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Rethinking accountability in a knowledge society

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Abstract Competition between schools combined with test-based accountability to hold schools accountable for predetermined knowledge standards have become a common solution in educational change efforts to improve the performance of educational systems around the world. This is happening as family and community social capital declines in most parts of developed world. Increased competition and individualism are not necessarily beneficial to creating social capital in schools and their communities. This article argues that: (1) the evidence remains controversial that test-based accountability policies improve the quality and efficiency of public education; (2) the current practice of determining educational performance by using primarily standardized knowledge tests as the main means of accountability is not a necessary condition for much needed educational improvement; and (3) there is growing evidence that increased high-stakes testing is restricting students' conceptual learning, engaging in creative action and understanding innovation, all of which are essential elements of contemporary schooling in a knowledge society. Finland is used as an example to suggest that educational change should rather contribute to increasing networking and social capital in schools and in their communities through building trust and strengthening collective responsibilities within and between schools. This would create better prospects of worthwhile lifelong learning in and out of schools. Based on this analysis, the article concludes that education policies should be directed at promoting more intelligent forms of accountability to meet external accountability demands and to encourage cooperation rather than competition among students, teachers and schools.

Keywords Accountability · Educational change · High-stakes testing · Learning · Trust

The views are those of the author alone and do not necessarily represent those of the European Training Foundation or any of the European Union institutions.

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Introduction

The knowledge society has created a paradox for its schools: the more teachers try to teach their students, the less they seem to learn. Demands for more teaching come from many sources, among them those who expect schools to prepare students for knowledge-based globalized life. Simultaneously, much of the energy of the educational change community goes into efforts to understand and improve the performance of educational systems. These notions are further driven by recent educational reviews that show how some cities, provinces and countries have better education than others. For example Singapore, Alberta, Finland, and Cuba have been mentioned among those where students do better on tests, are more likely to complete their education on time, and tend to stay within formal education longer than do their peers elsewhere (Carnoy 2007; OECD 2007; Sahlberg 2007; Schleicher 2006). Interestingly, these educational systems have used differing policies and implemented sometimes even contrary reforms to achieve good educational performance.

Many policy-makers and educational researchers are seeking to understand these differences in their own pursuit of successful educational reform. It has become clear that good learning outcomes are not just because of better schools and excellent teachers. Nor are they only because more time or money is spent on education, better curricula or more advanced facilities. In many parts of the world, young people who have good schools usually have parents who are better educated and are a part of networks that value education as a personal good. Often these parents in such favourable circumstances are able to offer the best ways for their children to be successful in school and thereby later in life.

But, as Carnoy (2007) claims, there is also another reason for some students doing better in school that he claims might be just as important as highly-trained teachers, educated parents, well-equipped schools and modern educational programmes. He says that "some communities, regions, and even countries have created environments and networks that—beyond families—help young people want to be academically successful and facilitate strategies that encourage them to achieve success" (Carnoy 2007, p. 1). In the 1960s James Coleman with his team initiated research and triggered long-lasting debate about factors that seem to cause differences in student achievement (Coleman et al. 1966). Later Coleman, following French sociologist Bourdieu, introduced the notion of family and community social capital that is embedded in relationships among individuals or among institutions and hence benefits all individuals or institutions involved in these relationships by making their work more productive (Bourdieu and Passeron 1977; Coleman 1988). Family, community or nation social capital lead to cohesiveness, trust, supportiveness, and care for those students in these networks that, in turn, help them learn better in school and to possess higher expectations for their own thinking, behavior and learning.

These expectations, however, should reach beyond measurable academic knowledge. Students need to experience personal and social development and change as the most important outcome of schooling. In other words, learning that is worthwhile and valued by their families, communities and nations more than simply achievement for external expectations or to satisfy policy norms. Instead, schools around the world are experiencing tougher and more consequential accountability structures purporting to improve teaching and learning. As a consequence, boredom rather than genuine interest is how students feel about schooling in many educational systems. "Being bored in school", Sharan and Chin Tan (2008, p. 4) explain, "means that students' learning is *unproductive*." School that does not stimulate desire to learn, need for learning, or curiosity to know more, is not able to generate productive learning required by the knowledge society. It is now clear that

tightened test-based accountability as a common change strategy is counter-productive to schools' efforts to improve. This is the reason for this article.

Knowledge-society learning

The prime socio-cultural pretext for educational reforms today is the ongoing social and economic transformation of our societies. Globalisation—the often-used label for this change—alters the basic nature of people's lives, including social structures, work and individual identities. Today, we live and work in a world of information, knowledge, and innovations. Indeed, many societies are labelled as knowledge societies that are driven by ideas, creativity and ingenuity. As Hargreaves (2003, p. 1) writes, "knowledge-society schools have to create these qualities, otherwise their people and their nations will be left behind." This is, however, yet another external expectation that teachers and schools are to attain. A variety of beliefs and public opinions abound regarding what teaching for a knowledge society means and how schools could best create the core qualities needed by students for our complex world.

Teaching in our insecure and complex world is influenced by two change forces that are more contradictory than complementary. The first force is what I have called the global educational reform movement (Sahlberg 2007, 2009). It is shifting the focus of improving education towards basic knowledge and skills in some core subjects, common standards for teaching and learning, measurable knowledge and stronger school and teacher accountability for results. It has increased competition in and between schools and thus has changed the nature of cooperation and networking. The other change force is increasing external expectations that schools should do more to help the particular nation's economy to develop and become more competitive. This means, among other things, emphasis on risk-taking, creativity, and innovation at all levels of schooling (Hargreaves 2003; Sahlberg 2006). Instead, 'teaching for test' has become one of the most common methods of instruction in test-based accountability nations (Au 2007; Cuban 2007; Jones et al. 2003; Nichols and Berliner 2007; Sacks 2001). Caught in the middle of these two change forces are teachers and students who often find it difficult or meaningless to react to these contradictory external pressures.

Steering educational systems towards producing intended outcomes requires congruence between teaching for the knowledge society, and what educational reforms require from teachers and students. In some cases, however, what schools are explicitly or implicitly assumed to do, within ongoing reforms, to improve their performance, contradicts what is needed from schools for the knowledge society. Comparison of different pressures that teachers and students experience at educational system, school, and classroom levels reveals some difficult incompatibilities and controversies. At the macro-level, the knowledge society demands an educational system flexible enough to react to weak signals and to produce a coordinated, collaborative response. Such a reaction and response is made possible by leadership that relies on a shared vision and collective professional cultures. An educational system's flexibility is promoted by freedom of choice, decentralized management and a culture of trust within professional communities, i.e. teachers and educational leaders. At the same time, educational reforms are imposing new regulations that not only set the criteria and targets for success and external measurement but also directives about how to achieve them.

But, a knowledge society is grounded upon the power to think, learn, and innovate both individually and collectively. Learning to think, to learn and to innovate requires more than

orderly implementation of externally mandated regulations. The high-demand features of modern schooling—learning together, creating new ideas, and learning to live with other people peacefully, best occur in an environment decidedly different from what our schools offer young people and their teachers today. Furthermore, treating ingenuity and diversity simultaneously in classrooms is a challenge to teachers. Schools will not be able to meet these expectations to educate their students for a knowledge society, unless they have:

(a) internal conditions that respect their professional intuition, knowledge and skills to craft best learning environments for their students;
(b) a social context and necessary social capital in their community that provide encouraging and supportive conditions of and will to learning for their students; and
(c) adequate external norms and expectations that rely on responsibility and internal accountability to reach good learning for all students.

The purpose of this article is to stress the distinction between intelligent and non-intelligent accountability policies and how they direct teachers and students toward learning differently. The primary assumption, first of all, is that students and teachers should have clear responsibilities regarding their work in schools. In other words, a certain amount of school accountability is needed but it should be designed and put in practice wisely. Due to the failure to do that, schools in many countries have an emerging educational dilemma: How to deal with external productivity demands one the one hand, while simultaneously teaching for a knowledge society with moral purpose?

The paradox of teaching in the knowledge society

Competitive pressures for higher productivity, better efficiency and system-wide excellence are affecting schools and teachers. Competition over students and financial resources are shifting schools' *modi operandi* from those based on moral purpose towards those that emphasise productivity and efficiency, i.e. measurable outcomes, higher test scores, better positions in school league tables, and thereby greater individualism. Indeed, increasing public-sector productivity is changing small, personalised schools into larger institutions characterised by opportunity and choice, but rarely by personal care and collective social and human responsibility. Market-like efficiency measures have brought standards, testing and the race for higher achievement as measured by these tests to the centre of lives of teachers and students—both in and out of their schools. All these are a threat to social capital in schools and in their communities. Indeed, schools are viewed as necessary elements for exponential economic growth in the service of wealth accumulation in the knowledge economy. Many education strategies of today seem to take for granted that the new educational order based on standards and test-based accountability will best serve this purpose. What the world and its species need are not unbridled wealth accumulation and a population programmed by schools to want it. We rather need an education that critically examines the implications of this phase of history that Rees (2003) sees the last phase for retaining an ecosystem in sustainable balance, and how new forms of international cooperation, as eloquently described by Sachs (2008), can ensure this. Education has a key role to play in doing both of these. Therefore, teaching in a knowledge society must be wisely balanced between different expectations described here.

As an illustration of how the external pressures on more effective teaching arrangements affect schools, a recent issue of Research Points published by the American Educational Research Association called for increased instructional time for schools (Rangel 2007). In

Rangel's advice to policymakers, she calls for more instructional time for core academic subjects, extending the school day and calendar, and guarantees that the extended time is used for high-demand academic learning. The educational change literature, however, is rich in examples of failure when 'more of the same' has been the leading idea of improvement (Fullan 2005; Hargreaves 2008; Sarason 1990). Instead, more learning time in schools should address the social-emotional development of students as both individuals and members of families, communities, nations and also the human species. It should start from the premise that the future survival of the species is the bottom line and that fundamental universal human rights should be the means of living together on our overpopulated planet. Such external conditions to teach and learn in schools are also shaping the social contexts of teachers and students. Evidence from educational systems where all schools have been able to perform well suggests, however, that it is the favourable social environment that provides schools the necessary background for effective teaching and shapes students' attitudes and conceptions of learning (Carnoy 2007; OECD 2007; Sahlberg 2009). In fact, emphasis on social justice and the moral purpose of both schooling and learning seems to exert an important impact on overall outcomes of education.

Teaching is a profession that is typically driven by ethical motive or intrinsic desire, just as nursing, the performing arts and humanitarian services are routinely driven. Most teachers, therefore, expect to teach in congruence with their moral purpose, i.e. so that students would understand and learn to promote their personal development and growth, not only for favourable exam scores or other externally set conditions of progress. Helping other people and thereby one's own community and society is the basic element of moral purpose associated with the teaching profession. Teachers are, by their nature, important facilitators in building social capital within their community and nation. Therefore, teachers historically have a broader professional work focus than simply academic learning or technical skill development, as reported by Lortie (1975) and Hargreaves (2008), for example. Increased emphasis on knowledge testing and competition has left many teachers 'hugging the middle' as Cuban (2007) puts it. Teachers try to balance their work between the moral purpose of student-centred pedagogy within education as a public right, on the one hand, and, on the other hand, the drive for higher standards through perceived efficiency of the presentation-recitation mode of instruction and the perspective of education as a private good.

In this article I argue that test-based accountability policies have trapped teachers in a dilemma between schooling for social capital and moral purpose with student-centred pedagogy and learning on one side, and efficiency-driven education with teacher-centred instruction and achievement on the other. Students as the main recipients of schooling must balance fulfilling their own aspirations with external demands for performance that are often not only conflicting, but also unethical and contradictory. When educational success is determined by each student's individual effort, school and community social capital are at risk. Coleman et al. (1966) envisioned social capital as individual and conscious accumulation that can be spread more equally through policy and other interventions aiming at social change. The role of state or provincial regulation and policies become key issues in creating that social capital in schools, communities and nations that play, according to Coleman (1988, p. 105), "roles in the creation of human capital in the rising generations."

Figure 1 illustrates the dilemma of teaching in the knowledge society. There seem to be two opposing contextual forces that shape teachers' and students' school experiences and hence affect student learning. On one side, socio-cultural context creates positive circumstances but also obstacles for favourable conditions to learn. Human and social capitals are two driving contextual factors that determine the dynamics of student's family and

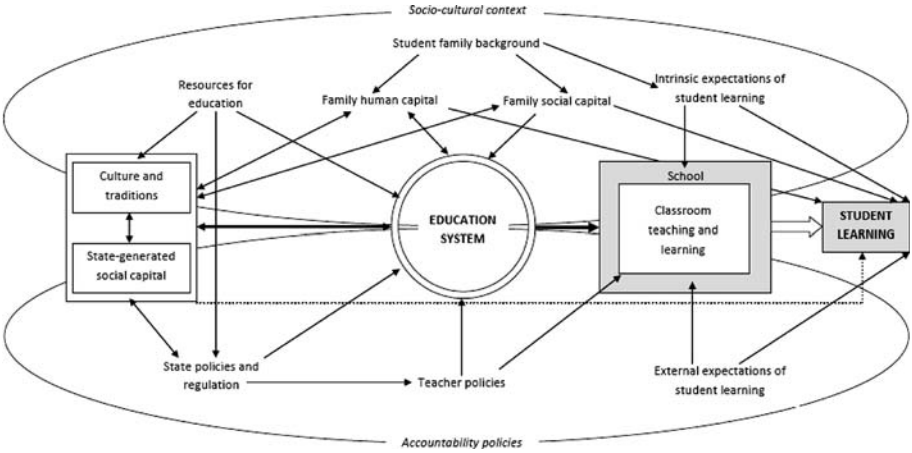

Fig. 1 A tentative scheme for two contextual forces affecting student learning

socio-economic background. On the other side, current market-oriented education policies—especially test-based accountability—affect other regulations and norms, influence teacher policies and set external expectations to how teachers should teach and what students should learn in school.

In some well-performing countries, high national social capital, including state interventions in social welfare, public health and caring of children (especially those with special needs), seem linked to high educational expectations for all children. As Carnoy (2007, p. 15) notes, "governments can … generate a cohesive and supportive educational environment on a regional or national scale that creates learning benefits for all students". This suggests that supportive social networks, such as families and communities, can play an important role in providing an encouraging environment within which children can learn. Tellingly, information and knowledge societies are changing social networks and reducing social capital in many developed countries although related values and behaviors are notoriously difficult to measure (OECD 2008; Putnam 1995). Nevertheless, structural indifference in the form of intentional reduction of public social services to children and youth, in our societies is negatively affecting children's well-being and widening the social gap within societies. This creates a risk also to learning in schools through weaker social networks and social capital.

Competition and test-based accountability

A particular approach to educational change is based on a belief in competition and information as the key drivers of educational improvement. This approach combines two traditions in public education that have previously been only loosely connected, namely, public accountability and student testing. During the past 20 years test-based accountability has held school, teachers, and students increasingly accountable for learning as measured by knowledge tests (Carnoy et al. 2003; Hamilton et al. 2002; Jaafar and Anderson 2007; Ladd and Fiske 2003; Møller 2009; Popham 2007). In their analysis of the Education Reform Act 1988 of England, Levin and Fullan (2008, pp. 289–290) summarize the logic of market-driven educational change as:

(1) The belief that competition in the economy as a whole drives efficiency and improvement could be applied to schools as well, so that competition among schools would lead to better outcomes for students.
(2) In order for schools to compete, individual schools would require much more autonomy.
(3) Parents would need to be able to choose the schools their children attended.
(4) In order to choose, parents and the public would require comparable measures of student achievement and education quality for all schools, based on a single national curriculum.

Indeed, the incentive-based educational reform movement has stimulated enormous debates between and within education and policy-making communities during the last two decades. Research-generated evidence on school accountability is rather difficult to interpret. The key question is: "Do students perform better in competition-based school systems that have autonomy, choice, and related accountability measures in place?" Proponents of greater accountability contend that autonomy and choice improve student learning by heightening incentives for teachers and students to try harder and do better. Accountability systems typically combine clear performance standards, external monitoring and testing of results, and consequential rewards and sanctions. Therefore, accountability advocates argue that by generating better information on student performance, such systems indirectly benefit students, teachers and principals in their efforts to achieve the best possible outcomes. Moreover, proponents claim that school autonomy, often an element of accountability systems, replaces the rigidity and bureaucracy of centralised governance with creativity and efficiency of local leadership (Wössmann et al. 2007). Competition among students due to free choice of schools, supporters say, releases energy and promotes school improvement as financial resources follow the students.

Some of the recent studies also suggest that with respect to accountability, "students perform better where policies are in place that aim at students (external exit exams), teachers (monitoring of lessons), and schools (assessment-based comparisons)" (Wössmann et al. 2007, p. 4). A study by Carnoy and Loeb (2002) of effects of external accountability on student outcomes in 50 states of the USA revealed that "the results show that students in high-accountability states averaged significantly greater gains on the NAEP 8th-grade math test than students in states with little or no state measures to improve student performance" (p. 305). Furthermore, their study concludes that students within high-accountability states do not display significantly higher retention or lower high school completion rates. A 2006 OECD PISA study covering 57 nations also indicates that accountability, autonomy, and choice are positively associated with the level of student achievement across nations (OECD 2007). However, it is noteworthy that accountability policies vary from one education system to another and in some cases, as described later, and refer to notion of mutual responsibility in education rather than specifically set accountability structures.

Competition as an approach to raising the quality and improving equity of education seems, indeed, common sense: most important justification for a success of the school is, and should be, whether students have learned what they were expected to learn in school. Expansion of the global educational testing industry is based on the optimistic assumption that it is possible to find out, with sufficient precision, what students have learned by testing them. "Unfortunately," Popham writes, "the tests currently being used as the centrepiece of the test-based accountability are the wrong ones" (Popham 2007, p. 166). Today's accountability tests do not measure what teachers taught to students but "rather

what those students brought to schools" (Popham 2007, p. 167). Test-based accountability policies that rely on flawed tests can harm schools rather than help them to improve. Other critical researchers (McNeil 2000; Sacks 2001) add that the cost of test-based accountability systems is too high and the tools currently used too weak to justify permanent change or promote worthwhile learning in schools. The problem, actually, is not necessarily holding students, teachers and schools accountable per se, but rather how it is arranged and operated in practice. Whenever school accountability is relying on poor-quality knowledge tests, such test-based accountability can be made work better by employing appropriate tests and other assessment models to complement information gathered by these enhanced tests.

Part of the opposition to test-based accountability comes from the fear that business-like management of education with in-built high-stakes testing and consequential accountability will eventually be harmful for the quality, equity, and overall viability of public education as it is today (Hargreaves 2008; Ladd and Fiske 2003; Nichols and Berliner 2007; Møller 2009; Popham 2007; Sacks 2001). Others contend that the accountability movement with increased competition, autonomy, and choice will not improve the quality of schools and learning, and, indeed, is creating adverse effects, such as narrowing learning, demoralizing teachers, increasing student drop-outs, and loosening integrity among school administrators, teachers and students (McNeil et al. 2008). High-stakes testing systems are, according to growing number of researchers, including Au (2007), Berry and Sahlberg (2006), Nichols and Berliner (2007), Loeb et al. (2008), and Shirley (2008), narrowing curricula, increasing the practice of presentation-recitation instructional modes, stifling creativity and undermining student engagement in schools. This has led to some civil disobedience. Recently a science teacher in Seattle was suspended for refusing to give a state test in his class. He crystallized his motive by saying that "all we have to do is have faith in these kids and work as hard as we can with these kids and their families and they're going to do fine" (Teacher Magazine 2008).

In an international review Wössmann and colleagues stressed that according to some critics "choice and competition in schooling will hurt the most disadvantaged, thereby weaken social cohesion" (Wössmann et al. 2007, p. 10). Indeed, good schools in open-educational markets with choice and competition will only accept the best students, leaving behind those who are most in need of attention and care. Nichols and Berliner (2007) offer an even gloomier view of education as a consequence of test-based accountability. With reference to Campbell's law which states that the more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor, they reported that over-reliance on high-stakes testing exerts serious negative repercussions at every level of the public school system. Excluding weaker students from tests, student and administrator cheating, and systemic corruption are already found in many schools and districts, as 'survival responses' to increased testing and the race for resources and fame.

In conclusion, evidence from various international sources does not support the idea that test-based accountability would be a proven strategy for sustainable school improvement. For example, a summary of the progress of student achievement in three consecutive OECD PISA surveys (OECD 2001, 2004, 2007) suggests that nations that have earlier built their educational reforms on test-based accountability ideas, have experienced stagnation or decline of student learning, often accompanied by increased drop-outs, compared to some other nations that focus on creating favourable conditions for teaching and learning by promoting cooperation rather than competition in their educational systems, for instance Finland, Slovenia or Estonia. Figure 2 illustrates, as an example, educational progress of

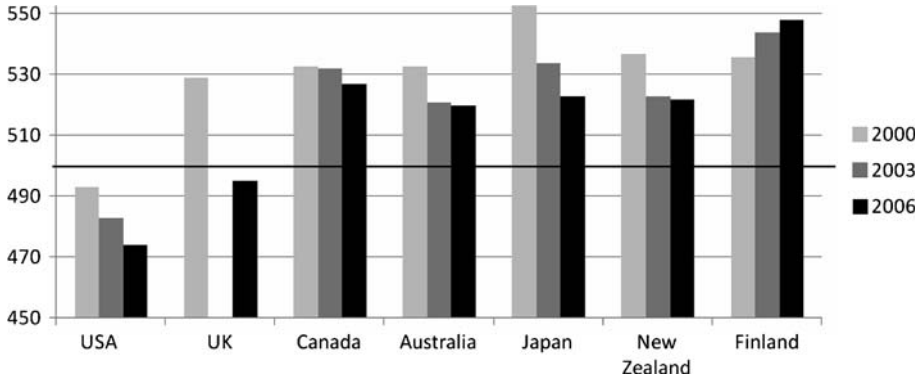

Fig. 2 Progress of student achievement from 2000 to 2006 as measured by the OECD PISA mathematics scale in some test-based accountability educational systems and Finland (OECD average in this scale is 500)

some of these test-based accountability nations as measured by OECD PISA mathematics scales in 2000, 2003 and 2006, in comparison to Finland that has never employed any external test-based accountability policies.

Comparisons in Fig. 2, however, do not suggest that test-based accountability as a single variable would explain educational success or failure of any nation. It rather hints that universal testing of students and related school accountability is not a necessary condition for sustainable improvement of educational performance. That does not mean that chances of high educational performance would increase if no accountability policies are employed. Instead, common concern here is that current externally mandated test-based accountability structures in public education have become increasingly narrow and, as mentioned earlier, focus almost solely on standardized knowledge tests and published the scores. Testing-driven systems often ignore deeper aims of schooling and broader goals of learning and thereby fail to consider such antecedents as curriculum development, school and classroom leadership and school–community contexts. The challenges of achieving new and higher societal expectations of learning and equity in schools have led, according to Tschannen-Moran (2007), to suspicion of teachers and schools. Higher standards and greater accountability, she says, "have fostered conditions of distrust and blame" (Tschannen-Moran 2007, p. 100). The presence of trust does not guarantee improved educational performance, but its absence signals failure.

Intelligent accountability policies

Rather than insisting on abolishing school accountability systems, there is a need for new type of accountability policies that balance qualitative with quantitative measures and build on mutual accountability, professional responsibility and trust. This is often termed intelligent accountability (Sahlberg 2007; Secondary School Heads Association 2003). This framework ensures that schools work effectively and efficiently toward both the public good and the development of students. Intelligent accountability utilises a wide variety of data that give genuinely express the strengths and weaknesses of a particular school in meeting its goals. It combines internal accountability, consisting of school processes, self-evaluations, critical reflection and school–community interaction, with levels of external accountability that build on monitoring, sample-based student assessment

and thematic evaluations appropriate to the stage of development of each individual school.

Responsibility and accountability are nothing new to schools. In the past, teachers were responsible for teaching their children well, respecting social rules and promoting cultural expectations. Schools have always been held accountable for what they do, not only what is measured by tests. Based on the idea of a school's own accountability, Abelmann and Elmore (1999) created a model of internal accountability that assumes that schools actually embed accountability in their daily operations. This model further assumes that a school's conception of accountability significantly influences how it organizes teaching and learning. In other words, accountability in school is a social construct that has different elements. Carnoy et al. (2003) describe this three-tier construct as (a) the individual's sense of accountability or responsibility; (b) parents', teachers', administrators' and students' collective sense of accountability or expectations; and (c) the organizational rules, incentives and implementation mechanisms or formal accountability system in schools. Schools vary considerably in the degree of alignment between these levels of accountability. The factors to which they hold themselves accountable also vary.

Intelligent accountability also stresses the principle of mutual responsibility. This means that accountability dynamics can be regarded as a two-way process. On the one hand, schools should be held accountable to decision-makers and the community for the overall outcomes of schooling. These outcomes, collectively defined by the school and their community stakeholders, go far beyond the student-achievement results that remain the focus of external standardized tests. Expected outcomes include non-cognitive areas, such as social skills, moral values and aspects of personality not assessed by current tests. On the other hand, decision-makers, authorities and school boards should also be held accountable for providing schools and their students, teachers and principals with the resources, conditions and opportunities needed to attain jointly agreed educational goals.

The school as a social organization has traditionally been a place for cultivating and caring for trust and responsible behaviors (Hargreaves 2003; Sharan and Chin Tan 2008). Learning to be responsible for one's own and others' well-being and growth is a tacit goal of schools. Societies with high social capital often also have higher mutual trust in other people. In such societies, as Hargreaves (2008, p. 37) suggests, responsibility precedes accountability. He asserts that "accountability is the remainder that is left when responsibility is subtracted." Responsibility grows from trust. Institutional cultures based on the culture of trust also spread responsibility to all members of the institution. One may also note that when trust disappears, so does an individual's sense of accountability or responsibility—and vice versa. Therefore, building trust within schools and especially among schools and their communities is a crucial step toward intelligent accountability and stronger mutual responsibility for our school systems. Unfortunately, in many schools external policies have replaced responsibility and trust with accountability which has left many schools caught between reaching out for their moral purpose and material rewards.

Part of the challenge to transform current accountability policies to more intelligent ones is to broaden the narrow and flawed ways of collecting information used in accountability judgements. Most commonly used instruments are data from standardized tests and examinations that typically focus on knowledge only rather than meta-cognitive skills and often try to cover too many aspects of the curriculum rather than concentrating on essentials. Alternative systems of accountability, as suggested by Nichols and Berliner (2007) and Popham (2007), for example, should shift the focus from assessment of learning to assessment for learning and employ different methods of assessment, in addition to performance tests, e.g. portfolios and projects.

These data are normally collected through a comprehensive census applied to all schools and all students of the age cohort. This is both expensive and is not a most appropriate strategy to learn how educational systems are progressing. Census-based external assessments also often ignore the peculiarities and profiles that individual schools have as a result of their own curricula. Hargreaves (2008, p. 39) argues that "it is not necessary to ensure accountability through a census. It can be achieved more easily and also more effectively through a statistically valid sample." The logic of using samples rather than a census is indeed easy to accept: In measuring the quality of drinking water or air we breathe it is quite enough to use samples to hold possible waste-generators accountable! Many governments, however, rely on educational accountability by census although it has evident drawbacks: It is expensive, it shifts focus away from worthwhile learning and is subject to wide-spread immoral abuse and collateral damage (Jones et al. 2003; Nichols and Berliner 2007; Sacks 2001). According to Popham (2007), currently used knowledge tests are not good enough to allow teachers to use them to improve their teaching. The high-stake, test-based accountability systems implemented in many nations create therefore a conflict between a spirit of risk-taking and creativity—essential elements of teaching and learning for the knowledge society—and normative pedagogies determined by reach for better test scores.

Moreover, current tests cannot adequately measure the important things we should measure, many of which are at the heart of knowledge-society learning. If teachers aim at learning that provides worthwhile 'cognitive perspectives,' as Peters (1983) calls it, and an increased capacity for self-awareness and the tools for developing emotional and social intelligence—the aspects in individuals that contribute to their collective family and community social capital—these should also be among the things used to judge success and failure (Sarason 2004; Sharan and Chin Tan 2008). The key question, therefore, in a knowledge society educational system is: "What is it that schools and teachers should be held accountable for and to whom?" Certainly focusing on knowledge in a few subjects is not enough. A knowledge society requires that students can use what they have learned creatively in new situations, solving problems and come up with new ideas.

The Finnish approach: Responsibility, trust and togetherness

In this article I have conveyed my concern that tightened test-based accountability for schools, teachers and students may jeopardise the schools' efforts to teach for the knowledge society and sustainable future, and is not, therefore, the best way to improve learning in our schools. Finland is an example of a nation that has demonstrated steady educational progress since the early 1970s, but has built an equitable educational system that operates in good congruence with a competitive knowledge economy (Aho et al. 2006; Hargreaves et al. 2008; Sahlberg 2007, 2009). It is therefore reasonable to look at how that society has addressed the global demand for stronger test-based accountability in its educational system.

Interestingly, the term accountability cannot be found in Finnish educational policy discourse. Educational reform principles since early 1990s—when much of public sector administration went through a thorough decentralisation—have relied on building professional responsibilities within schools and encouraging lateral capacity building among teachers and schools, rather than applying external accountability structures. Therefore, sample-based testing, thematic assessments, reflective self-evaluations and putting learning first have established culture of mutual responsibilities and trust. For example, before the

end of upper-secondary school, or grade 12, no external high-stakes tests are employed. Moreover, there is no inspection of teachers and only loose external standards steer the schools. This leaves teachers with good opportunities, as well as professional responsibilities, to focus on learning with their students rather than be concerned about frequent testing and public rankings of their schools. Some policy-makers predicted in mid-1990s that Finland will follow the school accountability policy models promoted by the global educational reform movement (Laukkanen 1998). However, in a review of policy development in Finland ten years later, test-based accountability is not even mentioned (Itkonen and Jahnukainen 2007; Laukkanen 2008). Møller (2009) has reported similar trends are reported in other Nordic countries.

Explaining the educational success of nations or schools is by no means easy. Finland is said to have well-prepared teachers, small schools, good principals, a relatively homogeneous society, an inclusive and compelling national educational vision and early intervention strategies for special education needs—each separately and collectively certainly help the Finnish educational system to perform well (Hargreaves et al. 2008; Laukkanen 2008; Sahlberg 2007; Schleicher 2006; Simola 2005). Some critics claim that particularly since Finland does not have such a diverse ethnic population that characterizes many other nations, Finnish schools perform better. Fair enough. I argue, however, that because Finland does not have test-based accountability applied to schools, teachers are free to teach for productive and worthwhile learning, not for the standardized achievement or race for higher public rankings. Indeed, since the beginning of the 1990s, Finnish schools have been systematically encouraged to explore their conceptions of learning, develop teaching methods to match their own learning theories and craft pedagogical environments to meet the needs of all of their students. *The National Framework for Evaluation of Outcomes of Education* (1999) and the *Law on Education* (1998) stipulate requirements and basic principles of student assessment and school evaluation. Teachers are responsible for the overall assessment of their students, using a mix of diagnostic, formative, performance, and summative assessments. The municipality's responsibility is to plan and implement necessary evaluations within and of their schools, based on nationally expressed needs. Thus, present education policies encourage cooperation between schools and try to protect schools from unhealthy competition, for example by ranking schools publicly according to student achievement data.

Finland's response to improve learning of all students since the early 1970s has relied on four strategic principles: (a) guaranteeing equal opportunities to good public education for all; (b) strengthening professionalism of and trust in teachers, (c) steering educational change by enriched information about the process and performance of teaching and schooling; and (d) facilitating network-based school improvement. Risk-taking, creativity and innovation have been valued as lighthouses of educational change. Schools have been credited and teachers recognised for their innovative ideas and initiatives. The global accountability movement has been reflected in clearer responsibilities, moral purposes and adoption of development-oriented education evaluation policies that integrate 'accountability' with overall educational progress in schools.

In such an educational environment, the collectively accepted conception of learning expands far beyond one that is typical to common knowledge tests. Finnish students, teachers and principals experience great degrees of autonomy and choice, but they also understand related responsibilities and expectations. I argued elsewhere that a significant proportion of success of Finnish schools results from putting worthwhile learning and mutual caring about youth in schools first, and only then responding to accountability demands in intelligent ways (Sahlberg 2007, 2009). Although test-based accountability is

not part of educational discourse in Finland, collective responsibility became more important due to systematic trust-building and cooperation endorsed by education administration in 1990s (Aho et al. 2006; Hargreaves et al. 2008). Specific strategies for building trust included, among other things, raising the professional status of teachers, enhancing school leadership and building professional learning communities in schools. Experience shows that trust in the education system can indeed be promoted by public policies but it can only be strengthened by multi-lateral trust between people.

The main message of this article is that schools in market-driven education environments have been left stuck a tough educational dilemma. The current culture of accountability in the public sector often threatens school and community social capital and damages trust, rather than supports it. As a consequence, teachers and school leaders are no longer trusted; this decline of trust is a crisis of suspicion, as O'Neill (2002) has observed. Although the pursuit of accountability provides parents and politicians with more information, it also builds suspicion, low morale, and professional cynicism. An accountability system must put worthwhile learning first, and then minimise the negative effect that externally mandated test-based accountability systems may have on teachers' work. This negative effect is evident in many educational systems today.

Today, Finland is often used as a model in successful educational change. "As societies move beyond the age of low-skill standardization," writes Hargreaves, "Finland contains essential lessons for nations that aspire, educationally and economically, to be successful and sustainable knowledge societies" (Hargreaves et al. 2008, p. 92). However, reform ideas and policy principles that have been employed in Finland since the 1970s will not necessarily work in other cultural or social contexts. For example, Finland, like other Nordic countries, has higher mutual trust in other people and their educational systems than elsewhere (OECD 2008). Similarly, there are other socio-cultural factors that are mentioned by some external observers (Grubb 2007; Hargreaves et al. 2008; Schleicher 2006), such as social capital, ethnic homogeneity and high professional status of teachers, that may have a key role when transferability of education policies is considered. Finnish experience suggests, after all, that it is possible to create an equity-based, high-performing educational system for a knowledge society relying on responsibility and trust instead of test-based accountability policies. In particular, the development of professional trust and responsibility as compared to the common emphasis on administrative and market-driven forms of accountability may be worthwhile adopting in other countries or settings.

Three suggestions

Policies that judge the quality of an educational system, province, or school by assessing student learning using common standardized tests, implicitly define what kind of learning is important in school. Most current accountability tests assess too much standard knowledge delivered by a prescribed curriculum—the outcomes that are easily measurable, and not necessarily the knowledge, skills, and attitudes that students will need in their lives within a knowledge society. Good schools teach successfully for all types of learning, but they put productive, worthwhile learning first. But even the best schools cannot achieve good learning alone. Since Coleman's study, it has been known that significant student-learning variance can be explained by out-of-school factors, such as family and community social capital, and peer group influence (Coleman et al. 1966; Coleman 1988). One must not assume that schools alone should be responsible for student learning and their well-being. Student assessment needs to be designed in ways that support learning—not just

achievement—in schools. Therefore, school accountability should be based on better tests and broader range of assessment methods that focus on meta-cognitive and skill learning, rely more on sample-based test data, and be matched by stronger parental involvement and community responsibility. Furthermore, collective responsibility for learning, well-being and happiness of young people in schools should supersede administrative accountability that is externally applied to schools.

After two decades of high-stakes and test-based accountability policies in England, United States, parts of Canada, and in other countries, the gap between proponents and opponents in the education community is widening. The unintended consequences of high-stakes testing are becoming evident, as presented in this article. On the other side, accumulated testing data are used to prove that stronger school and teacher accountabilities are improving learning, closing the achievement gap and decreasing number of early school leavers. International student assessment studies, e.g. recently the OECD PISA, also suggest that school autonomy, parental choice and accountability structures that hold schools, teachers and students accountable for determined results correlate positively with educational performance at national level. Indeed, the question is not whether schools, teachers and students should be held accountable or not. The challenge is how to establish accountability system that would support worthwhile learning, increase social capital and thereby help schools to be active players in developing our societies.

As a conclusion, I suggest the following. First, educational change efforts should primarily focus on building trust and collective responsibility in schools and their communities. Teachers belong to a community of high-professionals, just as medical doctors and engineers, where trust in and among professionals is the prime code of work. When trust in professionals disappears, the responsibilities that these professionals bear are also at risk. Autonomy that allows schools to decide their curriculum and teaching arrangements are authentic signs of trust. So are pedagogical freedom and teacher-based assessments. Accountability policies should not jeopardise that trust and social capital in schools but should instead strengthen it. Experiences in Finland and other Nordic countries suggest that school autonomy and trust are also necessary conditions for cultivating internal responsibilities of schools. Good educational leadership in schools is able to strengthen individuals' responsibilities for their own actions and performance and also create the collective responsibilities that schools need in order to provide good learning opportunities for all.

Then, education policies should promote more intelligent forms of school accountability and match them to external accountability needs. Test-based accountability, public ranking of schools based on those tests, and related rewards and sanctions are not contributing to ongoing efforts to sustainable improvement of the quality of public education. More intelligent accountability involves all stakeholders, including students and parents, in discussing and determining the extent that jointly set goals have been attained. It combines data from student assessments, external examinations, teacher-led classroom assessments, feedback from parents and school self-evaluations. Intelligent accountability draws on data from samples rather than census-based assessments that, by themselves, limit the stakes of student testing. It also focuses on broader learning, not just knowledge of mathematics, literacy, and the sciences, but also skills, attitudes and values that are needed in a knowledge society. The over-accountability of schools illustrates the need for a better balance between pressure and support in schools. Trusting in the professionalism of teachers and school principals means giving schools greater latitude in attaining the best outcomes for pupils. There is a need for significant deregulation of the school system, to

generate authentic freedom for all schools. More intelligent accountability systems should be designed to support these freedoms and responsibilities.

Finally, educational leadership should encourage cooperation among teachers and networking among schools. In my earlier article I defined a profound paradox for educators in the knowledge society: to prepare themselves for a more competitive knowledge economy, schools and students must compete less (Sahlberg 2006). Schools should increase their internal collaboration against the external competition. A knowledge society requires well-educated and prepared people who possess the knowledge and skills to work in an innovation-rich world. Cooperation and networking, rather than competition and disconnectedness, should therefore characterize education policies and the development of educational systems. This article provides evidence that high-stakes testing increases competition between schools and teachers and hence jeopardises efforts more cooperation and networking that are essential conditions for system-wide innovation and change.

Schools and other educational institutions should cultivate attitudes, cultures, and skills needed within creative and collaborative learning environments. Creativity will not flourish and be sustained in schools unless people feel secure to take risks and explore the unknown. Moreover, working with and understanding innovation requires creative and risk-intensive contexts. In brief, a sustainable learning society that also helps us all to understand how to retain our planet's ecosystem in sustainable balance can be best promoted by developing safe and caring schools and thereby combat declining social capital and increasing the structural indifference in many Western societies (Putnam 1995). The fear-free school is a place where students are not afraid to try new ideas and ways of thinking. Equally importantly, in the fear-free school, teachers and principals will willingly step beyond their conventional territories of thinking and doing—often these represent conditions for making substantive differences in students' learning and schools' performance. Schools in the sustainable knowledge society need to focus more on cultivating humanity and building social capital than on becoming marketplaces where value of success is determined by cost-efficiency and material competition for measurable private profit.

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