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FINNISH EDUCATION SYSTEM

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This paper provides background information on the origins and development of the education system in Finland over the past four decades. It describes the current pre-tertiary education system and highlights the outstanding performance of Finnish students on the Programme for International Student Assessment (PISA). This level of performance is compared with that of students in Northern Ireland. In conclusion, the paper considers the issue of transferability of reforms from one education system to another and identifies some of the challenges which the Finnish education system faces in the future.

SUMMARY OF KEY POINTS

Finnish education has gone through significant policy and structural reforms since the 1960s, moving from a selective to fully comprehensive system.

These reforms appear to have been highly successful as Finnish students' performances on a series of international comparative assessments have placed them best or amongst the best in the world.

Distribution of performance on assessments suggests high and consistent performance standards across schools in the entire education system.

Reform has required significant resources but the costs of the Finnish school system are close to the European average and the system is generally considered highly cost effective.

Explanations given for the effectiveness of the Finnish education system include:

- An emphasis in Policy development on long term vision and realistic target setting.
- Priority being given to building high educational quality in primary school that is accessible to all, irrespective of domicile, gender, financial situation or linguistic and cultural background.
- The education system is flexible and its administration is based on intense delegation and provision of support.
- Special education is usually closely integrated into normal teaching and is highly inclusive by nature.
- Early intervention and educational counselling and guidance are widespread in primary and secondary schools.
- Teachers are highly valued experts with a relatively high degree of autonomy and at all levels of education are well trained and strongly committed to their work.

Like all other education systems, the Finnish system faces challenges in the future. These include potentially shrinking public budgets with implications for special educational needs provision and a gender gap in performance, with young male Finns performing less well than females in secondary education.

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INTRODUCTION

Finland has been a member of EU since 1995 and has two official languages Finnish (96%) and Swedish (3%). It has been noted that its '*... widely scattered population poses enormous challenges in organizing and delivering public services, particularly education and health. While two-thirds of its 5.2 million people live in urban areas, 1 million just in the capital area around Helsinki, Finland's overall density of 17 inhabitants per square kilometre is among the lowest in the world.*'¹ In relation to its economy, a recent description states that:

Finland's robust economy rivals that of many larger nations. In 2004 per capita GDP was 27,400 USD, and Finland has been ranked as the world's most competitive country in three of the four surveys done this decade. Exports—mainly electronic and technical goods, chemical products and timber—generated 49 billion euros in 2004, or roughly 26 percent of GDP. The high-tech sector offers one clue as to how quickly the economy has shifted. Since 1968, the electro-technical industry's share of exports has grown from a 1 percent sliver to 55 percent in 2004. Several factors have contributed to Finland's economic prowess. The country provides a welcoming environment for large international companies. Finland also offers well-trained and competent employees and an economic policy that is both transparent and predictable. The justice system is impeccable, and Finnish society is remarkably free of corruption. One of the key drivers of Finland's success, however, is a uniformly high-quality education system which helped speed the country's social and economic internationalization in the 1990s.²

In the 1970s, the Finnish education system moved from a dual selective school system to one which is fully comprehensive. The system has continued to develop since then and has attracted considerable international attention, given to Finland heading a number of comparative education studies undertaken over the last decade.

This paper provides background information on the origins and development of the education system in Finland over the past four decades. It describes the current pre-tertiary education system and highlights the outstanding performance of Finnish students on the Programme for International Student Assessment (PISA). This level of performance is compared with that of students in Northern Ireland. In conclusion, the paper considers the issue of transferability of reforms from one education system to another and identifies some of the challenges which the Finnish education system faces in the future.

¹ Erkki Aho et al. (2006) *Policy Development and Reform Principles of Basic and Secondary Education in Finland since 1968*. World Bank Education Working Paper – Series 2
http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079967208/Education_in_Finland_May06.pdf

² As above

ORIGINS AND DEVELOPMENT OF SYSTEM

In response to changing economic circumstances and the increasing inability of existing educational structures to meet the changing demands being placed upon it, the Finnish Parliament decided in 1963 to reform compulsory education using the comprehensive school model. Following this Parliamentary Decision, an Act on Basic Education Reform was passed in 1968 and a New Basic School Curriculum Framework had been developed by 1970.³ In relation to the origins and development of the system it has been observed that:

The structure and basic values of the current education system in Finland were created in the 1960s when a political consensus was reached to abolish the parallel basic education structure that divided students into two educational streams at the age of ten... Until the beginning of the 1970s the most able pupils after fourth grade were selected for an academic stream that was the only path to higher education, and for a practically-oriented vocational stream that completed the educational path of youth at the age of 16 with educational cul-de-sac. The 1968 Act on School System that created the foundation for the new nine-year comprehensive school insisted that municipalities provide all pupils with equal opportunities to receive a publicly financed high-quality basic education regardless of age, domicile, economic situation, gender, or mother tongue. Together with the equity principle this new legislation put a strong accent on raising the quality of learning and the education level of the entire nation.⁴

The structural reforms which began in 1972 gradually changed the Finnish school system from a two-tier selective system into a comprehensive system. It is worth noting, perhaps, that the reform, which continued in the 1980s and 90s, did not occur totally without opposition.

The new nine-year comprehensive school that consisted of six-year primary school and three-year lower secondary school became a permanent system for all pupils by the beginning of 1980s. The ambition to integrate the educationally divided nation with this new school was high, but it was also bitterly criticized by politicians, media and many parents, too. The opponents argued that the common comprehensive school would lower academic expectations and hence gradually lead to poorer educational attainment, especially among more able and talented pupils... Hence, this new school quickly became a highly political issue. However, the Law on Teacher Education from 1979 that upgraded all teacher education to Masters Degree level and the new Comprehensive School Curriculum (1971) provided the needed professional and pedagogical boost. In fact, early investments in developing instructional technologies, teaching methods and improving teachers' knowledge and skills helped to prove many of the critics wrong.⁵

³ As above p17-18

⁴ Pasi Sahlberg (2006) Raising the Bar: How Finland Responds to the Twin Challenge of Secondary Education? Profesorado. Revista de currículum y formación del profesorado, 10, 1 (2006) p4-5 <http://www.ugr.es/local/recfpro/Rev101ART4ing.pdf>

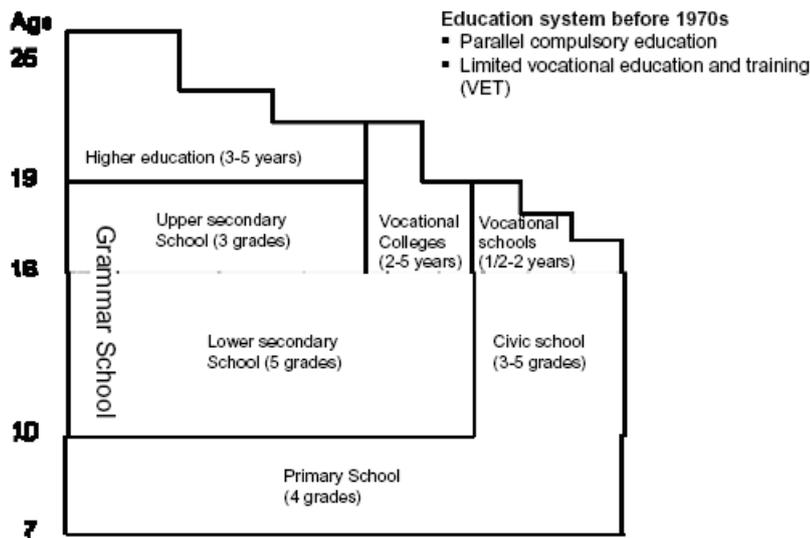
⁵ As above p4

In relation to these reforms, it has been noted that the administrative structures for implementing the change were initially highly centralised (1970s - mid 1980s) but from the mid 1980s became significantly more decentralised.⁶ The resources required to the deliver the reform appear to have been significant, as the following quotation, which relates to secondary school reform, underlines.

Following the Policy Decision, the Ministry of Education launched a massive program in 1975 to prepare for the new round of reform. Officials had learned from their comprehensive school experience how beneficial it was to pull stakeholders and experts into the planning process. To create commitment and win support, teachers, employers, unions and workers all had to have a say in shaping the new education system. And indeed, the Teacher Union, labor organizations and other associations worked closely with the government to restructure the upper grades...The planning organization was composed of 15 main committees, each with dozens of sections. All told, the team totalled more than 1,800 members. In addition, 42 full-time and almost 500 part-time experts assisted the committees, and 2,500 other experts provided advice. The magnitude of the effort can be seen in the deluge of documents the process produced: 3,100 pages of committee reports and 81,000 pages of curriculum texts.⁷

Three key phases of development of the Education System in Finland have taken place and these are shown in the figures below.

Figure 1 Education System before 1970s⁸



⁶ Kari Pitkänen (2005) Education Structures and Management. Pisa Conference in Helsinki 14-16 March 2005

<http://www.oph.fi/pageLast.asp?path=1,440,13979,39043,39046>

⁷ Erkki Aho et al. (2006) Policy Development and Reform Principles of Basic and Secondary Education in Finland since 1968. World Bank Education Working Paper – Series 2

http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079967208/Education_in_Finland_May06.pdf p72

⁸ As above p28-29

Figure 2 Education System after Basic and Secondary school reforms (1988)⁹

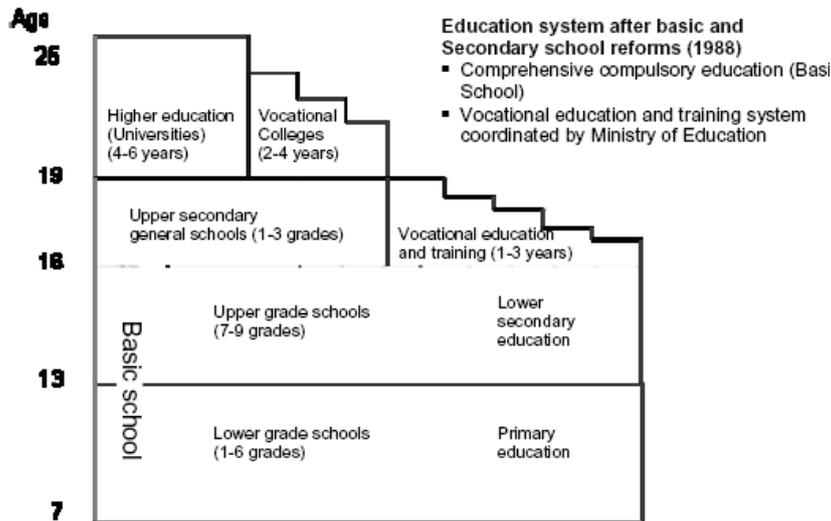
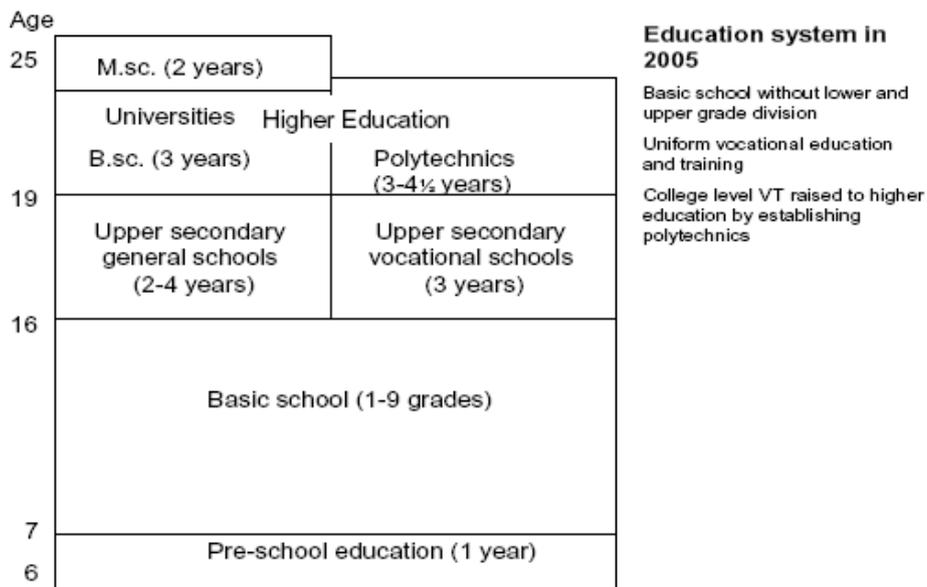


Figure 3 Education System 2005¹⁰



In relation to these phases it has been argued that each mirror's the country's economic development in the following way:¹¹

1. Transition from a northern agricultural country to an industrialized society.
2. A Nordic welfare society with growing service sector and higher technological level.
3. A high-tech internationalized country.

⁹ As above

¹⁰ As above

¹¹ As above p30

CURRENT SYSTEM

A number of detailed descriptions of the Finnish education system are widely available, including those published by Eurydice¹². This paper, therefore, provides only a brief overview of the system drawn mainly from information available from the Finnish National Board of Education and focuses on pre-tertiary levels.¹³ The key elements of the overall system are set out in Annex 1.

PRE-SCHOOL EDUCATION

Pre-school education is intended for six-year-olds, who will start their compulsory education in the following year. Participation in pre-school education is voluntary, and it is provided in day care centres and in pre-school classes operating in connection with comprehensive schools. Some 90 % of all six-year-olds participate in pre-school education. The majority of pre-school education is given in day care centres falling under the administrative field of the Ministry of Social Affairs and Health. Pre-school education provided in comprehensive schools covers about 15 % of the age group.¹⁴

The stated objective of pre-school education is to create a playing and learning environment offering inspiring activities and providing children with opportunities to develop holistically together with their peers. The aim is also to involve the children and their parents in the planning of pre-school education.

BASIC EDUCATION

[Age 7 – 16 *Peruskoulu/Grundskola* (Comprehensive school)]

Basic education is a nine-year general education, which is free and gives everyone who completes it the same right to further education. The stated purpose of basic education is to give the pupils knowledge and skills necessary in life, and to give everyone an equal educational foundation. Other goals include supporting the development of pupils as human beings, and their growth into ethically responsible members of society, and the promotion of learning and equality in society.

The comprehensive school is intended for pupils from 7 up to 16 years. The

¹² Eurydice, the information network on education in Europe, has since 1980 been one of the strategic mechanisms established by the European Commission and Member States to boost cooperation, by improving understanding of education systems and policies.

<http://www.eurydice.org/portal/page/portal/Eurydice>

¹³ The Finnish National Board of Education (FNBE) is the national agency in charge of development of education in Finland. It is working under the auspices of the Ministry of Education. FNBE is responsible for the development of pre-primary education and basic education, general upper secondary education, vocational education and training, formal adult education and training, liberal adult education (incl. folk high schools, study centres, summer universities) and extracurricular basic education in arts.

<http://www.oph.fi/english/frontpage.asp?path=447>

¹⁴ The Finnish National Board of Education (accessed March 2008)

<http://www.oph.fi/english/pageLast.asp?path=447,4699,4848>

school, however, can also be smaller and only have, for example, the primary school level grades 1 - 6 for children between 7 and 12 years or lower secondary school grades 7 - 9 for children between 12 and 15 years. According to Statistics Finland, there were 570,700 pupils in 3,263 active comprehensive schools in autumn 2007, 97 per cent of which were run by Municipalities.¹⁵ Of all comprehensive schools 78 per cent taught grades 1 to 6, fourteen per cent taught grades 7-9 and eight per cent of comprehensive schools taught all the grades from 1 through to 9. Twenty-seven per cent of comprehensive schools had fewer than 50 pupils and five per cent had over 500 pupils.¹⁶

Curriculum control and content

In relation to curriculum control and content, a Eurydice document notes that 'The national core curriculum was verified by the Finnish National Board of Education in 2004 and includes objectives and assessment criteria. Within this framework, schools and local authorities then form their own curricular regulations that are sensitive to the local context. Teachers choose their own teaching methods and have freedom to select their own teaching materials'.¹⁷

Assessment

Achievement is assessed both continuously and through tests set by teachers, with a certificate being awarded when a pupil successfully completes, as most pupils do, the full nine years of comprehensive schooling.

Children with Special Educational Needs

The comprehensive school system in Finland includes significant provision for children with special educational needs, as the following extract from a UNESCO report underlines:

The comprehensive school education must be arranged so that the child's age and preparedness for learning are taken into account. Thus even severely disabled children are taught at comprehensive schools. Compulsory education usually starts in the year that the child becomes seven years of age. For children with special needs, compulsory education starts one year earlier and lasts eleven years.

Instruction and, if necessary, syllabi can be adjusted, and an individual curriculum can be designed for the pupil. Pupils in need of special support are provided with personal education and rehabilitation programmes, which include measures concerning both education and rehabilitation.

Pupils with learning difficulties get remedial teaching in addition to normal classes. The educational authorities are responsible for the education of all children, including those with profound developmental disability. The aim is to integrate special-needs education as far as possible into ordinary

¹⁵ Statistics Finland (accessed March 2008)

http://www.stat.fi/til/pop/2007/pop_2007_2007-11-15_tie_001_en.html

¹⁶ Statistics Finland (accessed March 2008)

http://www.stat.fi/til/kjarj/2007/kjarj_2007_2008-02-22_tie_001_en.html

¹⁷ Eurydice (2007) National Summary Sheets on Education Systems in Europe and Ongoing Reform: Finland p3

http://www.eurydice.org/ressources/eurydice/pdf/047DN/047_FI_EN.pdf

schools, keeping in mind that there are those who benefit more from separate special-needs education.

According to the Basic Education Act, a pupil with minor learning disabilities, such as reading disorders, or difficulties of adjustment, or slight learning difficulties in individual subjects difficulties, is entitled to special education by the side of normal class hours. This is called part-time special education. If various support measures are not sufficient to eliminate a pupil's learning or adjustment difficulties, he or she may be transferred to entirely to special education.¹⁸

UPPER SECONDARY EDUCATION

Age 16-19 **Lukio/Gymnasium** (general upper secondary school)

Ammatillinen oppilaitos/Yrkesläroanstalt (vocational upper secondary institution)

Upper secondary education consists of general upper secondary education and vocational upper secondary qualifications. General upper secondary education is general education that prepares students for the matriculation examination. The principal objective of vocational programmes is vocational competence.

Students who have successfully completed compulsory education are eligible for general and vocational upper secondary education and training. Students are entitled to apply nationally to any institution offering upper secondary education. Student selection to upper secondary schools is mainly based on previous study record, whereas selection criteria used by vocational institutions also include work experience and other comparable factors and possibly entrance and aptitude tests.

In relation to the transition to upper secondary education, the absence of 'high stake standardised testing' and the provision of counselling and career guidance have been noted:

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

¹⁸ Education for All – Finland Country Report (accessed March 2008)

http://www.unesco.org/education/wef/countryreports/finland/rapport_2.html

make ill-informed decisions regarding their further studies. It also helps students to put more effort on those areas of their studies that are particularly needed in upper secondary school.¹⁹

Table 1 Destination of those who complete 9th grade of comprehensive school.

	Year of graduation						
	2006		2005	2004	2003	2002	2001
	No.	%	%	%	%	%	%
Completers of 9th grade of comprehensive school	65,838	100.0	100.0	100.0	100.0	100.0	100.0
Continued studies in year of graduation							
upper secondary general education	33,666	51.1	53.2	54.1	55.1	54.8	54.2
upper secondary vocational education	26,374	40.1	39.4	38.4	37.0	36.7	36.1
10th grade of comprehensive school	1,353	2.0	2.5	2.5	2.4	2.6	2.9
Did not continue studies	4,445	6.8	4.9	5.0	5.5	5.9	6.8

Source: Education Statistics, Statistics Finland²⁰

Table 1 above shows that only 7% of students do not continue studies after they have completed comprehensive school. Just over a half of students go on to upper secondary general education whilst 40% move to upper secondary vocational education. A small percentage of students complete a voluntary 10th year, which local authorities may decide to organise and which provides additional instruction up to a maximum of 1,100 hours.

Secondary General Education

The syllabus of general upper secondary education is designed to last three years, but students may complete it in 2 to 4 years. Instruction is organised in a form not tied to year classes and each course is assessed on completion. When a student has successfully completed the required number of courses, he or she receives a school-leaving certificate.

General upper secondary schooling ends with a national matriculation examination, which in addition to the test in mother tongue, comprises three compulsory tests in the other national language; a foreign language; mathematics; or general studies (humanities and natural sciences). Students may also include optional tests in the examination. Upon successful completion of the matriculation examination and the entire upper secondary school syllabus, students are awarded a separate certificate that shows the tests passed and the levels and grades achieved. Under certain conditions

¹⁹ Pasi Sahlberg (2006) Raising the Bar: How Finland Responds to the Twin Challenge of Secondary Education? Profesorado. Revista de currículum y formación del profesorado, 10, 1 (2006) p13 <http://www.ugr.es/local/recfpro/Rev101ART4ing.pdf>

²⁰ http://www.stat.fi/til/khak/2006/khak_2006_2008-01-17_tie_001_en.html

students in vocational upper secondary education and training may also take the matriculation examination.

Secondary Vocational Education

Vocational education and training cover seven sectors of education and includes 53 vocational qualifications and a total of 119 different study programmes. Studies last up to three years and each vocational qualification consists of studies in core subjects, such as languages and sciences, free-choice studies and an element of on-the-job learning in work life.

Students' skills and knowledge are assessed after completion of each study module. A qualification certificate is awarded after completion of all studies included in the individual study plan.

HIGHER EDUCATION

The Finnish higher education system consists of two parallel sectors: polytechnics and universities. Universities are characterized by scientific research and higher education based on it. Polytechnics are working life oriented and operate on the basis of higher expertise requirements set by working life. Higher education is popular, and the number of applicants is constantly a multiple of the intake, meaning that all fields of study must restrict the admission of applicants.

Table 2 Direct transition to further studies of completers of the 9th grade of comprehensive school and the matriculation examination 2001-2006

	Year of graduation						
	2006		2005	2004	2003	2002	2001
		%	%	%	%	%	%
Completers of the matriculation examination*	33,091	100.0	100.0	100.0	100.0	100.0	100.0
Continued studies in year of graduation							
in upper secondary vocational education	1,398	4.2	4.4	4.0	4.0	4.0	4.1
in polytechnic education	5,766	17.4	18.2	17.0	15.2	16.0	11.7
in university education	6,774	20.5	19.5	19.2	19.0	19.4	19.4
Did not continue studies	19,153	57.9	57.9	59.8	61.8	60.6	64.8

Source: Education Statistics, Statistics Finland²¹

Matriculation examination refers to a final examination of upper secondary general school which is set by the matriculation examination board and which a student studying the full upper secondary general school syllabus can take. Satisfactory pass of the matriculation examination leads to a matriculation examination certificate. As shown in Table 2 above, in 2006, of those

²¹ http://www.stat.fi/til/khak/2006/khak_2006_2008-01-17_tie_001_en.html

students who completed the matriculation examination, a fifth went on to university education and 17% went on to polytechnic education.

FUNDING AND ADMINISTRATION

The following sections of the paper provide information relating to the funding and administration of the education system in Finland.

COST/FUNDING

The costs of this school system are close to the European average, as is the number of lessons. The system is generally considered highly cost-effective²² and one report notes that:

...the building of an equity-based and well-performing Finnish education system has occurred with relatively modest education spending. Moreover, the education system is primarily financed from public sources. In 2002, 2.2 percent of total education expenditure came from private sources, while 99.2 percent of primary and secondary education expenditure was publicly financed... Indeed, total expenditure on educational institutions as a percentage of GDP for all levels of education declined from 7.9 percent in 1992 to 6.3 percent in 1995 and most recently to 6.0 percent in 2002... This indicates that high participation rates and equity coupled with good learning achievement have been established without increasing educational spending, quite the contrary.²³

The same report, went on however to identify the funding challenges which Finland faced in relation to education funding.

Since the economic crisis of 1990s, local education authorities have increasingly struggled with shrinking budgets, leading to enlarged class sizes, reducing some school-support services, and, in many cases, also merging and closing of schools to gain efficiency... The number of comprehensive schools (grades 1 to 9) has declined by 20 percent over the last ten years. Nevertheless, basic conditions for good secondary level schooling for all have been made available throughout the country...securing necessary resources for and investments in initial preparation of teachers in the universities has contributed positively later on to [a] teaching force that has not only been adaptive to necessary school improvement but also capable to look for scientifically-based solutions to common problems in their schools.²⁴

ADMINISTRATION

As has been noted earlier, Finland has moved from a highly centralised to a highly decentralised model of administration during the last four decades. The key elements of the administration system are:

²² <http://virtual.finland.fi/netcomm/news/showarticle.asp?intNWSAID=25825>

²³ Pasi Sahlberg (2006) Raising the Bar: How Finland Responds to the Twin Challenge of Secondary Education? Profesorado. Revista de currículum y formación del profesorado, 10, 1 (2006) p7 <http://www.ugr.es/local/recjpro/Rev101ART4ing.pdf>

²⁴ As above p8

- Parliament
- Ministry of Education
- Local Authorities
- Schools and Teachers

The following descriptions of the roles of each of these elements is extracted from information available from the Ministry of Education.

Parliament

Parliament passes legislation concerning education and research and determines the basic lines of education and science policy. The Government and the Ministry of Education, as part of it, are responsible for preparing and implementing education and science policy. The Ministry of Education is responsible for education financed from the state budget. The Government adopts a development plan for education and research every four years.

Ministry of Education and National Board of Education

The Ministry of Education is the highest education authority in Finland, supervising publicly subsidised education and training provision, from primary and secondary general education and vocational training to polytechnic, university and adult education.

The Ministry of Education and the National Board of Education are responsible for implementing education policy and for administering the education system at the central government level. However, many matters are decided by the education and training providers themselves, that is, local authorities and their consortia. Pre-primary and basic education and upper secondary general and vocational education are governed by objectives set in legislation and by national core curricula. General education and vocational training are co-financed by the government and the local authorities

Local Authorities

Local administration is the responsibility of the local authorities (municipalities), which play a prominent role as education providers. Most institutions providing basic and upper secondary level education are maintained by local authorities or joint municipal boards (federations of municipalities). Municipalities are the only level of local government in Finland, although there are a number of regional bodies that are regional arms of the national government or collectives of municipalities. Education is one of the functions of the 446 municipalities only 14 of which serve populations of over 50,000 inhabitants and 200 of which serve populations of fewer than 4,000 inhabitants.²⁵

²⁵ Review of Public Administration Northern Ireland web site (accessed March 2008)
<http://www.rpani.gov.uk/index/rpa-reviewresearch-decisions/research-old/study-visits/finland.htm>

Schools and Teachers

Schools in Finland have a relatively large degree of autonomy and teachers have a key role in the running and success of schools as the following extracts from a comprehensive report on the Finnish Education system underline:

In the early 1990s, the era of a trust-based culture formally began in Finland. The culture of trust basically means that the system, that is, the Ministry of Education and the National Board of Education, believes that teachers together with principals, parents, and their communities know how to provide the best possible education for their children and youth...The National Board of Education (NBE) approves the national framework curriculum, but municipalities and schools are obliged to prepare the school curriculum, and have [the] right to choose textbooks and select instructional methods. Teachers also create their own ways to measure student progress, and learning-oriented assessment is an integral part of daily school life. The school and teacher autonomies are commonly seen as the factors that positively affect the high quality performance of schools and entire education system...The teaching profession has always enjoyed great public respect and appreciation in Finland. Parents trust teachers as professionals who know what is best for their children. Teachers therefore have considerable independence in the classroom in terms of choosing appropriate pedagogical methods. A teacher's work is considered to be an independent, high-status profession that attracts some of the best secondary school graduates. Indeed, only about 10 percent of some 5,000 applicants are accepted each year to the Faculties of Education in Finnish universities. All teachers in Finland need a Master's degree to qualify for a permanent teaching job.²⁶

There is a strong emphasis in Finland on self evaluation and education and training providers have a statutory duty to evaluate their own activities and participate in external evaluations. On this issue, Eurydice provides the following overview:

There is no separate school inspectorate and inspection visits to schools conducted by state authorities have been abandoned. The activities of education providers are guided by objectives laid down in legislation and the national core curricula. The system relies on the proficiency of teachers in their efforts to meet the objectives laid down in the curricula. There is strong focus on both self-evaluation and external evaluation. A separate Evaluation Council for Education and Training has been operating in conjunction with the Ministry of Education since April 2003. It is responsible for planning, co-ordinating, managing and developing the evaluation of basic education and upper secondary education and training. The polytechnics and universities are responsible for the evaluation of their own

²⁶ Erkki Aho et al. (2006) *Policy Development and Reform Principles of Basic and Secondary Education in Finland since 1968*. World Bank Education Working Paper – Series 2
http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079967208/Education_in_Finland_May06.pdf pp 9-12

operations and outcomes. In this respect, they receive support from the Higher Education Evaluation Council.²⁷

THE PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT (PISA)

The Finnish school system has attracted significant attention from around the world, due to its students' performance on PISA (The Programme for International Student Assessment). PISA is an internationally standardised assessment that was jointly developed by participating countries and administered to 15-year-olds in schools.²⁸ Assessment takes place in three-yearly cycles and each cycle is named according to the year in which the assessment takes place. The survey was implemented in 43 countries in the first assessment in 2000, in 41 countries in the second assessment in 2003, in 57 countries in the third assessment in 2006 and 62 countries have signed up to participate in the 4th assessment in 2009.

In all PISA cycles the domains of reading, mathematical and science literacy are assessed. Each cycle, however, focuses on one of these three areas. The main focus of PISA 2000 was on reading literacy. In PISA 2003, the emphasis was on mathematical literacy and an additional domain on problem solving was also introduced. In the PISA 2006 cycle, the focus was on scientific literacy. PISA 2006 also included reading and mathematics as minor domains and collected data on student, family and institutional factors that could help to explain differences in performance. In all three PISA cycles, Finnish students have been rated as best or amongst the best.

Given the sampling used in PISA, comparisons can be made between the mean scores obtained by students in Finland and those of students in Northern Ireland. A recent report from the National Foundation for Educational Research looked specifically at student achievement in Northern Ireland in relation to PISA 2006 and compared performance with other participating countries, including Finland. Annex 2 of this paper contains a number of figures from this report which provide an overview of these comparisons.

In relation to the science scale, Finland was the highest-performing country and led a group of nine countries that significantly outperformed Northern Ireland. In addition to Finland, only two other EU member states (Estonia and the Netherlands) formed part of this group.

Finland had the second highest overall mean score in mathematics attainment and was only one point behind the highest scoring country, Chinese Taipei. It headed the group of 7 EU member states which significantly outperformed Northern Ireland in mathematics scores.

²⁷ Eurydice (2007) National Summary Sheets on Education Systems in Europe and Ongoing Reform: Finland p2

http://www.eurydice.org/ressources/eurydice/pdf/047DN/047_FI_EN.pdf

²⁸ http://www.pisa.oecd.org/pages/0,3417,en_32252351_32235907_1_1_1_1_1,00.html

Finland had the second highest overall mean score in reading attainment (only Korea having a higher score). In addition to Finland, however, the Republic of Ireland was the only other EU member state in the group of 7 countries which outperformed Northern Ireland in this area.

Distribution of Performance

Analysis of PISA results is not confined to overall mean scores and contains analysis of performance differences between schools in each country and the extent to which such differences can be explained by socio-economic factors. As regards these differences, Finland and Northern Ireland students' results differ significantly. Finland is not only notable for its high average performance but also for its low levels of between school differences and the relatively low extent to which students' socio-economic characteristics account for these differences. In relation to Northern Ireland, the 2006 PISA results show high levels of between school differences, which may be accounted for by socio-economic differences. Commenting on between school differences a report from the PISA 2006 assessment stated that:

On average across OECD countries, around one-third of all variation in student performance (33%) was between schools, but this varied widely from one country to another. In Germany and the partner country Bulgaria performance variation between schools was about twice the OECD average... In other countries, school differences played only a minor part in performance variation. In Finland less than 5% of the overall performance variation among OECD countries lay between schools and in Iceland and Norway it was still less than 10%....Considering that Finland also showed the highest overall performance in science suggests that Finnish parents can rely on high and consistent performance standards across schools in the entire education system.²⁹

Addressing the importance of socio-economic differences the report added that:

Students' socio-economic differences accounted for a significant part of between school differences in some countries. This factor contributed most to between-school performance variation in the United States, the Czech Republic, Luxembourg, Belgium, the Slovak Republic, Germany, Greece and New Zealand, and the partner countries Bulgaria, Chile, Argentina and Uruguay.

Less than 10% of the variation in student performance was explained by student background in five of the seven countries with the highest mean science scores of above 530 points (Finland, Canada and Japan, and the partner countries/economies Hong Kong- China and Estonia).³⁰

²⁹ OECD – The Programme for International Student Assessment 2006 – Executive Summary (accessed March 2008)

<http://www.oecd.org/dataoecd/15/13/39725224.pdf>

³⁰ As above

Northern Ireland's results differ significantly from Finland's in terms of the distribution of performance, as these extracts from a report by the National Foundation for Education Research (NFER) show.

Northern Ireland had a wider spread of attainment [on science assessment] than all other countries participating in PISA. As well as high achievers, Northern Ireland had a substantial 'tail' of low-scoring students.

In contrast to science, the spread of attainment in mathematics was similar to the average for OECD countries. While the proportion at the lowest levels was similar to the OECD average, the proportion at the highest levels was slightly below the OECD average...

As with science, and in contrast to mathematics, the spread of attainment in reading was wide. Only seven countries had a wider gap between the highest and lowest achieving students. Compared with the average for OECD countries, the proportions at the lowest PISA levels of attainment were similar while the proportions at the highest levels were slightly higher.³¹

Explaining the PISA success

The Finnish achievements on PISA have been widely debated and a range of explanations given for the relative success of the Finnish education system. Some explanations have focused at the system level whilst others have focused on specific elements related to schools, teachers and curriculum. Commenting on the success of the Finnish reforms in building a secondary education system that has experienced rapid growth of access and recognized improved quality, one observer has highlighted the following five factors:

- Policy development has emphasised long term vision and realistic target setting.
- Priority has been in building high educational quality in primary school that is accessible to all pupils.
- Designing a system of early intervention and educational counselling and guidance in primary and secondary schools.
- Help all students to be successful in transition from primary to secondary education and create second chance paths to increase the rate of success.
- Promoting lateral capacity building in which schools and municipalities learn from each other.³²

The Finnish National Board of Education (FNBE), the national agency in charge of development of education in Finland has suggested that some explanations for why Finland did so well on PISA are to be found in the main

³¹ Bradshaw, J., Sturman, L., Vappula, H., Ager, R. and Wheater, R. (2007). *Student Achievement in Northern Ireland: Results in Science, Mathematics and Reading among 15-year-olds from the OECD PISA 2006 study* (OECD Programme for International Student Assessment). NFER. Executive Summary pp vii-ix

³² Pasi Sahlberg (2006) Raising the Bar: How Finland Responds to the Twin Challenge of Secondary Education? Profesorado. Revista de currículum y formación del profesorado, 10, 1 (2006) p4-5 <http://www.ugr.es/local/recfpro/Rev101ART4ing.pdf>

principles for comprehensive education in Finland. It underlines that:

- The Finnish school system offers equal educational opportunities to everyone irrespective of domicile, gender, financial situation or linguistic and cultural background. With this objective in mind, accessibility of education is ensured throughout the country. Finland does not have segregated educational services for different genders, i.e. no girls' and boys' schools. Basic education is provided completely free of charge (including teaching, learning materials, school meals, health care, dental care and school transport).
- Basic education is an integrated nine-year structure intended for the entire age group. Schools do not select pupils; instead, every pupil is guaranteed access to a school within their own catchment area. Even children with the most severe intellectual disabilities fall within the framework of common basic education.
- The education system is flexible and its administration is based on intense delegation and provision of support. Steering is based on objectives set out in the Basic Education Act and Decree and within the National Core Curriculum for Basic Education. Responsibility for provision of education and implementation of objectives rests with local authorities (municipalities).
- Activities at all levels are characterised by interaction and partnership building. In order to develop the school system, there is co-operation between different levels of administration, schools and other sectors of society. Finnish school authorities also co-operate a lot with subject associations and teacher and rector organisations. This has secured strong support for development measures.
- Plenty of attention is focused on individual support for pupils' learning and well-being and relevant guidelines are included in the National Core Curriculum. Every pupil receives support to help them perform their studies successfully. Only 2% of pupils have to repeat a year. Years are mostly repeated during the first or second school year. Only 0.5% of pupils fail to be awarded the basic education certificate. More than 96% of those completing basic education continue their studies at upper secondary level.
- Assessment of both schools' learning outcomes and pupils is encouraging and supportive in nature. The aim is to produce information that will help schools and pupils to develop. There are no national tests of learning outcomes and no school league tables. Pupils and schools are not compared with each other. National assessments of learning outcomes are based on samples and the key function of assessment is to pinpoint areas requiring further improvement in different subjects and within the entire school system.
- Teachers working at all levels of education are well-trained and strongly committed to their work. All teachers are required to hold a Master's degree and initial teacher training includes teaching practice. The teaching profession is highly respected and popular in Finland, which

makes it possible to select the best young students. Teachers have an independent position in their work.

- Organisation of schoolwork and teaching is guided by a conception of learning where pupils' own active involvement and interaction with teachers, fellow pupils and the learning environment are important. Pupils process and interpret the information that they absorb on the basis of their prior knowledge structures.³³

Commenting on PISA 2000, the Finnish PISA team from the Institute for Educational Research at the University of Jyväskylä noted that there was no one single factor behind the high reading literacy achievement of Finnish students. Rather, the team suggested, a whole network of interrelated factors were associated with good performance. This network the team went on to say "...connects students' own interest and engagement in reading, their learning strategies and leisure activities in the learning environments provided by school and homes and also with students' own and their parents' and teachers' values, aims and expectations". Commenting on possible success factors the team noted that:

Comprehensive school – a pedagogical philosophy and practice

One effort to strengthen the principle of equity in Finland has been to build up a comprehensive school that every child attends free of charge nine years from the age of 7 to the age of 15 or 16. Comprehensive school is, however, not only a system. It is also a matter of pedagogical philosophy and practice. It accentuates that school is for each child and the school has to adjust for each child's needs. The pedagogy is built up to fit for heterogeneous student groups. Teachers cannot exclude anybody or send him or her to another school.

Teachers are highly valued experts

In order to succeed in a heterogeneous group a teacher has to be well educated, a real pedagogical expert, which Finnish teachers are. All teachers have a master's degree either in educational science or in subject area. They are paid relatively well, compared to the most other OECD countries. The teacher's - especially the class teacher's - profession is valued and popular in Finland.

Right to special education for all

Special education has likewise played an important role in Finland in catering for students who have problems following regular teaching. But in Finnish schools special education is not only for students with serious problems in their studies: every student is entitled to ask special help in a school. Special education is usually closely integrated into normal teaching and is highly inclusive by nature. Only about two per cent of students attend separate special education institutions.

Flexibility in curriculum

Until the 90s, the Finnish national core curriculum used to be strict and detailed and textbooks meticulously controlled, the goal being (adequate) educational consistency across schools and classrooms. The structure,

³³ The Finnish National Board of Education website (accessed March 2008)
<http://www.oph.fi/english/SubPage.asp?path=447:65535:77331>

organisation, contents and resources of the comprehensive school were minutely established in the curriculum. A profound change in curricular philosophy and practice took place in the early 90s. The national curriculum underwent reorganisation, whereby it became more flexible, decentralised and less detailed. At the same time, questions about the accountability of schools and about the need for national testing programmes and national standards for student grading gained momentum also in Finland.

Cultural homogeneity

In the long term, the development of the Finnish comprehensive school has been underpinned by an exceptionally broad cultural and political consensus about the main lines of national education policy. In Finnish culture, grave political conflicts and sudden changes in educational thinking have been relatively rare.³⁴

Specifically in relation to maths, one Finnish academic commenting on PISA results has noted that:

The success of Finland in PISA has surprised mathematicians and mathematics educators both in and outside Finland, myself among them. Nevertheless, because of my background and experience, it was easy for me to understand the reasons behind this success. The five main reasons are the success of pre-service teacher education, the culture of the teaching profession, the success of in-service teacher education, the different efforts which have been made to develop mathematics education and the daily traditions of school life in Finland.³⁵

A group of over 200 mathematics teachers in universities and polytechnics, however, have warned against making too much of the Finnish students mathematics literacy, as demonstrated on PISA assessments. Commenting on the results of the 2003 PISA assessment, the group warn that:

The results of the PISA survey have brought about satisfaction and pride in Finland. Newspapers and media have advertised that Finnish compulsory school leavers are top experts in mathematics.

However, mathematics teachers in universities and polytechnics are worried, as in fact the mathematical knowledge of new students has declined dramatically. As an example of this one could take the extensive TIMSS 1999 survey, in which Finnish students were below the average in geometry and algebra. As another example, in order not to fail an unreasonably large amount of students in the matriculation exams, recently the board has been forced to lower the cut-off point alarmingly. Some years, 6 points out of 60 have been enough for passing.

³⁴ Pirjo Linnakylä & Jouni Välijärvi (2003) Finnish Students Performance in PISA – Why such a Success? From the Finnish PISA team Institute for Educational Research, University of Jyväskylä. Published as: Linnakylä, P. & Välijärvi, J. 2003. Das erfolgreiche Abschneiden von finnischen Schülern bei der PISA-Studie. Welche Erklärungen gibt es dafür? Forum Jugendarbeit International / Dirk Hänisch, Reinhard Schwalbach (toim). Bonn: Internationaler Jugendaustausch- und Besucherdienst der Bundesrepublik Deutschland, 284-295.

³⁵ George Malaty (University of Joensuu, Finland) What are the Reasons Behind the Success of Finland in Pisa? <http://www.cimt.plymouth.ac.uk/journal/malaty.pdf> (accessed March 2008)

This conflict can be explained by pointing out that the PISA survey measured only everyday mathematical knowledge, something which could be - and in the English version of the survey report explicitly is - called "mathematical literacy"; the kind of mathematics which is needed in high-school or vocational studies was not part of the survey. No doubt, everyday mathematical skills are valuable, but by no means enough.

CONCLUSION

Whilst there appears to be a general consensus that Finland has been successful in developing a high performance education system over the past four decades, like all education systems it faces challenges in the future. In this context it has been noted, for example, that:

Despite good overall quality of secondary education, the parallel and socially and educationally dividing structure of upper secondary education has remained in Finland. Furthermore, there are some commonly accepted concerns that may be seen as problems that need to be resolved. First, although employers and business leaders are participating actively in curriculum development and quality assurance of vocational secondary education, some specific occupations suffer from inadequate training. As the number of vocational qualifications has decreased and curricula have become more general, employers are still expecting fairly specialized knowledge and skills from newly trained workers. Second, the status gap between general and vocational upper secondary education remains wide despite the efforts to make vocational education more attractive among youth. This is an equity issue because many students still seem to make their educational career choices based on the status of the available educational options. This means that educational performance rather than genuine interest more often than not determines students' choices at the transition point. Moreover, only about 17 percent of students who complete vocational secondary education continue education at tertiary level. Third, expanding number of students who require special needs education services is raising worries. Nearly every fourth basic school student has been included at some point in special needs education. This may be part of the strengthened early intervention strategy but more likely it indicates growing social and behavioral problems in society that are reflected in schools. Education policies are continuously addressing the urgency of arranging appropriate special needs education at all levels of schooling. However, when local education authorities are struggling with shrinking public budgets, special needs education is often the area that suffers the most. Finally, it seems like secondary education is becoming a particular challenge for Finnish young men. Almost one if [sic] every five young male Finn is without secondary education degree. Closing the gender gap in secondary education has become the next task for the Finnish policy-makers in raising the bar of secondary education even higher in the future.³⁶

³⁶ Pasi Sahlberg (2006) Raising the Bar: How Finland Responds to the Twin Challenge of Secondary Education? Profesorado. Revista de currículum y formación del profesorado, 10, 1 (2006) p4-5 <http://www.ugr.es/local/recfpro/Rev101ART4ing.pdf> p24

What may work in context does not necessarily work in another and, in the context of much international interest in the Finnish system, the question as to how transferable the system or elements of it might be to other education systems is important. Clearly it is not simply a matter of copying as this comment underlines:

While the cross-national studies have identified a number of school variables that seem to 'work' in producing higher levels of proficiency (for example, student achievement has been positively related both to the time given to the study of a subject at school and to time spent on homework), the most important message conveyed to policy-makers by international comparisons seems to be that, in general, the impact of any school variable is small, and often linked to a variety of other aspects of educational context. No spectacular progress in achievement can probably be expected by just implementing some 'miracle' innovation, copied from a specific aspect found in high-achieving school systems. By contrast, much can be learned by carefully examining how important positive and negative factors interact in a variety of other systems, in order to redesign national reforms.³⁷

Underlining some of these same points a detailed study of the Finnish school system concluded that:

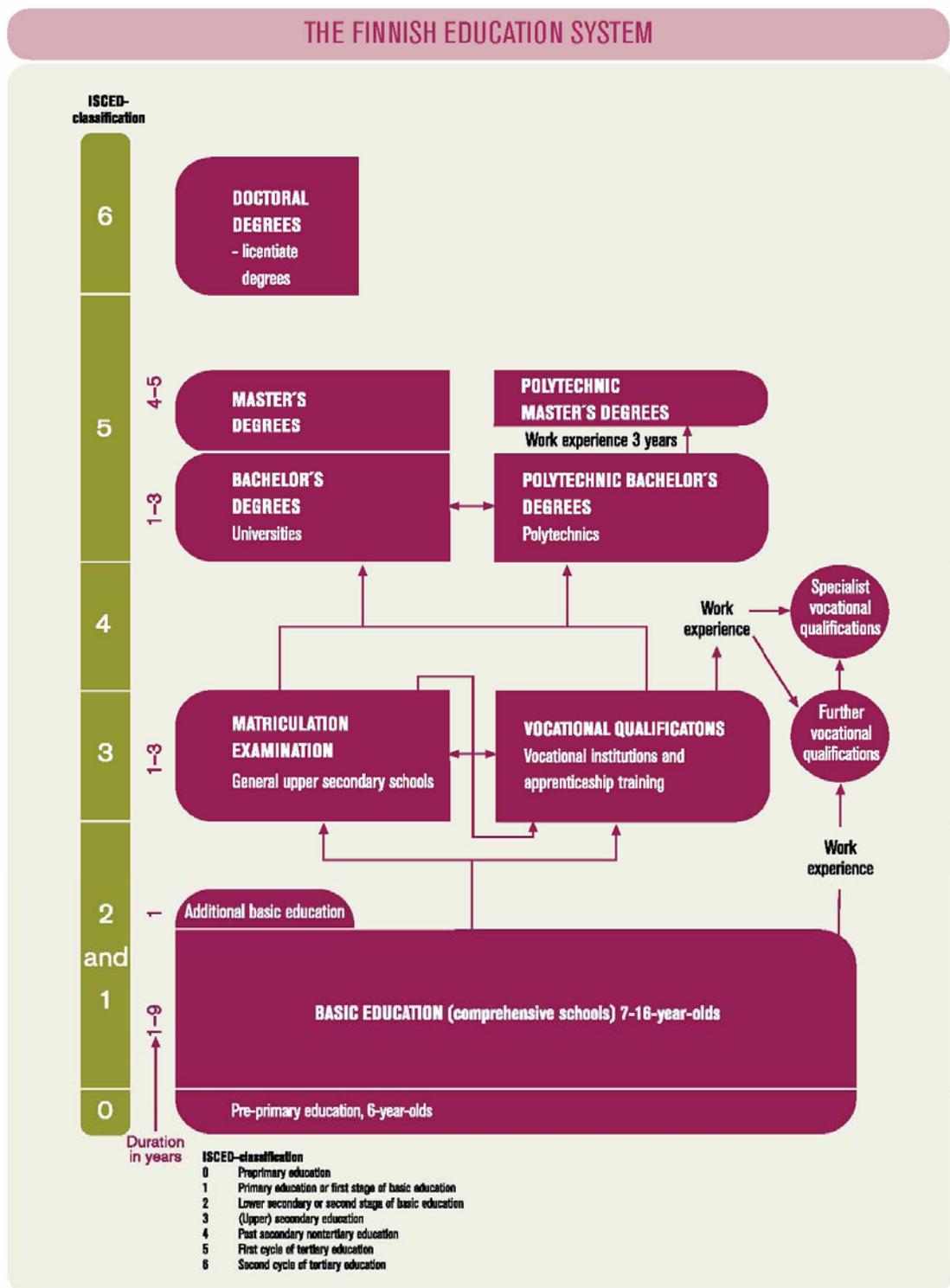
The Finnish model cannot be copied wholesale, for it is a model or strategy that arises out of alignment between and integration of a deep set of cultural and social values, a particular kind of social and economic state, and a distinctive approach to educational reform. However, the political and cultural differences that characterise Finnish society along with other elements such as relatively small size or ethnic composition should not be used to excuse its relevance and importance for other settings either. Yet again, the temptation to "cherry pick" particular parts of the Finnish strategy for proposed adoption and transference to other nations is equally problematic if any preferred element is not seen in relation to all the others that make up Finland's complex social, economic and educational system. The challenge, rather, is to promote mutual learning and interaction across countries about the deeper principles and practices that underpin Finland's educational model - and adjust these through thoughtful adaptation within different cultures and contexts. It is these processes of intelligent interaction rather than direct transplantation that are indeed at the heart of *positive deviance*.³⁸

³⁷ Kenneth N Ross and LLona Jurgens Genevois eds (2006) Cross-national studies of the quality of education: planning their design and managing their impact.

³⁸ School leadership for systemic improvement in Finland - A case study report for the OECD activity Improving school leadership by: Andrew Hargreaves, Rapporteur Gábor Halász Beatriz Pont December 2007

<http://www.oecd.org/dataoecd/43/17/39928629.pdf> (accessed March 2008)

Annex 1 – Finnish Education System

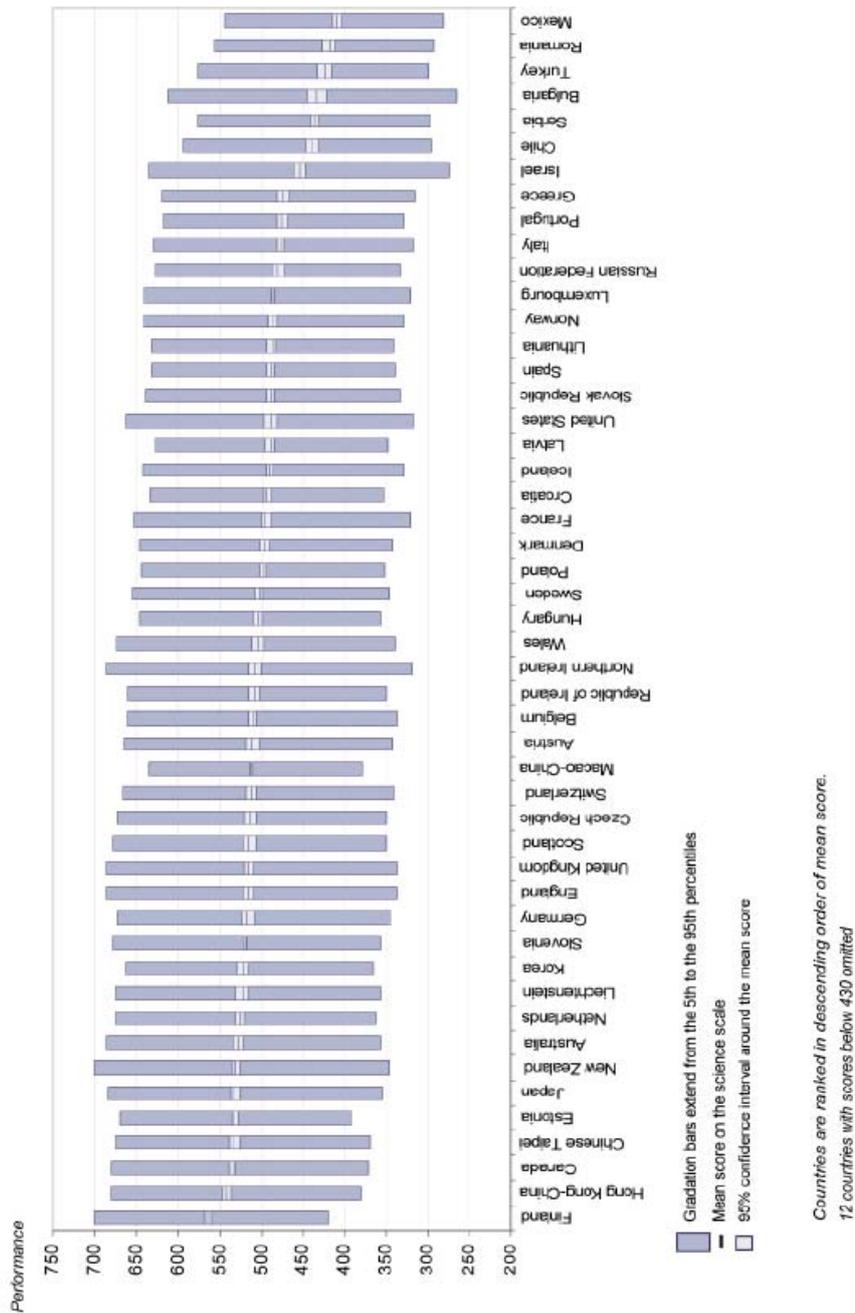


Source: Finnish Ministry of Education

http://www.minedu.fi/export/sites/default/OPM/Koulutus/koulutusjaerjestelmae/liitteet/finnish_education.pdf

Annex 2 – PISA Results

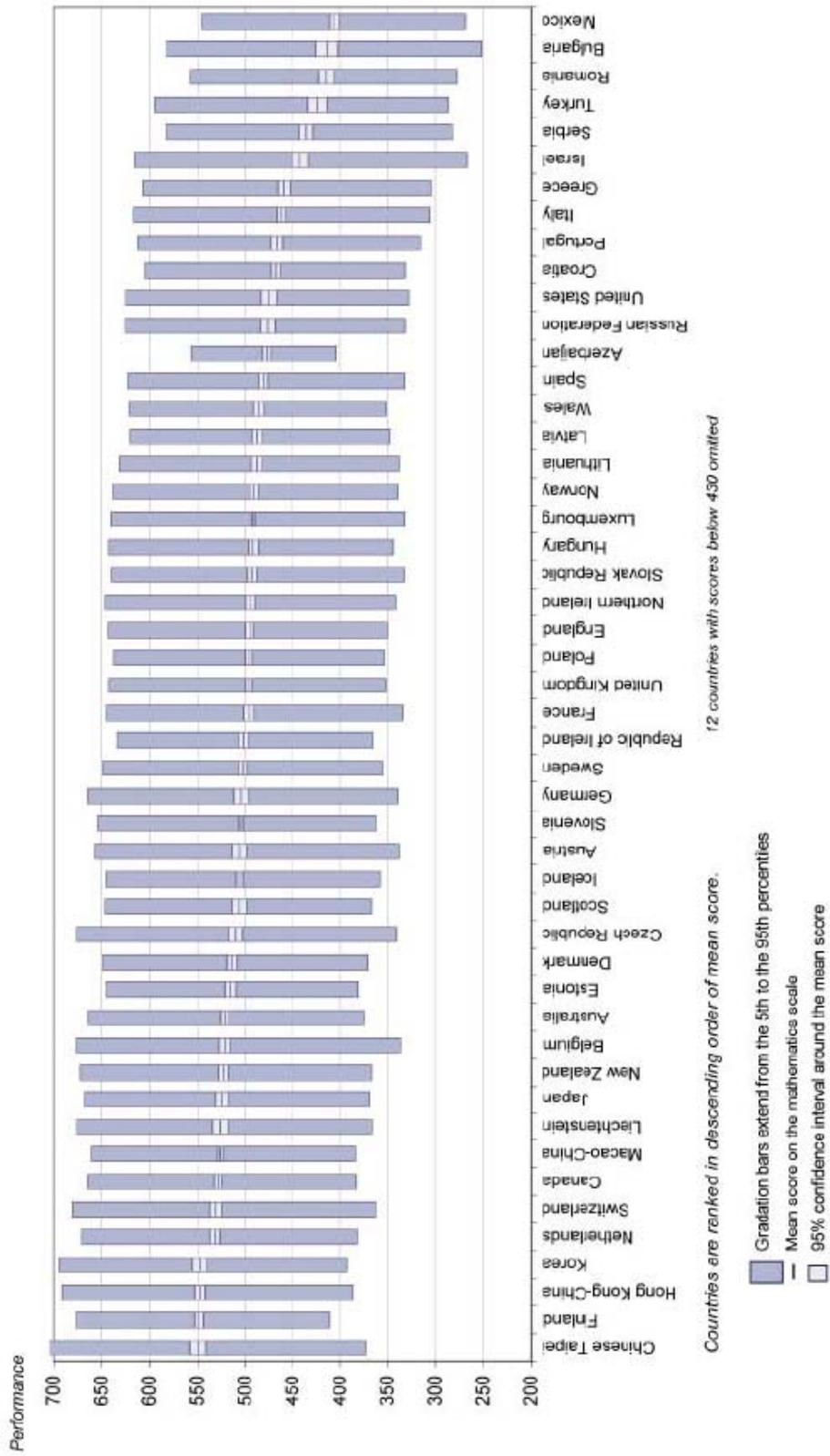
A.10 Distribution of student performance on the science scale



Source: Bradshaw, J., Sturman, L., Vappula, H., Ager, R. and Wheeler, R. (2007). *Student Achievement in Northern Ireland: Results in Science, Mathematics and Reading AMONG 15-YEAR-OLDS FROM THE OECD PISA 2006 STUDY (OECD PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT)*. NFER

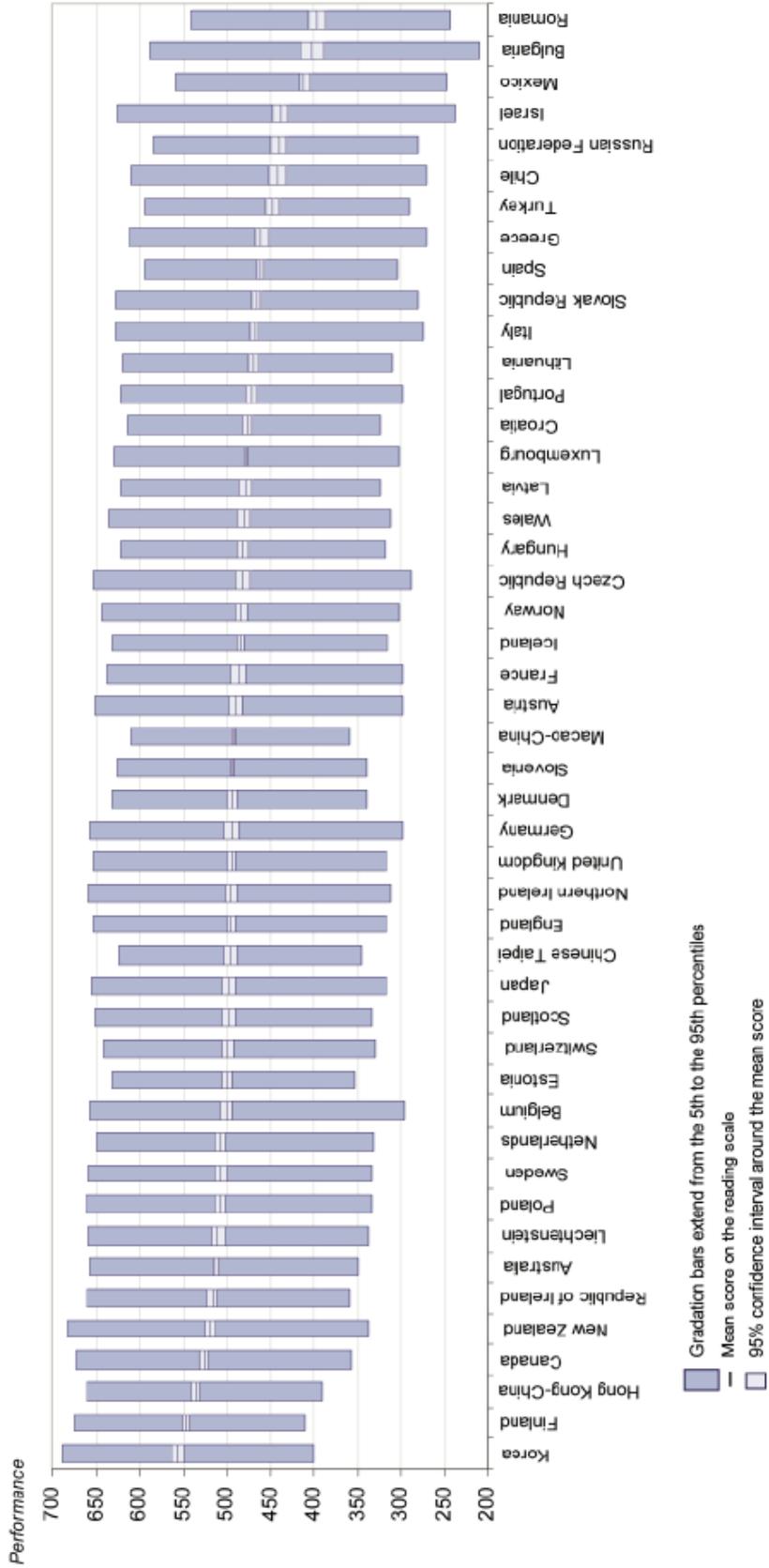
Annex 2 – PISA Results

B.3 Distribution of student performance on the mathematics scale



Annex 2 – PISA Results

C3 Distribution of student performance on the reading scale



Countries are ranked in descending order of mean score. 13 countries with scores below 430 omitted