RAISING THE BAR: HOW FINLAND RESPONDS TO THE TWIN CHALLENGE OF SECONDARY EDUCATION?

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Abstract:

Secondary education has been at the core of social policies and education system development in Finland during the last three decades. After creating a comprehensive nine-year comprehensive school that is same for all pupils in 1970s, education policy targets have regularly insisted that all basic school leavers have to have access to upper secondary education of their choice. Today, the Finnish education system is considered as an international benchmark of good quality combined with system-wide equity and access. In this article I analyze the twin challenge—that is quality of and access to secondary education—through three dimensions: transition rate from basic to upper secondary education, completion rates of secondary education, and student learning. I then argue that Finland has been able to create a secondary education system that performs well at reasonable cost by using education reform strategies that have relied on (1) long-term vision of good secondary education for all, (2) improving quality of primary education for all children, (3) designing a system of early intervention and educational counseling and guidance in primary and in secondary schools, (4) helping all students to be successful in transition from primary to secondary education and creating second chance paths to increase the rate of success, and (5) promoting lateral capacity building in which schools and municipalities learn from each other. The Finnish experience suggests that improving the quality of secondary education requires sustainable policies and leadership, cultivating professionalism and trust throughout the education system, and intelligent approaches to curriculum and accountability.

Key words: Secondary education, Education quality, Education reform, Education policy, Intelligent accountability

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1. INTRODUCTION

Secondary education has become a popular topic in current global education policies and research agendas. As the recent international review of secondary education states, "a key policy objective is to ensure that both access

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and quality are enhanced for those generally excluded by poverty, ethnicity, gender, and other factors" (World Bank 2005, p. 38). Indeed, access and quality are interrelated dimensions of education development and they constitute the *twin challenge* in secondary education. Increased access to secondary education often makes quality improvement even more difficult to achieve. Nevertheless, the emerging knowledge society with its more sophisticated labor requirements, built-in instability and need for broader meta-cognitive and interpersonal skills requires deeper learning during formal education from all citizens. Many believe that nine-year basic education alone is not enough to build these competences for the knowledge society and that more of the same is not the answer.

In this article I tackle primarily the second dimension of the twin challenge in secondary education: quality. The main aim is to understand what education policies have been implemented in building a secondary education system that has experienced rapid growth of access and recognized improved quality, especially at the upper level of secondary education. I have chosen Finland as an example of such education system. The Finnish education system has gone through significant development since the beginning of 1970s. It has been transformed from an inequitable parallel system with modest participation rates, to practically full enrollment, considerably higher completion rates and recognized system-wide student achievement and equity. However, it should be stressed that the parallel structure has remained in the upper secondary education system in Finland despite some efforts to close the social status gap between general and vocational education. I analyze the quality of secondary education in Finland by looking at transition rates from lower to upper secondary level, completion rates that in non-compulsory school may be seen as an anecdotal indication of quality of education, and finally I include data from international comparative studies of student achievement as an evidence of equity and quality of secondary education. The conclusion is that education policies that focus on upper secondary education alone, whether structural or pedagogical issues, are not likely to improve the quality of secondary education significantly even in the long run. Moreover, I claim that unlike many other countries that have followed the market-oriented standardization and accountability movements in education development, secondary school teachers in Finland are teaching in an environment that has only loosely defined standards and instead high trust on teachers' and schools' capacities to identify the best means to achieve national education goals. Raising the quality of and access to secondary education requires intelligent curriculum and accountability policies that balance trust-based professionalism with external evaluation and information-based steering.

In Finland most children start their compulsory nine-year basic education in August of the year when they turn seven years. At the moment, however, over 95 percent of first grade pupils have completed optional pre-school year that is commonly recognized as an important factor of good student performance later. This is also the crucial transition point when they decide their further educational paths. Secondary education in Finland consists of compulsory lower secondary level (grades 7 to 9) and non-compulsory upper secondary level (grades 10 to 12). In principle, after completing compulsory basic school at the

age of 16 a young person has five options: general upper-secondary school, vocational upper-secondary school, other post-compulsory education or training (such as apprenticeship training), voluntary additional 10th grade of basic school, or employment. Annually more than 99 percent of ninth grade comprehensive school pupils successfully complete their compulsory education and only about 5 percent do not immediately continue learning.

2. OUT OF MANY, ONE COMMON SCHOOL FOR ALL

Since December 2001 when the first results of the Programme for International Student Assessment (PISA) were launched by the Organization of Economic Development and Cooperation (OECD) hundreds of education experts have wondered what could be the secret of good education performance in Finland. Scores of factors thought to affect the improved quality of education in general and student learning in particular have ranged from a well-trained teaching force, to a culturally homogeneous society (Välijärvi et al. 2002; Simola 2005; Schleicher 2006; Sahlberg 2007). PISA measures education performance on the basis of 15-year-old students' ability 'to complete tasks relating to real life, depending on a broad understanding of key concepts, rather than assessing the possession of specific knowledge' (OECD 2001, p. 19). Thus it also indicates how the domains of reading, mathematical, and scientific literacy are taught and learned in lower stage of secondary education. In our recent policy analysis of education in Finland we (Aho et al. 2006) concluded that

> comprehensive school that offers all children the same high quality, publicly financed education—not only excellent teaching but counseling, health, nutrition and special-education services as well—seems to play a key role in building a high-performing education system. Good schooling for all, not for some, is the core value that drives education in Finland. (p. 2)

What is significant in this conclusion is that it puts a strong accent on good basic education for all as a necessary—but not sufficient—condition to achieving good results at the upper levels of schooling. Many efforts to improve the quality of secondary education are failing because the levels of knowledge and skill of students who are entering upper secondary education are not compatible with what is required. As a result, many countries have been forced to maintain selective and often elitist upper secondary systems where students are grouped based on what their schools were like in elementary and lower secondary levels rather than according to their talents and interests. Next is a short review of the key ideas in developing equity-based nine-year comprehensive school (*peruskoulu*) that provides common education foundation for all pupils in Finland. A more detailed analysis is available in Aho and colleagues (2006).

Policy principles for reforming secondary education

The structure and basic values of the current education system in Finland were created in 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 (Hirvi 1996; Lampinen 1998; Aho et al. 2006). 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. As a consequence, the Government decided to launch planning of an upper secondary education system into which newly educated youth would start to enter soon.

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 (Aho et al. 2006). Hence, this new school quickly became 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.

As the comprehensive school reform began to show results by the end of 1980s, the logical next step in reforming the education system was to extend the reform efforts to post-compulsory education. Upper secondary education constituted of two sectors: the general school that was a general path to higher education, and the vocational school that led to professional qualifications. The vocational education sector had two tracks. The first funneled students into school-level studies, while the second provided college-level vocational education. School-level education and training varied from six months to two years. The more advanced college-level studies lasted three to four years. According to today's international classification, college level vocational education would fall between upper-secondary and higher education.

The major area of secondary school reform since the 1980s concerned vocational education. In practice, upper secondary education was – and has remained until today – a parallel educational structure with two sectors with different educational and social status. The purpose of the reform was to make vocational education more attractive to students who are transferring from basic school to upper secondary school. Vocational school graduates were also made eligible for higher education institutions. Along with opening the vocational education as an alternative route to higher education, policymakers aimed to

decrease the number of students in general upper-secondary education and close the existing status gap between the two sectors. Interestingly, in 1981 the Ministry of Education set a target of 20 000 to 22 000 students to enter general upper secondary education annually which represents approximately one third of the age group. However, this goal fell short as in 1988 there were already 32 200 new students enrolled in the first year of general upper secondary education, or about 55 percent of the age cohort.

Starting in 1985, upper-secondary general education went through fundamental structural and pedagogical changes. The aim in developing a new upper-secondary general school curriculum was to create a more flexible pedagogical structure for municipalities and schools. At the same time, an experimental project did away with class-based organization of schooling and introduced course-based and later non-graded general upper secondary schools where students were not bound by time and age group but rather studied according their own pace and interest. The course-based upper-secondary general school made its debut throughout Finland in 1982 and the entire system became non-graded by the end of 1990s. This is unique structure in upper-secondary schools internationally. Interestingly, China has recently been interested in restructuring its secondary education towards non-graded way.

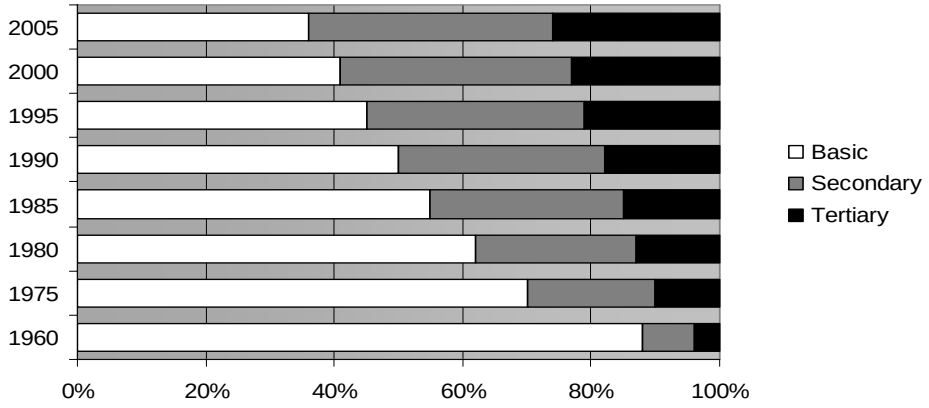
A main objective of the secondary school reform was to offer all graduates from basic school a meaningful option to continue studies at the upper secondary level. In 1988, there was a study place at the upper secondary vocational school, college or higher education level for practically all school leavers from basic and upper-secondary general school. General upper-secondary school received 55 percent of the basic-school graduates; in 1972, that figure was 40 percent. Thus, vocational education institutions and colleges received the bulk of students who had completed upper-secondary general education but were not enrolling in higher education. Special study programs were designed for them with courses of shorter duration than for basic-school graduates.

One of the policy options in increasing educational equity and improving the quality of upper secondary education in Finland in the 1980s was the idea of so called 'youth school'. This referred to an integrated upper secondary school that had general and vocational education programs within in one structure, as it was in Sweden. Lessons from experiments implemented throughout the country in 1990s concluded that although this 'youth school' has several advantages, such as providing more opportunities for small municipalities and enriching the range of optional study programs for students, it did not become a system-wide structural solution (Virolainen 1996). Instead, the legislation and the official education policies insisted that cooperation between general and vocational schools has to be arranged in a way that will enable students with flexible vertical transition and mobility. Compatible non-graded general upper-secondary school and modular-based vocational school have provided technical opportunities for further cooperation.

In Finnish society 'the third sector' that is an amalgamation of nonprofit and non-governmental organizations and the volunteer activities and donations that sustain them has played an increasingly important role in creating a secondary education sector that is more responsive to the needs and interests of all individuals. During the 1990s, when the education system was undergoing a major cultural transformation, youth groups and other organizations played an active role in the education policy dialogue as well as in implementation of reforms. For instance, youth organizations and sports associations focused on the learning and educational aspects of their activities in order to harmonize their goals with those of formal education provided by schools. This also was another avenue for involving more parents and other adults in the overall upbringing and education of youth.

The planning and implementation period of the secondary school reform lasted two decades, from 1974 to 1992. Over those two decades, enrollment in secondary education expanded significantly. In 1970 some 25 percent of Finland's adult population had graduated from upper-secondary education or universities. By 1990, half of the adult population had at least an upper-secondary level of qualification (figure 1). However, secondary school reform was not able to narrow the gap between the popularity of general and vocational schools as was expected.

Figure 1. *Level of education of adult population (15 years or more) in Finland since 1960 (Sahlberg 2007)*



The development of the current secondary education system in Finland is a result of systematic improvement of quality, access, efficiency and flexibility of, not only secondary education, but the entire education system as a whole (Hirvi 1996; Lampinen, O. 1998; Aho et al. 2006). The main development policies and reform principles were already agreed decades ago and have not changed much since. For example, the target of providing meaningful choice for all those pupils who are leaving basic school to continue education in upper secondary level has its roots in the education policies and plans of 1970s. Education authorities have

set the education policy target for the rate of transition from basic to further education so that in 2009 at least 97.5 percent of basic school leavers will continue studying in the field of their own choice.

3. SECONDARY EDUCATION IN THE ERA OF NEW ECONOMIC AND POLITICAL ORDER

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

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

Transition to the knowledge-based economy has significantly increased domestic knowledge generation. In the late 1970s Finland ranked at the lower end of the OECD countries in research and development intensity. According to the OECD, today Finland invests 3.5 percent of GDP in research and development (R&D) which is the second highest in OECD after Sweden (Routti & Ylä-Anttila 2006). Interestingly, during the biggest economic recession of peacetime in the early 1990s R&D investments were kept in agreed levels and private investment even increased (Castells & Himanen 2002). It is noteworthy that the building of an equity-based and well-performing Finnish education system has occurred with relatively modest education spending. Moreover, the education system is primarily financed from public sources. In 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 (OECD 2005a). Indeed, total expenditure on educational institutions as a percentage of GDP for all levels of education declined from 7.9 percent in 1992 to 6.3 percent in 1995 and most recently to 6.0 percent in 2002 (Hirvi 1996; OECD 2005a). This indicates that high participation rates and equity coupled with good learning achievement have been established without increasing educational spending, quite the contrary. Since the economic crisis of 1990s, local education authorities have increasingly struggled with shrinking budgets, leading to enlarged class sizes, reducing some school-support services, and, in many cases, also merging and closing of schools to gain efficiency (Rinne et al. 2002). The number of comprehensive schools (grades 1 to 9) has declined by 20 percent over the last ten years. Nevertheless, basic conditions for good secondary level schooling for all have been made available throughout the country. I argue that securing necessary resources for and investments in initial

preparation of teachers in the universities has contributed positively later on to teaching force that has not only been adoptive to necessary school improvement but also capable to look for scientifically-based solutions to common problems in their schools.

In Finland for primary to tertiary education, annual expenditure on educational institutions per student in 2002 (in equivalent US dollars using purchasing power parities (PPP) for GDP) was US$7300 (OECD average US$7400). Per pupil expenditure in secondary education was US$7100 (OECD average US$7000). Comparing the actual spending per student, on average, from the beginning of primary education to age 15, with average student performance in mathematics at age 15, provides further support for the argument that good educational performance in Finland is attained at reasonable cost (Sahlberg 2007). In Finland the cumulative cost (US$ using PPP) is US$59000 whereas in Spain the same figure is US$52000 and in the United States US$84000.

Participation in upper secondary education

As shown by table 1, 3400 young people, or some 5.5 percent of all basic school leavers in 2003 decided not to continue education immediately after completing compulsory education at the age of 16 (Committee Report 2005). This high number of youths dropping out of education is considered as one of the biggest problems in the Finnish education system today. Still, rather than solving that problem by issuing legislation that would make upper-secondary education compulsory, the education authorities are working together to find ways of providing a meaningful educational option for all. Table 1 indicates how the options that basic school leavers confront have been selected by pupils between 2000 and 2006.

Table 1 also predicts that in 2006 about 95 percent of those who completed compulsory basic education will continue their studies at upper secondary level or in the additional 10th grade of basic school. In 2003, the ratio between students who enrolled in general and vocational upper secondary education was 55.1 percent and 37.0 percent respectively of entire enrolling student cohort. It is expected that in 2006 less than five percent or 3,350 basic school leavers will opt not to continue studying in formal upper secondary education. Some of them would enroll in other post-compulsory educational programs. The voluntary additional 10th grade of basic school has proved to be a useful option for most young Finns who chose that option after comprehensive school: in 2002 out of 1800 of those who studied one additional year in basic school 83 percent enrolled in general or vocational secondary education (35 and 48 percent respectively). Fewer than two percent of pupils who enroll in additional 10th grade drop out from the education system during the school year. The agreed education policy target of having only 2.5 percent basic school leavers not immediately continue education in upper secondary level is ambitious and requires systematic measures from education authorities as well as from schools. According to current education policies (Committee Report 2005), the voluntary additional 10th grade of basic school will be made available

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

Table 1. Enrolment in upper secondary education of basic school leavers in Finland between 2000 and 2006 (Source: Statistics Finland 2006)

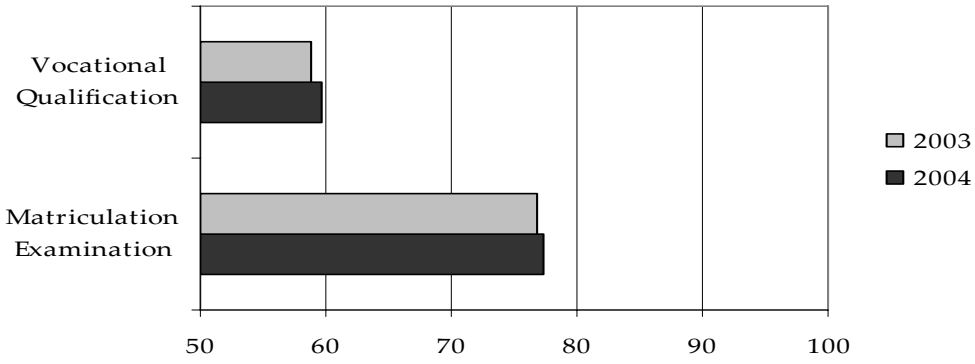
	2000	**2003**	**2006***
Basic school leavers	66 250	60 850	66 700
Total number of young people continuing education after compulsory basic school	93.0 % 61 650	94.5 % 57 450	95,0 % 63 350
general upper secondary education	53.7 % 35 600	55.1 % 33 500	54.5 % 36 350
vocational education	36.3 % 24 050	37.0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

* Policy target set by the Government (Committee Report 2005)

Completion rates of upper secondary education

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

Table 2. *Proportion of upper secondary school students who successfully completed their studies by the target time (3.5 years) in 2003 and 2004 (Statistics Finland 2006)*



Due to the non-compulsory nature of upper secondary education, one of the criteria of both quality and effectiveness of post-compulsory education is the completion rate. As part of the newly introduced education efficiency system in Finland, since 1999 the state authorities have collected systematic data and analyzed completion rates in upper secondary education. If ideal completion time of vocational or general upper secondary studies is set at 3.5 years, then about three out of four general education students and three out of five vocational education students successfully completed their studies in that desired time (table 2).

Because individual study plans are not tied to age groups or classes many students will take more time to complete their studies than others. Some of them, however, will leave the education system without a qualification or diploma. Therefore, a look at the drop-out rates provides an alternative view on the quality and efficiency of secondary education. According to national statistics (Committee Report 2005), during recent years about two percent of general upper secondary school students terminate their studies annually without moving to any other upper secondary education or training. Approximately the same number of students moves from general to vocational secondary education and complete their studies there. In vocational secondary education the situation is worse. For example, in 2003 11.5 percent of vocational school students terminated their initial studies of whom 1.5 percent continued education in some other school or institution.

Drop-out from formal education and training in Finland is slowly declining and in Upper secondary education, drop-out rates are substantially lower compared with most other countries (OECD 2005a). As far as all upper secondary education is concerned, 5.6 percent of students terminated their studies during the academic year 2003-04. The need for preventing educational failure and drop-out from the education system is biggest in secondary and tertiary vocational education. Keeping students in education has become a particular incentive to schools through the results-based central government

funding scheme that was introduced in upper secondary vocational education earlier this decade. When the results-based financing index for education and training provider is calculated, reduced drop-out rates and thus improved completion rates have a weight of 28 percent. Although the financing index regards a fairly small part of overall education budgets, this has rapidly focused the attention of schools and teachers on the measures that would on one hand improve the early recognition and prevention of problems that might lead to drop-out, and on the other hand strengthen direct support to students' learning and overall well-being in school. Vocational schools in particular have developed innovative solutions for those students whose learning styles prefer a more practically oriented curriculum. For example, practice-oriented 'innovation workshops' have become a popular way to increase the attractiveness and relevance of secondary education for many students who are at risk of leaving school.

Participation in post-secondary education

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

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

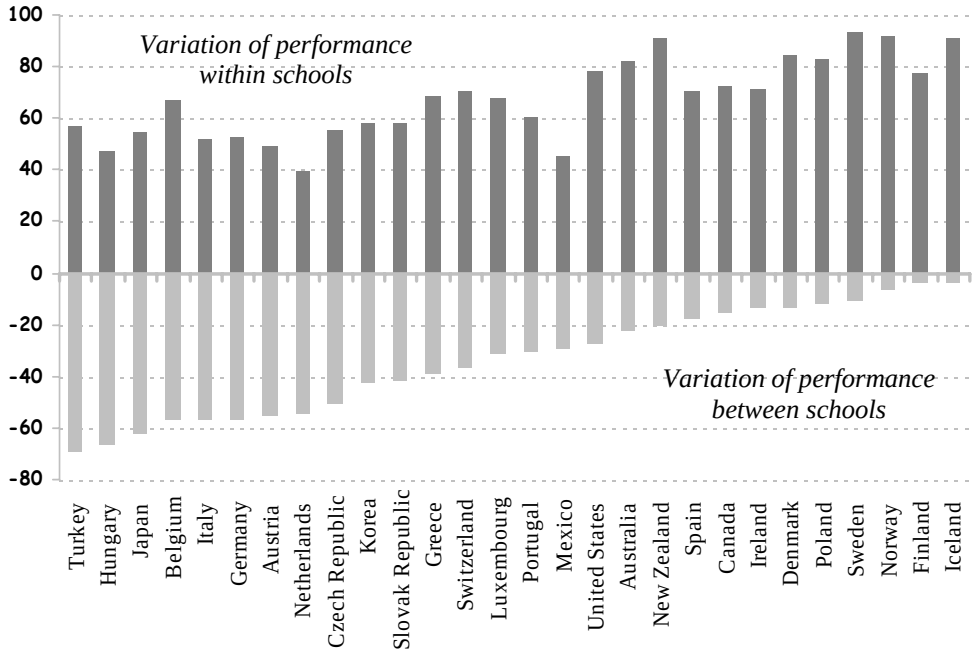
The complaints by employers have a similar tone. Although there are no reliable studies to determine how common dissatisfaction among employers is, anecdotal evidence from the feedback from business leaders indicates that focus on more general occupational knowledge, skills and competencies does not

always prepare people for jobs that require very specified skills. Making on-the-job-learning as a part of all vocational programs and including employers as a third party in performance-based assessment for qualifications have eased the criticism and improved the compatibility between vocational education and labor market requirements.

4. TEACHING, LEARNING AND ORGANIZATION OF UPPER SECONDARY SCHOOLS

The most commonly used international indicator of student learning at the end of lower secondary education is PISA that assesses reading, mathematical, and scientific literacy of 15-year old pupils who are in the last grade of their lower secondary school, i.e. in the middle of their secondary education cycle. In both PISA cycles in 2000 and 2003 Finnish pupils have been rated among the best in all OECD countries (OECD 2001; OECD 2004; Sahlberg 2006). Moreover, the gap between low and high performing students is the smallest in Finland if measured using between school and within school variation from previous PISA data (figure 2).

Figure 2. *Within school and between school variations in student performance on the mathematics scale (OECD 2004)*



The fact that almost all inequality in Finland is within school as shown in figure 2 means that the inequality that remains is probably mostly due to students' natural talent variation. Accordingly, variation between schools mostly

corresponds to sociological inequality. Since this is a small source of variation in Finland, it suggests that schools deal with sociological inequality very successfully.

System-wide excellence in student learning in lower secondary level indicates that the majority of basic school leavers have developed sufficient knowledge and learning skills to continue studying in upper secondary level successfully. Relying on the PISA 2003 data, the percentage of those students who reached only proficiency level 1 or 0 in mathematics was 6.8 percent in Finland. The same indicator in the USA was 25.7 percent and in the OECD countries on average 21.4 percent. Furthermore, a total of 77 percent of Finnish students, the percentage being the highest among OECD countries/regions (the OECD average 57 percent), reached proficiency level 3 or higher and seem to have acquired the literacy skills needed to cope with the demands of further learning and work posed by today's knowledge societies (OECD 2004). Similar trends were observed in reading literacy in PISA 2000 (OECD 2001). Nevertheless, some national studies (National Board of Education 2005) warn that 15 to 20 percent of basic school leavers have severe gaps in basic knowledge and skills that are general requirements for further secondary education. It is often argued that proficiency requirement in basic school subjects in Finland is higher than PISA proficiency level 1.

Transition to upper secondary education

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

Students today enter the transition point between basic and upper secondary education with different knowledge, skills and attitudes than before. The changing student population has been one driver to help the developing upper secondary education system to better reflect the new situation.

Implemented reforms of upper secondary education in Finland have had a fundamental impact on school organization, especially regarding teaching and learning. Traditional school organization that is based on presentation-recitation models of instruction, age-grouping, fixed teaching schedules and dominantly classroom-based seatwork has been gradually transformed to more flexible, open and interaction-rich learning environments where an active role for students comes first (Aho et al. 2006). Ongoing school improvement has been facilitated by implementing structural changes in upper secondary school and by enriching schools and classroom with alternative instructional arrangements and teaching methods.

General upper secondary education

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

An important factor affecting the nature of teaching and learning in general upper secondary school is the nature of student assessments and school evaluation. Teachers assess the achievement of each student at the end of each course which means approximately five or six times per subject per school year. The National Matriculation Examination that students take after successfully completing all required courses is a high-stake examination and has therefore a visible affect on curriculum and instruction. Nevertheless, general secondary school can be characterized by having a strong focus on learning, creativity and various methods of studying rather than concentrating on passing tests and exams.

Vocational upper secondary education

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

approximately 37.5 percent of new upper secondary school students start their studies in vocational schools.

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

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

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

5. STRATEGIES FOR RAISING THE QUALITY OF SECONDARY EDUCATION IN FINLAND

Education reforms in general and improvement of quality of education systems in particular are complex and slow processes. Previous research and policy analysis suggest that rather than investing in single innovations and randomly designed reforms, evolution of education should be seen as systemic process and built upon the ideas of sustainable leadership (Fullan 2005; Hargreaves & Fink 2006; Hargreaves & Goodson 2006). Aho and colleagues (Aho et al. 2006) suggest that

> while the principle of justice, i.e. equity and equal opportunity, have been the leading values of Finland's long-range education vision, strong and systematic emphasis on leadership at all levels of education began to emerge in the 1980s. Throughout the decades it has been clear that education policies need to be based on depth, length, and breadth of leadership, and that diversity and resourcefulness are the conservative drivers of educational change. Finally, one of Finland's key success factors as been the early recognition that learning from past experiences can build a better future. (p. 134)

Secondary education has been for long time the least interesting and attractive topic for policymakers. Recently, due to the increasing number of young people who want to extend their educational paths, the emerging needs of knowledge society, and new policies on lifelong learning, secondary education has become a focus of policy analysis and debate globally. A study conducted by the World Bank suggests that one reason for the growing demand for secondary education is that "economies increasingly need a more sophisticated labor force equipped with competences, knowledge and workplace skills that cannot be developed only in primary school or in low-quality secondary school programs" (World Bank 2005, p. xvi). As a consequence, research on secondary school improvement is gradually increasing but is still less common than research on primary and lower secondary schools.

Building on existing policy analysis and research I have proposed five policy principles that have been included in Finnish education policy to secure equal access to and raise the quality of secondary education.

(1) Policy development has emphasized long-term vision and realistic target setting. The present secondary education system in Finland that was described in the earlier sections of this article is a result of long-term policies and systematic development of the education system that has its roots in the values and principles set up four decades ago. It is quite remarkable how the decision-makers at the dawn of the major education reform in Finland envisaged the need for making upper-secondary education more responsive to the changing needs as stated by the Parliament in 1968 (Aho et al. 2006):

> Working life and technological development demand more and more from society and the workforce, and therefore the Parliament requires that the Government presses forward with plans and arrangements which aim to develop technical, commercial, agricultural and other special schools and fields of study, which would open channels to corresponding higher education. (p. 48)

As early as in 1974 the Government set an education policy target that would encourage all basic school leavers to continue studies at the upper secondary level. This was natural because the new comprehensive nine-year basic school would quickly increase the number of young people with upgraded knowledge and skills for further education. It was envisaged in the 1970s that the key basis of the Finnish economy—including forestry and the heavy metal industry—would be knowledge. Quite correctly the policy-makers assumed that the emerging knowledge society would require better educated people, both as workers in information industry and as citizens consuming information products. In 1975, as figure 1 shows, about 70 percent of the Finnish adult population had only completed basic education or less which was an extremely low education level for the knowledge-driven future scenario.

The longer-term vision that has been driving the education policies since early 1970s has set a target to have most young people successfully complete some type of upper secondary education. Moreover, from early on, policy-

makers thought that whatever decisions student makes at the transition from basic education to upper-secondary school, the path to tertiary education should be clear. One of the most significant policy decisions made at the beginning of secondary education reform in 1974 was that the structure of the upper secondary school will consist of these two streams (Aho et al. 2006). This shifted the focus of education policies and targeting of increasing financing to developing the quality of secondary education, especially the further training of teachers. I have also noted that some of the changes in upper secondary education policies and schools have been reactions to unpredictably emerged conditions and happened due to changing needs and expectations of youth and their parents rather than results of intentional reforms. For example, general secondary education sector developed since 1930s much larger than any committee or policy target had expected.

(2) Priority has been in building high educational quality in primary school that is equally accessible to all pupils. Primary education, that is the first six years of basic school, is often seen as the foundation for good performance in later phases of education (Välijärvi et al. 2002; Simola 2005; Sahlberg 2007). Primary school and related policies, such as curriculum, assessment, teacher training and textbooks, have been at the core of national education development policies and reform strategies since early 1970s (Aho et al. 2006). The New Comprehensive School Curriculum Framework of 1971 laid the groundwork for new pedagogic approaches and educational content to be included in teaching all pupils regardless of their social-economic background, domicile or individual characteristics. Student assessment analyzed to obtain results to inform national education policies and local decision-making and to support teaching, learning and school development. These same principles of assessment are still included in the current education legislation of 1998. Finnish educational assessment policies differ from those in many other systems, for example the United States, where the purpose of increased student testing is to understand and compare performance of schools of schools against the standards determining the proficiency. The fact that pupil achievement is not defined and assessed from a competitive perspective has also direct affect on how teachers teach: teaching is typically aimed at promoting deeper learning and creating interest to know ahead of achievement. Teachers in Finland are working with loosely defined standards (as in many elite private schools in other countries) but high teacher professionalism, trust and creativity.

Primary school teacher education takes place in universities and leads to Masters Degree. Teacher preparation was converted from a three-year program at teachers' colleges to five-year university programs in the late 1970s. Hence, most primary school teachers today possess higher university degrees. Westbury and colleagues (2005) point out that preparing teachers for a research-based profession has been the central idea of teacher education developments in Finland since the mid-1970s. Higher academic qualification has enabled schools to have increasingly active role in curriculum planning, evaluating the education outcomes and leading overall school improvement. The

OECD review on equity in education in Finland (OECD 2005b) describes how Finland has created a virtuous circle surrounding teaching:

> High status and good working conditions—small classes, adequate support for counselors and special needs teachers, a voice in school decisions, low levels of discipline problems, high levels of professional autonomy—create large pools of applicants, leading to highly selective and intensive teacher preparation programs. This in turn leads to success in the early years of teaching, relative stability of the teacher workforce, and success in teaching (of which PISA results are only one example), and a continuation of the high status of teaching. (p. 21)

Teachers enjoy social respect and professional freedom. Professional trust has become one of the recognized characteristics of Finnish education recently (Välijärvi et al. 2002; Kupari & Välijärvi 2005; Schleicher 2006; Aho et al. 2006). Primary school teaching is considered to be a profession that compares to any other high-profession in society, such as medical doctor, lawyer or economist. There is relatively little teacher mobility from one primary school to another which means that most pupils will have the same well-trained teacher for the first six years of schooling.

(3) Designing a system of early intervention and educational counseling and guidance in primary and in secondary schools. *Vertical transition* refers to the process that connects two levels of education. Finnish education policies have included several equity-oriented measures to support successful transition from basic school to upper secondary education. First, the policy of early recognition and intervention related to learning difficulties have been included as part of school practice and classroom pedagogy throughout the education system. All teacher education curricula have modules that aim at improving knowledge and skills teachers need in identifying and addressing deficits that may lead to student failure. Assistant teachers, special needs education experts and multi-disciplinary teams in schools are all prepared to minimize the number of students falling behind. Strengthening these early intervention structures has been a long-term aspect of education development plans (see Ministry of Education 2004).

Second, educational guidance and counseling have been integral part of the basic education curriculum since 1970s. According to current legislation all pupils in lower secondary school are subject to educational guidance and counseling two lessons per week. In fact, appropriate educational counseling and guidance is every student's right in all types of schools. Although studies have found that there are serious shortcomings regarding access to educational guidance and counseling, it has significant impact on helping students to make appropriate decisions (Numminen & Kasurinen 2003; OECD 2005b).

Third, special needs education services have been extended to cover all types of schools. Early intervention policies have been implemented especially in basic school. For example, in Finland as in the United States, students with reading, writing and mathematics learning problems comprise approximately 40 percent of the special needs education population in grades 1 to 6. However, in

Finland the respective percentage in grades 7 to 9 is 13 whereas in the United States it is 62. As Itkonen and Jahnukainen (2006) state, that "the Finnish school system provides interventions in the primary grades and then exits the majority of students, especially those with speech, reading and writing, and mathematics disabilities" (p. 22). Despite tightening education budgets the number of students in special needs education at all levels of education is increasing: seven percent of basic education students and five percent of vocational secondary education students were included in special needs education programs. Almost one of every four basic school pupil was in part time special needs education during the school year 2004-05.

Fourth, performance-based school financing of vocational education has created new incentives for schools to address each student's successful completion of their studies and to combat drop-outs. Reduced drop-out rates and thus improved completion rates have a significant weight when the financing formula to education institutions is applied. In most cases it is financially more beneficial for a school to invest in preventive measures, such as student counseling and special needs education services, than to experience numerous dropouts.

Horizontal transition in upper secondary education refers to student mobility between general and vocational streams. In principle, after enrolling in one or the other type of upper secondary education a student has the right to move to another stream. Although this is made possible by legislation it rarely happens. More often, however, students select courses from other education institutions for their individual study plans. The basic premise of Finnish secondary education policy is to make upper secondary education as flexible as possible in terms of students' choices and mobility.

(4) Help all students to be successful in transition from primary to secondary education and create second chance paths to increase the rate of success. Since the late 1970s the comprehensive school has provided equal opportunities for all pupils for further studies. Therefore transition from basic to upper secondary education has become an important junction in young people's lives. Education policies and development strategies have recognized that transition from basic to secondary education is more than a shift from one level of education to another. As the Committee on Transition from Basic to Upper Secondary Education and Training stated, "it must be seen as a longer transition phase in which a young person gradually clarifies his/her preferences and aims regarding further education and future career" (Committee Report 2005). Success in this transition is of utmost importance to a student's further studies. Therefore, student counseling and career guidance during the lower secondary education can play significant role in providing pupils with better information about educational and career opportunities.

The additional 10th grade of basic school was created in 1977 as an experiment to help those pupils who were not accepted in upper secondary school due to the limited number of study places. Approximately three percent

of basic school leavers enroll in the 10th grade, most of them to improve their marks and chances to be accepted by the upper secondary school of their choice (Committee Report 2005). The 10th grade curriculum focuses on providing students with positive learning experiences and securing necessary educational guidance and counseling to support students' further education and career planning. Annually, approximately four out of five students who complete additional 10th grade immediately continue their education in upper secondary level.

(5) Promoting lateral capacity building in which schools and municipalities learn from each other. Finland's comparative strength in developing the quality of education has been the key role given to local innovation and sharing of good practices within the system (Sahlberg 2006). Education policies in general have promoted strategies that Fullan (2005) calls 'lateral capacity building' in which schools learn from each other, and at the same time municipalities share their educational change knowledge. I believe, however, that this is not a well developed strategy in Finland yet, and thus represents an underutilized resource in education system development. Lateral capacity building mobilizes two important change forces: knowledge and innovation about educational change and productive practices on one hand, and shared identity on the other.

Reliance on lateral capacity building and learning from the past in school improvement has also raised the role of leadership and school management in Finland. Increasingly, school principals and education authorities in the municipalities have been recruited according to professional excellence criteria rather than that of political reward as it used to be. School principals have become the key facilitators of professional development of their teaching staff and lateral cooperation with other schools. It is commonly recognized among school principals in Finland that promotion of cooperation rather than between-school competition has been the key strategy in reaching out for better schools.

6. PROFESSIONALISM, TRUST AND INTELLIGENT ACCOUNTABILITY IN SECONDARY EDUCATION

Teaching in Finland, especially in secondary schools, is recognized as a high profession. Part of that recognition raises from initial training of teachers that is based on Masters Degrees and has strong scientific orientation. Hence, all teachers are prepared for research-based teaching practice. The balance between the theoretical and practical knowledge in these programs helps young teachers master various teaching methods as well as the science of effective teaching and learning. Secondary school curriculum reform in the mid-1990s revealed that teachers with high professional competency are quite motivated and easy to engage in school development processes in their own schools as well as in national and international projects (Sahlberg 2007). They also tend to work just as seriously at developing their own personal professional knowledge and skills. Strengthened teacher and principal professionalism gradually shifted the authority and locus of control from central administration to schools.

Many of the current education policies in Finland, including the teacher professionalism movement, are relevant only when parents, students, and authorities trust teachers and schools. One should remember that the Finnish education system was very centralized when the education reforms in the 1970s were implemented nationwide. Schools were regulated by the national and regional agencies often to the smallest detail. The shift toward trust-based education management and stronger teacher professionalism began in the 1980s, when the major phases of the initial reform agenda were put in practice and consolidated in the education system. In the early 1990s, the culture of trust had penetrated into public sector management in Finland. However, since then the neo-liberal public sector management policies have slowly begun to replace trust with competition, productivity and other market values.

The culture of trust 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 (O'Neill 2002; Aho et al. 2006). Or, as Tschannen-Moran (2004) says, "trust is manifest in situations in which we must rely on the competence of others and their willingness to look after what is precious to us" (p. 15). In Finland, the transition from bureaucratic central administration to the decentralized culture of trust happened at a time of deep economic crisis and public budget cuts. Fortunately, depending on local wisdom to decide what is best for the people seemed to work well even with the most difficult issues, such as reducing expenditure and realigning existing operations to new budgeting realities.

The culture of trust can only exist in an environment that is built upon good governance, or openness, and close-to-zero corruption, or honesty. Although collective value of social networks and the inclinations that arise from these networks to do things for each other may be declining in Finland as in many western societies, social capital that is a key component to building and maintaining democracy has a central place in Finnish society. Indeed, Finland performs extraordinarily well in international good governance and corruption perception rankings. Transparency International has named Finland as one of the least corrupt nations among 146 countries included in the annual comparison. Public institutions generally enjoy high trust and regard in Finland. Trusting schools and teachers is therefore a natural consequence of an effectively functioning civil society. As Lewis (2005) has observed, honesty and trust are often seen as some of the most basic values of Finnish society.

Inviting teachers and schools to take part in social development had an enormously positive impact on the education sector in the 1990s. Emerging trust in schools, and strengthened school autonomy and professional independence of teachers, had two important consequences (Kupari & Välijärvi 2005; Aho et al. 2006). First, teachers realized that the system believed that schools and communities were the places where decisions concerning the curriculum and the overall arrangement of schooling should be done. Teachers, with their high professional and moral qualifications, mostly welcomed this new responsibility. Second, schools very quickly embraced new roles in leading change through the

culture of trust. School improvement not only exploded in Finland as a consequence of this new trust, but also became much more diverse than before. Each school, at least in principle, could design its own change strategy with mission statements, vision, and implementation methodologies and schedules. It is this latter dimension of trust that has had the most significant role in propelling Finland's education system past those of many other countries.

Teacher professionalism and society trust in schools and teachers have protected the Finnish secondary education system from many consequential accountability policies that are common in the United States, England and Canada. Instead, national curriculum and evaluation strategies are designed according to intelligent accountability principles (Secondary Heads Association 2003; Crooks 2003; Fullan 2005). Intelligent accountability in the Finnish secondary education context preserves and enhances trust among teachers, students, school leaders and education authorities in the accountability processes and involves them in the process, offering them a strong sense of professional responsibility and initiative. For example, vocational education performance-based assessments are based on collective judgment and feedback from teachers, employers and employees in tandem with the voice of the student. Intelligent accountability designs in Finland also require that evaluation and assessment leads to deep, worthwhile responses rather than bold statistics and technical reports. In many cases schools and teachers have access to the assessment evidence concerning their own school in order to track down the areas of improvement.

Finally, the Finnish intelligent accountability, using Crooks' (2003) formulation, recognizes and attempts to compensate for the severe limitations of our ability to capture educational quality in performance indicators. These indicators are often chosen "for ease of measurement and control rather than because they measure quality of performance accurately" (O'Neill 2002, p.54). National sample-based assessments in lower secondary school together with continuous teacher-made classroom assessments provide well-founded and immediate feedback that promotes insight into performance and supports planning and decision making about what works and what should be improved. Indeed, the national Matriculation examination at the end of general upper secondary school is the only high-stake accountability measure in Finland.

The new education legislation (1998) stipulates that the education providers, i.e. in most cases municipalities, are obliged to conduct self-evaluation in their own jurisdiction. During the recent years one of the key areas of improved capacities in education system have been those related to self-evaluation, peer assessment and benchmarking. Moreover, the national curriculum frameworks require that school curriculum must describe how the performance of each school is done. External assessments of student achievement, school performance and productivity indicators together with various forms of self-assessments provide what Fullan (2005) calls an integrated approach of intelligent accountability where assessment of and for learning are combined.

7. CONCLUDING DISCUSSION

A reader may argue that Finland is a special country in many ways and that therefore the findings above are not relevant to any other education system. Indeed, Finland is a relatively small country with a culturally and socially homogeneous population. It has highly trained teachers who enjoy substantive prestige in their profession. For example, among the general upper-secondary school leavers, the teaching profession is on the top of the list of most admired career paths: according to a poll conducted in 2004 over 26 percent of general upper secondary school graduates rated the teaching profession as the most desirable (Helsingin Sanomat 2004). Despite of these features there are several lessons than may be considered in developing quality of secondary education elsewhere.

How successfully Finland has responded to the twin challenge of secondary education? This requires answering two questions: (1) Is the quality of secondary education in Finland any better than in other countries? (2) Are more young people attending and completing secondary education in Finland than elsewhere? Since there is no reliable and commonly applied measure for quality of secondary education specifically, we need to look at some of the aspects of education system performance that indicate good performance and quality overall. In this article I have included transition rate from basic to secondary education, completion rates of various types of upper secondary education and student achievement in the middle of secondary education cycle, i.e. at the age of 15 in reading, mathematical and scientific literacy. In Finland approximately 95 percent of the basic school leavers' age cohort transit immediately to upper secondary education or the additional 10^{th} grade of basic school. It should be noted that more than 99 percent of pupils complete basic school. Completion rates in upper secondary education are fairly high: 90 percent in vocational education and 98 percent in general secondary education. This means that close to 90 percent of the age cohort completes some type of secondary education. Finally, two cycles of PISA studies suggest that the Finnish 15-year olds learning achievement in reading, mathematics and science is internationally of very high quality. If it is accepted that these aspects indicate something about the quality of secondary education, then the argument made in this article is valid.

The Finnish approach to secondary education development shows that good performance in access, completion and quality is attainable at reasonable cost, using education policies that are built upon equity, early intervention and helping students to plan their future and take a lead in their own learning. Finland has systematically build trust in education system by promoting teacher professionalism, school autonomy and good leadership as the key drivers of change and improvement. Moreover, according to the Finnish experience, improving the quality of secondary education requires development of sustainable policies that address the importance of creating good knowledge, skills and lifelong learning attitudes as early as possible in primary school for all pupils. The Finnish secondary education model also shows how preparing pupils well for the transition from basic to upper secondary school can increase the rate

of successful career decisions and hence reduce student failure in upper secondary school. Finally, education development strategies must benefit from already existing good practices and innovations through lateral capacity building and thereby systematically enhance and enrich the learning environments in upper secondary schools.

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 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.

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