student population per school was 20 or 30 students. Students came to school from 9 a.m. to 1 or 2 p.m. A basic lunch was provided in schools, but students also brought milk and bread from their homes. Books were provided by the schools, and returned by the children at the end of the school year.

There was only one teacher who taught all the children. The teacher would ask older students to teach the younger ones. In larger families with many siblings, small children would learn from older siblings; otherwise they would learn to read and write from parents or teachers.

As in many other places, teachers would force students to write right-handed even if they were left-handed since birth. If schools were larger, with say two classrooms, students were brought from far away, and students and teachers lived together.

Teachers taught; students had to learn. *Hauki on kala*, literally meaning “a pike is a fish,” and semantically meaning that students had to concentrate on what the teacher was saying; it was the children’s own fault if they didn’t understand and learn. The teacher was not going to repeat again and again what he or she had already said. “I will not repeat that a pike [local fish] is a fish.” In other words, if you learn something, you have to understand the meaning of what you are learning.

Teachers and students used pencils, paper notebooks, erasers, and a ruler. Teachers were provided with maps, and other materials.

Teachers, who were respected very much, taught all the time—mostly two teachers, husband and wife; the man for older children and the wife for younger. In those days when children engaged in bullying, their punishment was to stay after the school day, just sitting and waiting all afternoon. There were no computers, no smart phones, of course, so bullying was more physical than psychological.

My two hosts, a couple who were both teachers, are still very active, managing the difficult life of Lapland. Savvy Helena takes care of the house and grandchildren; Ensio makes and repairs violins and other string instruments and manages a forest. At 75 years old, he is able to run a forest farm (cutting, loading, and carrying four tall pine trees in 1 h), do the fine work of a luthier, teach adults about the violin-making craft, and build new rooms for the house. Finnish people are, among other things, hard workers and very skillful with their hands and minds. The two children of my hosts, a former principal and a very crafty middle-aged Finn, have lives full of activities: Paula holds a full-time position in the Söndänkylä municipality, and Juhana teaches from time to time, makes and repairs violins and cellos following his father’s trade, and has many strengths in building, construction, and teaching. The entire family is very close-knit, working together in northern Finland, and enjoying weekends at the beautiful cottage of the mother-in-law, Inkeri, a very skillful and hard-working woman. Three adorable children not only work or play with numbers and letters at school but also play and run almost *ad libitum* in the forest at  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ).



## ***Vaajakosken Koulu***

*Vaajakosken koulu*, located in Jyväskylä, is an old school in a new building which opened in early 2012. It is an example of school modernity in its entire splendor. This physical learning environment is as good as it gets. It is a lower secondary (grades 7–9) school, soon to also become a grade 5–9 school and to receive fourth graders from elementary schools around the area.

I have been in this school before, in the old premises that were closed mainly for health reasons. The new building is phenomenal, full of modern information and communications technology (ICT) gadgets, and twenty-first-century desks for teachers, with camera projectors, LED projectors, recording devices, laptop computers, and control consoles on site, and with almost an unlimited amount of wall, floor, and ceiling electricity outlets.

Surrounded by beautiful snowy scenery, one interesting snapshot is a long hallway with youngsters in their stocking feet, seated on a wall bench, one after the other, working with personal computers on their laps, with winter jackets slung over their shoulders.

Classrooms are still modest, full of light, with whiteboards, student desks, and rolling chairs for teachers and children to facilitate mobility. Students are working in pairs or groups everywhere, and teachers circulate around the classroom. Teachers' desks do not look like teachers' desks anymore. In every classroom, the teacher has a modern corner-shaped desk, a huge flat panel computer, a laptop, and a console with different devices and controls. White boards are now more abundant.

Wide corridors and large sitting areas are full of round tables to accommodate 6–8 students at a time. Floor to ceiling windows are not only paths to the woods but also factories of light.

Clean and tidy, the school creates a nice, enjoyable, and functional physical learning environment. Toilets are private and sparkling clean. Classroom after classroom is wide and versatile, full of ICT set-ups and equipment, until you get to the computer or ICT-specific room where flat panel computers are displayed on round islands so students can work and communicate with each other at the same time. Back in 2004, when I started to visit schools in Finland and around the world, this arrangement was a new idea; today it is the norm. For safety reasons, all classrooms have at least two exit doors, and one can witness a combination of old materials and maps on the walls, together with LED projectors, laptops, hanging outlets, and chairs on wheels. There are no improvised classrooms or studios; each one follows its vocation or function: arts for arts, workshops for workshops, home economics for home economics, textiles for textiles, gym for gym, and music for music, as it is true and common in most Finnish schools. But classrooms per se tend to be very open, well lit, and versatile, enabling students and teachers to work in different daily arrangements. Finnish schools blend with nature too. Thus, the twenty-first-century school in Finland is a fusion of nature, technology, functionality, and versatility.

The architecture prioritizes open spaces, high ceilings, wide hallways, and versatile facilities, combining geometry with colors. The school lunch services, however, is pretty much the same as 8 years ago.

Finnish schools in the second decade of the new century look similar to schools at the turn of the century, but with more light, more modernity in terms of ICT and teaching gadgets, more versatility, and with many more places to rendezvous. However, the spirit of the school is the same.

### *Nepenmaenkoulu at Joensuu*

It was good that I came to Joensuu (near the knee of the female-shaped geography of Suomi) to visit two schools. It was a brief visit to one elementary school and one lower secondary or middle school, but it was a long train ride, taking almost 10 h on the intercity train, there and back. Interviews were conducted over almost already answered questionnaires, and visits to the premises of the two schools had to take place quickly.

Joensuu has a population of around 73,000 and is the capital city of North Karelia, which has a population of around 168,000. Economically, it is a timber city with its economy tied to the forest. Its university (formerly University of Joensuu) merged in 2010 with the University of Kuopio, to give rise to a vibrant University of Eastern Finland<sup>27</sup> with more than 15,000 students, almost 10% of the population of North Karelia and 20% of the capital city.

Jyrki Huusko is the *rehtori* (principal) of the elementary school. He is also a researcher with the university, a convenient combination. He says he is happy, fully committed to the school and school-related work, and he was, formerly and briefly, head of the education department at the Joensuu *kunta* (commune or municipality), and a leader in his own right.

From his viewpoint, it is all about children and children's well-being and care, and nurturing them to grow the way they want to grow, not the way we want them to grow.

The school and the school buildings are old. The oldest building dates back to 1960, before the school reform of the 1970s, and the newest building dates back to 1978, right toward the end of the implementation of the school reform. The school will receive new facilities in 2 years, but in the meantime this is the home for this school of 340 pupils of *Nepenmäenkoulu*<sup>28</sup> (elementary school, grades 1–6) with a 1-year preschool for 6-year-olds.

The school is literally surrounded by a forest, like many schools in Finland. The student population is almost entirely Finnish, and the performance results in national assessments have been higher than the means for Finland and Joensuu in mathematics and reading. Children seem entertained and happy, albeit in old buildings.

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<sup>27</sup> <http://www.uef.fi/uef/english> (September 21, 2012).

<sup>28</sup> <http://nepenmaenkoulu.jns.fi> (September 21, 2012).

One can see small but significant changes in the two buildings. Both buildings were constructed on the principle of one teacher/one class, so in that sense, none of the buildings is purpose-built for cooperative working. Classrooms are relatively small, but ample enough to allow for 20–25 students in very versatile settings. Hallways or mezzanines are very small, and classrooms are classrooms, with no teachers' offices, no shared areas, and no windows between classrooms. There is a drinking fountain—not found in more modern schools—right between two hand-washing sinks. The teachers' desks are full of technological devices, with the new camera projectors soon to replace overhead projectors. One can still see the old clumsy overhead projectors here and there in Finnish schools, but they are becoming part of history, soon to increase the overhead projectors' collection in the school museum in downtown Helsinki.

The 1978 building shows some fundamental changes: wider and longer hallways, brighter in color, a huge (for an elementary school) gymnasium for indoor sports, and relatively large wood- and metalworking workshops, where a group of third graders were building bird houses for the long-awaited spring season. The newer building also houses a very comfortable and cozy teachers' lounge, and arts, music, and textile studios. Particularly impressive are the special education rooms, for no more than ten pupils, literally full of materials, to awaken the interest of children in need of support—a big topic in Finnish school education.

## Chapter 7

# Finland's Teaching and Learning Environment

The aim of this chapter is to share the results of two research agendas: one in search of a taxonomy of teachers and teaching in Finland and the other in search of cultural learning environments as they occur in Finnish schools and homes in the twenty-first century.

### Teachers' Taxonomy and Environment

As part of a broader research project, the main findings of which were published previously (Andere 2008a), I introduced some additional exploratory questions in order to investigate further the factors behind the high performance of Finnish students. The questions were asked in two rounds of interviews conducted with knowledgeable individuals in Finland regarding their country's success in standardized tests such as PISA.<sup>1</sup> The first round of interviews was conducted from March 28 to April 10, 2004. At that time, my interviews were conducted with principals, teachers, and experts. In all, I completed a total of 33 nonrepresentative interviews. Of a list of 20 preestablished factors associated with student success, the five factors most frequently mentioned by interviewees as the top ranking factors were, in descending order: students' own outstanding abilities (21 mentions), teachers' level of training (17), class size (17), students' socioeconomic level (14), and class ambience (13). Two factors on the list of the top five ranking factors (level of training and class ambience) relate to teachers.

Furthermore, and with the same exploratory purpose, I visited Finnish schools<sup>2</sup> in three additional field trips (two in 2008 and one in 2009) and conducted 54 nonrepresentative interviews, some in groups and some individually according to the availability and wishes of interviewees. Nine interviews were granted by *lukio* (upper

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<sup>1</sup> Programme for International Student Assessment: <http://www.pisa.oecd.org>

<sup>2</sup> The schools visited were chosen judgmentally with the help of Finnish academic or government experts, or by networking that evolved from previous visits to principals in other schools. Most Finnish schools at the elementary and lower secondary levels (grades 6–9) are public, non-selective schools.

secondary) students; 26 by schoolteachers; 7 by principals; 4 by students in teacher-training colleges; and 8 by academic or government experts. For these rounds of interviews, interviewees were not asked to rank the factors as they did in 2004. This time, the questions were open-ended. Interviewees were asked to speculate on factors behind Finnish students' high performance on standardized tests such as PISA. The number of mentions and factors in descending order were: teachers (attraction to the profession, preservice training, motivation, attitudes, etc.), 36 times; society/culture, 35 times; equity and opportunities, 28 times; education system, 22 times; and pedagogies, 15 times.

Thus, teachers, or the quality of teachers, loosely defined, are mentioned by researchers, experts, professionals, students, and public opinion as the main or one of the main factors of success in students' school education. This was indeed confirmed by the former rounds of interviews.

In order to summarize the wealth of information provided by interviewees in this 2008–2009 inquiry, I have developed a taxonomy of the quality of teachers (Exhibit 1)

Exhibit 1 A Quality of teachers' taxonomy: good teachers and good teaching

| Generic Factors | Specific Factors  |
|-----------------|---|
| Cultural        | Trust among teachers and students<br>Teachers respected by society<br>Students respected by teachers<br>Teachers proud of their profession<br>Cooperation and networking among teachers   |
| Pedagogical     | Teachers teaching for critical thinking<br>Teachers allow children to play<br>Changing teaching styles and methods<br>Teachers connect with students<br>Different teaching for different students<br>Teaching with improved learning environments<br>Caring teachers for all and least talented children<br>Humane teaching without strict discipline<br>No hurry in teaching<br>Teachers who value students as individuals and enhance their individuality<br>Students motivated by teachers<br>Students challenged by teachers<br>Pedagogic freedom |
| Professionalism | Teachers serious about their work<br>Committed and hardworking teachers<br>Reliable teachers  |

Exhibit 1 B Quality of teachers' taxonomy: good teachers and good teaching

| Generic Factors     | Specific Factors  |
|---------------------|---|
| Gender              | Many female teachers who give the best of themselves  |
| System              | Teachers take part in curriculum design and implementation<br>Special teachers for special students<br>Highly trained teachers in the profession for many years<br>Good and homogeneous quality of teachers<br>Strong pre-university education in teachers' colleges<br>The best high-school students attracted by universities |
| Cognitive abilities | Good communication skills<br>High teaching quality<br>Profound knowledge of subjects taught   |

Exhibit 1 C Quality of teachers' taxonomy: good teachers and good teaching

| Generic Factors          | Specific Factors   |
|--------------------------|--|
| Meta-cognitive abilities | Thoughtful and reflective teachers<br>Planning teachers  |
| Non-cognitive abilities  | Love for their career and subjects taught<br>Fascination for sharing knowledge<br>Teachers who like working with students<br>Teachers working together with students instead of a top-down approach<br>Teachers who give the best of themselves<br>Teachers with good attitude<br>Teachers who work with passion<br>Teachers who make themselves available to children<br>Teachers who gain support and trust from their leaders<br>Love-filled environment in the classroom<br>High morale in teachers<br>Ethical teachers<br>Students challenged by teachers<br>Teachers concerned about their students<br>Positive interactions between students and teachers |
| Executive function       | Independent teachers<br>Teachers with authority  |

We can thus qualify this as a profile or taxonomy of Finnish teachers as seen by Finnish teachers, experts, and students in this sample that was small and nonrepresentative but based on the perceptions of knowledgeable individuals.

### The Finnish Learning Environment

According to the Finnish national curriculum, the learning environment “comprises physical, mental and social safety and security” (Finnish National Board of Education 2011, 41). However, the expression “learning environment” is used in specialized and nonspecialized literature in a very wide, diverse, and almost ubiquitous manner to describe different learning processes. A Google search for “learning en-

vironment” produced 14,900,000 results on June 26, 2012, and a more restricted Google Scholar search produced 617,000 results on the same day.

Therefore, a “learning environment” may have many meanings: cultural, physical, mental, social, pedagogical, and technological or virtual. For instance, a “supportive learning culture,” i.e., as in Finland, and in some Far East and Southeast Asian countries or regions, such as Hong Kong, Shanghai, South Korea, Japan, and Singapore, can in itself be a learning environment. Values and habits, such as honesty, hard work, and sociability, create a “cultural learning environment.” There are also physical learning environments, comprising architectural designs, equipment, premises, libraries, plus sport, arts, science and health facilities, and materials. And there are mental learning environments, composed of human interaction at home, in school, at work, or in the community, and involving respect, trust, cordiality, and an absence of bullying. There are also social learning environments, involving cooperation, teamwork, integration, and inclusion. Additionally, a “learning environment” or a “powerful learning environment” may also apply to more concrete instructional or cognitive meanings (constructivism, self-evaluations, tutoring, and collaboration), in which case the epistemology of learning environments is less diffused and refers to classroom-specific, subject-specific, instruction-specific or technology-specific arrangements or interventions (Goh and Khine 2002, and De Corte et al. 2003). We may also talk of formal and informal learning environments. And finally, spatial learning environments may refer to schools, homes, or companies, for instance.

The research reported in this section addresses the broader cultural learning environments—at school and at home—that facilitate or inhibit the more instructionally based, pedagogically prone classroom or subject learning environments.

## Methodology

Sample: A total of 53 interviews were conducted in 29 different school levels in 21 Finnish schools (some combined, that is, with more than one level<sup>3</sup>) in 12 different cities or towns. Tables 7.1 and 7.2 summarize the number of schools visited and questionnaires conducted, classified by school level and interviewees. The research was conducted from March 23 to April 29, 2012.

The selection of schools and interviewees was not random. Schools were selected with the help of professors, principals, and Opetushallitus (OPH) experts. The criterion for selection was: schools with powerful or interesting learning environments. No definition of learning environment was provided in advance. Teachers to be interviewed were selected by the principals of the schools visited. Therefore, the sample is judgmental rather than random. However, given the low between-school variance of PISA performance results in Finland, one can expect a very homogeneous learning environment in the country's schools.

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<sup>3</sup> Seven schools were counted more than once because questionnaires were answered by teachers from different school levels within the same school institution, i.e., preschool, elementary, lower secondary, or upper secondary.

**Table 7.1** Schools and cities

| Level           | School levels | Cities |
|-----------------|---------------|--------|
| Preschool       | 3             | 3      |
| Elementary      | 14            | 10     |
| Lower Secondary | 9             | 9      |
| Upper Secondary | 3             | 3      |
| Total           | 29            | 12     |

**Table 7.2** Interviews and levels of education

| Level           | Principal | Teachers | Total |
|-----------------|-----------|----------|-------|
| Preschool       | 1         | 4        | 5     |
| Elementary      | 12        | 14       | 26    |
| Lower Secondary | 7         | 10       | 17    |
| Upper Secondary | 2         | 3        | 5     |
| Total           | 22        | 31       | 53    |

Questionnaires: Interviews were based on a written questionnaire sent in advance to interviewees. Most of the questions were the same in all questionnaires. Some adaptations were made according to the levels of education: preschool, elementary, lower secondary, or upper secondary.

Content: The questionnaires were based on perceptions of principals and teachers with regard to learning environments in seven different issue areas:

1. Cultural learning environments at home and school
  - a. Shared values
    - i. At home
    - ii. At school
  - b. Shared habits or activities
    - i. Outside the school
    - ii. Inside the school
  - c. Expectations
2. Social learning environments:
  - a. Parents and schools
  - b. Shared activities in schools
  - c. Social weaknesses
  - d. Social strengths
  - e. Positive learning environment traits
  - f. Negative learning environment traits
  - g. Relationship with municipal authorities
3. Changes in Finland's education
  - a. Last 10 years in school education
  - b. Main lessons from PISA
  - c. Changes in the classroom and the school
  - d. Changes wanted



4. Technological learning environment
5. Factors associated with school success
6. The strongest perceived education level
7. Physical learning environment

## ***Results***

1. Cultural learning environments at home and school. It is extremely difficult to measure cultural values from any perspective, and even more so, perceptions of intangible values or habits. However, the following results reflect how teachers and principals think children are raised at home and educated at schools.

- a. Shared values:

- i. At home:

When all questionnaires (53) from all schools are taken into account, the cultural trait that was cited most frequently as the highest ranking trait that parents transmit to children at home was love and tenderness (23 mentions), followed by honesty (11 mentions), trust (6), and sociability (4). Honesty, however, is more frequently mentioned (38 times) if it is ranked as one of the three highest values at home, followed by trust (31 mentions), love and tenderness (30), and sociability (22). The values that received the most responses at the lowest ranking or least frequently mentioned level, when all responses from all schools were taken into account, in descending order were: discipline (21 mentions at lowest value), reading (as a surrogate for learning value, 13 hits), and obedience (11). The same order applies when values were counted as one of the three lowest rankings: discipline (38), reading (34), and obedience (30).

- ii. At school

When all questionnaires (52) from all schools are taken into account, the cultural trait that was cited most frequently as the trait that teachers try to transmit to children at school was sociability (12 mentions), followed by honesty (11), reading (9), love and tenderness (8), and trust (6). Preschool and elementary teachers were the only ones to mention "love and tenderness." When values were mentioned, as among the top three rankings, sociability was still the highest (38), followed by honesty (32), reading (23), and trust (21). The values that received more responses at the lowest ranking level when all responses from all schools were taken into account were: obedience (19), love and tenderness (12), and discipline (9). The following order applies when values were counted within the three lowest rankings: discipline (35), love and tenderness (27), and obedience (26).

b. Shared habits or activities:

i. Outside the school

Teachers and principals perceived playing mainly as fun. With a sample size of 50 responses for the question, “Why do children play at home?” 45 mentions were “for fun.” The results for how children play at home according to the perceptions of teachers and principals (48 responses) in descending order (mentioned as one of the six more frequent play activities) were: hanging out with friends (30 hits or mentions), Internet (30), video games (28), watching TV (27), sports (24), and music/art forms (16). How they play or what they do for fun less frequently (48 responses): reading (37), music/art forms (28), and sports (24).

With whom do they play at home? According to the teachers’ and principals’ perceptions (47 responses), children play mainly with other children (45 hits), alone (42), with mother (5), and with father (4).

How do teachers see playing? For preschool, elementary, and lower secondary students, 40 out of 48 teachers see playing as fun as opposed to playing for learning. And when children play for fun, what do they play? According to teachers (39 responses), they play with: sports and action games (25), videogames (14), computer games (8), in groups or with other children (7), smartphones and tablets (6), and toys, dolls, cars, and balls (6).

ii. Inside the school

What do children do at school when they have free time? The main activity, by far, as seen by teachers (52 responses), when the activity is ranked as the top one, is playing for fun (29 mentions), followed by hanging out with friends (7), playing for learning (6), and reading (5). If the activity is ranked in the two highest values, then children: play for fun (39 hits), read (18), do arts (14), and hang out with friends (8). The activities they do the least are: writing (28), playing for learning (14), reading (13), and doing arts (12).

c. Expectations: Teachers and principals (51 responses) think it is very important to parents that children go to school. On a scale from 1 to 7 (with 1 as not important and 7 as very important), the mean value is 5.73 and the median value is 6.

2. Social learning environments:

a. Parents and schools

How many times do parents and teachers meet per year? The answer (51 responses) varies a great deal depending on the level of education. In terms of person-to-person meetings, the number of times parents and teachers meet per year on average is the following: every day for preschool; 6.9 days per year for elementary school; 2.11 for lower secondary; and 1.6 for upper secondary. However, regardless of the number of times, teachers often answered qualitatively with expressions such as “whenever neces-

sary” or “whenever there is a problem,” or “every day through Internet or e-mail.” And when parents come to schools, what do they do? Teachers (52 responses) think that when parents come to school: they have individual meetings with teachers, attend group meetings, and attend festivals and performances. As for what parents do the least: attend board meetings, co-teach, and visit open classes.

b. Shared activities in schools

What are the main activities children do together with teachers other than classroom activities per se? Teachers (46) think they visit libraries, museums, theaters, forests, and the countryside. If children are at elementary school, they make this type of visits two times per month; if they are in lower secondary, 1.71 times per month; and if they are in upper secondary, 0.63 times per year, according to 45 questionnaires.

c. Social weaknesses

Teachers and principals (47 questionnaires) identified, in descending order, the following social weaknesses or challenges for students in all schools: dysfunctional families (21 mentions), Internet and TV content (15), bullying (7), videogames and computer games (5), lack of parent support (5), and parents' need for help (5).

d. Social strengths

Teachers and principals (49 questionnaires) identified, in descending order, the following social strengths for students in all schools: supportive families (29 mentions), supportive welfare society (16 hits), enough resources (9), and support in schools (8).

e. Positive learning environment traits

Teachers and principals from all schools (49 questionnaires) saw the following traits as positive for the teaching and learning process: communication with teachers (29 mentions), communication with parents (18), and communication among students (8).

f. Negative learning environment traits

Teachers and principals from all schools (48 questionnaires) saw the following traits as negative for the teaching and learning process: little contact with parents and teachers (18 mentions), too much TV, Internet, and video games (16), bullying (9), family situation (6), and do not sleep enough (4).

g. Relationship with municipal authorities

On a scale from 1 to 7, where 1 is “not at all” and 7 is “very,” to what degree do teachers and principals (48 questionnaires) from all schools see the relationship with local authorities as close, supportive, and valuable? In all cases, the mean value is above 4.5. The median value is 5.0 for the three categories. The value of the relationship receives a median of 6 for lower secondary teachers and principals.

### 3. Changes in Finland's education

a. Past 10 years in school education

How has school education in Finland changed during the past 10 years? Teachers and principals from all schools (42 responses) saw the follow-

ing changes: schools have become more inclusive and supportive (multicultural, special needs, and children in need) (15 mentions); more IT in schools and more IT skills in children (11); more students per classroom and bigger schools (6); and teamwork teaching (5).

b. Main lessons from PISA

What is the main lesson after 10 years of PISA? Teachers and principals from all schools (39 questionnaires) think the main lessons they have learned are: high-quality teaching force (12 mentions), self-confidence (3), do not know (3), closer relationship between teachers and students (2), and students do not enjoy school (2). This question received many different answers. Apart from those already mentioned, the following is a sample: results difficult to compare; social equality is the key; not good enough in creativity; teaching according to each student's needs; our students are quite similar; and same vernacular language. The majority of teachers and principals interviewed (20 from a sample of 37) think the small decrease in PISA performance in PISA 2009 has not sparked debate in Finland.

c. Changes in the classroom and the school

How have teachers and principals changed their teaching or leadership during the past 10 years? These are the main grouped answers from all schools and levels (44 questionnaires): more teamwork (10 mentions), shared leadership (9), more IT skills (8), no change (7), the need for constant change (3), and child-centered teaching (2).

d. Changes wanted

Teachers and principals (45 questionnaires) think the following are the features of school education in Finland that they would be most eager to change: fewer students per classroom (8 mentions), nothing (7), the curriculum (6), special teachers and programs for special education (5), more interactive methods (4), and new buildings (4).

4. Technological learning environment

The rapid and massive advent of information and communication technologies (ICTs) in schools has awakened interest in so-called technological learning environments. Teachers and principals (48 questionnaires) were asked to gauge, on a scale from 1 to 7, if some aspects of technology are less important (1) or more important or crucial (7) to learning success. These are the results: to have a laptop computer might or might not be important for children (since the mean value is 3.67 and the median is 4, teachers are not decided or neutral about the importance of this factor); iPads, androids, and tablets are not crucial (3.1 mean; 3 median); smart boards might or might not be crucial (3.77 mean; 3.5 median); but learning to use computers and navigate on the Internet is crucial for successful learners (5.71 mean; 6 median). A total of 46 teachers and principals think on average that parents place some importance on ICT gadgets in schools (4.26 mean; 5 median), but as some of them pointed out in the interviews, it is not really a concern for them, since most homes have similar or better ICTs than

what schools have. Training for teachers on how to use software is by far the most important ICT investment according to 45 teachers and principals.

5. Factors associated with school success

Teachers and principals (49 questionnaires) think the most important factor behind students' high performance on standardized tests such as PISA is the high quality of teachers (28 mentions), followed by an equal society and school system for all (12).

6. The strongest perceived education level

Teachers and principals (51 questionnaires) think the elementary school level is Finland's strongest education level (37 mentions) in terms of quality, followed by the upper secondary school level (11).

7. Physical learning environment

Many things can be said about the physical environment of Finnish schools. For example, they are tidy, well lit, and moderately resourced. I visited Finnish schools seven times between March 2004 and April 2012. I visited old and new schools, with old and new facilities, and only recently, I witnessed a drive toward more technological gadgets such as laptops, white digital boards, digital camera projectors, and light-emitting diode (LED) projectors. There is, however, a much more important learning environment that has to do with what the literature refers to as the teacher–student relationship. We can divide the analysis into tangible and intangible learning environments. The architectural arrangement and the gadgets belong to the tangible ones. Chapters 5 and 6 give a relatively detailed narrative of the intangible and tangible resources in Finnish schools.

## Opinions from Finnish Experts

In March and April 2012, I conducted eight interviews, of nine questions each, with experts—some academic and others governmental, and all of them fully involved in education or education policy. Interviewees gave their answers to open-ended questions. Here are their answers:

1. School education has changed in the past 10 years in the following ways: no major changes (4 mentions); more special education programs and student support (4); fewer budgetary resources (2); more students per class (2); and more social and family factors that challenge teachers (2).
2. The main lesson learned after 10 years of PISA: education system works well in Finland (3); Finnish schools create learning environments with lots of activities (3); and equality (2).
3. The ways that teaching has changed in classrooms in the past 10 years: use of ICTs (5); even more hard work (2); teachers work in teams (2); organized instruction (2); and less support from selfish parents (2).

4. The municipalities changed their education policy by: allocating fewer resources to schools (7); closing down small schools (3); more students per class (2); and no major changes (2).
5. Has the small decrease in PISA results sparked debate in Finland? No, no one is really concerned about PISA (7), but more concerned about boys than girls (3).
6. The most important factor associated with high PISA results is: teacher education (5); equality (4); public policies (2); special education (2); and society (2).
7. How will technology change education? New possibilities for learning (3); homes in Finland have better technology than schools, so in the future, schools will teach children how to program instead of how to use ICTs (1); not much change in comprehensive schools (1); more laptops, smart boards, Internet, mobile technologies and distance education, and more group learning (1); more connection between formal and informal learning; more student-centered education (1); and perhaps a new staff position in schools for pedagogical planning with ICTs (1).
8. The most important changes envisioned in the future for education (all answers mentioned only once): stronger social interaction; more networking; more emphasis on motivation and use of information sources; no real changes because of PISA and because we are so satisfied with our schools, maybe a little bit of change in the learning culture and student-centered learning; teachers better trained to handle the more difficult relationship with students; and more challenges in upper secondary education.
9. The most important changes envisioned in education policy: more social capital (teachers and schools working together); community building; intelligent accountability; perhaps education for the talented, but this will separate schools; and keeping class size small.

## Summing Up

According to the perceptions of teachers and principals, children in Finland seem to be raised and educated in cultural and social learning environments with the following characteristics: At home, students live with parents who have high expectations of schooling, and students experience more honesty, sociability, love, and tenderness, than discipline, reading (as a surrogate for learning), and obedience.

Teachers and principals see that children face a dichotomy. For some children, the main learning environment strength is a supportive family, but for others, the lack of a supportive family is their main weakness. In both cases, schools try to compensate for or reinforce families through supportive teachers and resources; and the society does so through a supportive welfare system. However, children face possible weaknesses or disadvantages from too much exposure to Internet and negative TV content; bullying; and video and computer games.

Parents visit schools very often at the preschool level and less often as the child moves through the system. And when parents go to school, they meet with teachers regarding students' concerns, but they very rarely attend open classes or engage in co-teaching. In all cases, parents and teachers communicate often by Internet by formal and informal means.

At schools, children face an environment which emphasizes sociability, honesty, reading (as learning), and trust more than discipline, love, tenderness, and obedience. In this sense, schools and homes reinforce each other.

Playing is mainly for fun and when children play outside the school, they hang out with friends, interact with the Internet, play video games, or watch TV, and they do so with other children or alone but almost never with parents. At school, children mainly hang out with friends or do some reading. They do not go out of the school with their class very often, but when they do, which is more frequent in elementary than in lower or upper secondary, they visit libraries, museums, theaters, forests, and the countryside. Forests surround many schools, and this reinforces the close relationship that Finns have with nature from the time they are born.

In both schools and homes, teachers and principals see that the most positive feature of children's learning environments is close contact or communication with highly trained teachers, parents, and peers.

Most teachers and principals see the local or municipal authorities as close, supportive, and valuable. This creates a larger learning environment than the school or home for children.

Over the years, schools have become more inclusive and supportive for children with all needs; at the same time, in terms of the physical learning environment, they have become more ICT oriented. Parents do not demand technology in schools, since in most cases, technology at home is on par with or better than in schools.

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# Art and Music

























# Classrooms













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STOP













# Home Economics




















# ICT and Science Classrooms





# Grundämnenas periodiska system

Kemiskt symbol → **Al**



Grundämne → **Aluminium** 13

Elektronförordning → **2-8-3**

Atomnummer → **13**

Atomvikt → **26,982**

Grundämne upptäckt av svensk kemist

- Bilkampor, flyverkapslar
- Fotskrador
- Bilar, Fyggplan, husgeråd
- Vattenledning
- Lötning av papper

- R Radioaktiv grundämne
- r Radioaktiv grundämne med mycket låg aktivitet

Atomnummer

Atomvikt

Används i gädden form för legering som kemisk förening

Grundämnetas tillstånd vid rumstemperatur

- gas
- vätska
- fast ämne (naturligt förekommande)
- fast ämne (ej naturligt förekommande)
- Förekomst i naturen
- huvudsakligen i gädden form
- huvudsakligen i förening
- sällt i gädden form som i kometer

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| <b>4</b><br>Ti<br>Titän<br>22<br>47,88       | <b>5</b><br>V<br>Vanadin<br>23<br>50,94     | <b>6</b><br>Cr<br>Krom<br>24<br>51,996   | <b>7</b><br>Mn<br>Mangan<br>25<br>54,938 | <b>8</b><br>Fe<br>Järn<br>26<br>55,845  | <b>9</b><br>Co<br>Kobolt<br>27<br>58,933 | <b>10</b><br>Ni<br>Nickel<br>28<br>58,693 | <b>11</b><br>Cu<br>Koppar<br>29<br>63,546  | <b>12</b><br>Zn<br>Zink<br>30<br>65,38      |   |  |   |   |   |   |   |   |  |  |  |  |   |   |   |   |   |   |   |   |  |  |   |  |  |  |   |  |   |   |  |  |  |  |  |  |   |   |  |   |   |  |   |   |   |   |  |   |   |  |  |  |   |   |   |   |   |  |  |   |                                       |  |  |   |                                       |  |  |                                       |  |  |   |   |   |   |  |   |   |   |   |   |  |  |
| <b>13</b><br>Al<br>Aluminium<br>13<br>26,982 | <b>14</b><br>Si<br>Silicium<br>14<br>28,086 | <b>15</b><br>P<br>Fosfor<br>15<br>30,974 | <b>16</b><br>S<br>Svavel<br>16<br>32,06  | <b>17</b><br>Cl<br>Klor<br>17<br>35,453 | <b>18</b><br>Ar<br>Är<br>18<br>39,948    | <b>19</b><br>K<br>Kalium<br>19<br>39,098  | <b>20</b><br>Ca<br>Kalcium<br>20<br>40,078 | <b>21</b><br>Sc<br>Skandium<br>21<br>44,956 | <b>22</b><br>Ti<br>Titän<br>22<br>47,88 | <b>23</b><br>V<br>Vanadin<br>23<br>50,94 | <b>24</b><br>Cr<br>Krom<br>24<br>51,996 | <b>25</b><br>Mn<br>Mangan<br>25<br>54,938 | <b>26</b><br>Fe<br>Järn<br>26<br>55,845 | <b>27</b><br>Co<br>Kobolt<br>27<br>58,933 | <b>28</b><br>Ni<br>Nickel<br>28<br>58,693 | <b>29</b><br>Cu<br>Koppar<br>29<br>63,546 | <b>30</b><br>Zn<br>Zink<br>30<br>65,38 | <b>31</b><br>Ga<br>Gallium<br>31<br>69,723 | <b>32</b><br>Ge<br>Germanium<br>32<br>72,630 | <b>33</b><br>As<br>Arsen<br>33<br>74,922 | <b>34</b><br>Se<br>Selen<br>34<br>78,96 | <b>35</b><br>Br<br>Brom<br>35<br>79,904 | <b>36</b><br>Kr<br>Krypton<br>36<br>83,80 | <b>37</b><br>Rb<br>Rubidium<br>37<br>85,468 | <b>38</b><br>Sr<br>Strontium<br>38<br>87,62 | <b>39</b><br>Y<br>Ytterbium<br>39<br>88,906 | <b>40</b><br>Zr<br>Zirkon<br>40<br>91,224 | <b>41</b><br>Nb<br>Niob<br>41<br>92,906 | <b>42</b><br>Mo<br>Molibden<br>42<br>95,94 | <b>43</b><br>Tc<br>Teknecium<br>43<br>98,906 | <b>44</b><br>Ru<br>Rutenium<br>44<br>101,07 | <b>45</b><br>Rh<br>Rhenium<br>45<br>101,07 | <b>46</b><br>Pd<br>Palladium<br>46<br>106,36 | <b>47</b><br>Ag<br>Silver<br>47<br>107,868 | <b>48</b><br>Cd<br>Kadmium<br>48<br>112,411 | <b>49</b><br>In<br>Indium<br>49<br>114,818 | <b>50</b><br>Sn<br>Bly<br>50<br>118,710 | <b>51</b><br>Sb<br>Antimon<br>51<br>121,757 | <b>52</b><br>Te<br>Tellur<br>52<br>127,603 | <b>53</b><br>I<br>Jod<br>53<br>126,905 | <b>54</b><br>Xe<br>Xenon<br>54<br>131,29 | <b>55</b><br>Cs<br>Cesium<br>55<br>132,905 | <b>56</b><br>Ba<br>Baryum<br>56<br>137,327 | <b>57</b><br>La<br>Lantan<br>57<br>138,905 | <b>58</b><br>Ce<br>Cerium<br>58<br>140,12 | <b>59</b><br>Pr<br>Praseodym<br>59<br>140,908 | <b>60</b><br>Nd<br>Neodym<br>60<br>144,242 | <b>61</b><br>Pm<br>Prometium<br>61<br>144,913 | <b>62</b><br>Sm<br>Samarium<br>62<br>150,36 | <b>63</b><br>Eu<br>Europium<br>63<br>151,964 | <b>64</b><br>Gd<br>Gadolinium<br>64<br>157,25 | <b>65</b><br>Tb<br>Terbium<br>65<br>158,925 | <b>66</b><br>Dy<br>Dysprosium<br>66<br>162,50 | <b>67</b><br>Ho<br>Holmium<br>67<br>164,930 | <b>68</b><br>Er<br>Erbium<br>68<br>167,259 | <b>69</b><br>Tm<br>Thulium<br>69<br>168,934 | <b>70</b><br>Yb<br>Ytterbium<br>70<br>173,054 | <b>71</b><br>Lu<br>Lutetium<br>71<br>174,967 | <b>72</b><br>Hf<br>Hafnium<br>72<br>178,49 | <b>73</b><br>Ta<br>Tantalum<br>73<br>180,948 | <b>74</b><br>W<br>Wolfram<br>74<br>183,84 | <b>75</b><br>Re<br>Rhenium<br>75<br>186,207 | <b>76</b><br>Os<br>Osmium<br>76<br>190,23 | <b>77</b><br>Ir<br>Iridium<br>77<br>192,222 | <b>78</b><br>Pt<br>Platina<br>78<br>195,084 | <b>79</b><br>Au<br>Guld<br>79<br>196,967 | <b>80</b><br>Hg<br>Bly<br>80<br>200,59 | <b>81</b><br>Tl<br>Tallium<br>81<br>204,384 | <b>82</b><br>Pb<br>Bly<br>82<br>207,2 | <b>83</b><br>Bi<br>Bismut<br>83<br>208,980 | <b>84</b><br>Po<br>Polonium<br>84<br>209 | <b>85</b><br>At<br>Astatin<br>85<br>210 | <b>86</b><br>Rn<br>Radon<br>86<br>222 | <b>87</b><br>Fr<br>Francium<br>87<br>223 | <b>88</b><br>Ra<br>Radium<br>88<br>226 | <b>89</b><br>Ac<br>Actin<br>89<br>227 | <b>90</b><br>Th<br>Torium<br>90<br>232,038 | <b>91</b><br>Pa<br>Protaktinium<br>91<br>231,036 | <b>92</b><br>U<br>Uran<br>92<br>238,029 | <b>93</b><br>Np<br>Neptunium<br>93<br>237,048 | <b>94</b><br>Pu<br>Plutonium<br>94<br>244,064 | <b>95</b><br>Am<br>Americium<br>95<br>243,061 | <b>96</b><br>Cm<br>Curium<br>96<br>247,070 | <b>97</b><br>Bk<br>Berkelium<br>97<br>247,070 | <b>98</b><br>Cf<br>Californium<br>98<br>251,083 | <b>99</b><br>Es<br>Einsteinium<br>99<br>252,083 | <b>100</b><br>Fm<br>Fermium<br>100<br>257,103 | <b>101</b><br>Md<br>Mendelevium<br>101<br>258,103 | <b>102</b><br>No<br>Nobelium<br>102<br>259,103 | <b>103</b><br>Lr<br>Lawrencium<br>103<br>262,103 |





PBS

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How?  
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The Alkali Group

|   |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|
| 1 | H  | Li | Na | K  | Rb | Cs | Fr |
| 2 | He | Be | Mg | Ca | Sr | Ba | Ra |
| 3 | B  | Al | Ga | In | Tl | Pb |    |
| 4 | C  | Si | Ge | Sn | Pb |    |    |
| 5 | N  | P  | As | Sb | Bi |    |    |
| 6 | O  | S  | Se | Te | Po |    |    |
| 7 | F  | Cl | Br | I  | At |    |    |



Periodic Table of Elements

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|





# Landscapes























# Libraries







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# Lunch



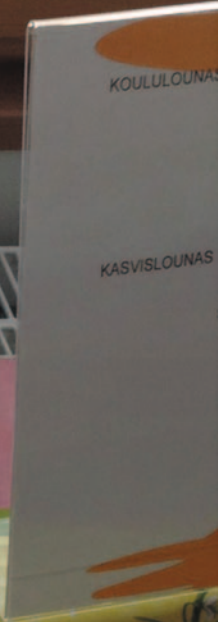








CATERING













# School Premises























# Sports























# School surroundings

























# Principals' and Teachers' Desks







ÄLÄ ALA  
LATTIJOITA  
SÄRKEÄ, EI SIINÄ OLE  
MITÄÄN JÄRKEÄ.



LEIKIT SITÄ  
TAI TÄTÄ  
ÄLÄ SIIVOMATTA  
JÄTÄ!

ÄLÄ LUE  
PELOTTAVISTA  
KARHUISTA,  
LUE VAIN  
MUKAVISTA  
KOHUISTA!

#### ENERGIAJAE

- \* keropöytäskätköt
- \* muovipöytäskätköt
- \* kankaiset
- \* langat
- \* puu
- \* lasiset
- \* kalvat, laminaatit
- \* kansiöt
- \* muovi

TILLY

Aa Bb Cc Dd Ee Ff Gg



(4:4)  
Borde  
Liverp  
Reykja















Luomutuotteen  
merkkivaltu

ÄLÄ VÄLÄ  
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KÄYTTÄ



# Woods and Metals

