

The interplay between ILSA and curriculum reforms: - the case of Sweden¹

Eva Forsberg & Daniel Pettersson***

**Uppsala University, ** University of Gävle & Uppsala University*

Introduction

In this paper, using Sweden as an example, the overall aim is to show how international large-scale assessments (ILSA) have become the main way of telling the truth about schooling, teachers, pupils and their relations to society. Our primary interest is on how the educational system receives, acknowledges and adapts to the reasoning transported within and through ILSA (cf. Hacking, 1992). ILSA are elaborated on from a curriculum theoretical perspective. Here, the focus is on education as an institution and the knowledge, norms and values that are selected, ordered and codified in the Swedish educational system in the context of international tests.

Initially, meritocracy is identified as the basis for democracy and comparison in modern welfare societies. We consider meritocracy as a cornerstone for ideas about equality and a competitive assessment culture supported by and closely linked to educational research. In the Nordic countries, educational reforms, policy-making and governance have been closely linked to educational research, especially curriculum studies. Consequently, we approach ILSA and its rise, manifestation and evolution through the relations between educational policy, practice and research. We argue that, due to changes in the Swedish educational system and its context, it is relevant to describe it in terms of a comparative curriculum code.

Meritocracy – a comparison device for democracy and competition

In Sweden, ideas about social differentiation based on merit have been interwoven with ideas about a modern welfare state. As differences in people's life chances could no longer be legitimized by references to birth, rank or economic status, meritocracy was instead put forward as a device emphasizing democracy that ensured universal access to basic education and equality of life chances. Although individuals have equal access to basic education, their educational trajectories and transfer to different positions in the labour market largely depend on performance and merit.

Even though meritocracy was suggested as a tool for strengthening democracy, it can also reproduce and legitimize social stratification (Littler, 2013) and further elitist forms of democracy (Porter, 1995). Put differently, meritocracy is at the same time a specific reasoning and a state sanctioned technology that promotes the elimination of a traditional heritage based on inequality, and a tool that legitimizes inequalities based on individual achievements. In this interpretation,

¹ This paper is based on parts of an article (Forsberg, Nihlfors, Pettersson & Skott, 2017) produced in a project on the intersection between curriculum and leadership research.

meritocracy is considered as a societal concept in which the talented, energetic and ambitious are favoured for their talents due to the interconnectedness between education, merits and social benefits. This critique of how liberal society constructs inequality through ideas of merit is also a central part of British sociologist Michael Young's satirical novel from 1958, *The Rise of the Meritocracy*.

However, socioeconomic background, cultural background and ethnicity are still dominant predictors of educational performance. In part, the inability of the educational system to correspond to meritocratic ideals can be understood in relation to the styles of reasoning on which meritocracy rests, such as the conceptualization of talent/intelligence, the ability to discern what is essential knowledge, skills and abilities, whether these are measurable - preferably by means of standardized tests - and whether they are comparable. Ultimately, comparisons are at the heart of making merit intelligible. In sum, educational systems based on meritocracy have advantages and disadvantages for the furthering of democracy.

Meritocracy and international large-scale assessments (ILSA)

As a basis for educational evaluation, different meritocratic technologies affect and regulate the entrance, passage and exit of education as well as transfers to the labour market (Forsberg, 2006). This can be highlighted by administrative and pedagogical systems that are designed to assess, evaluate, document and compare students' performances and school results. In this way, merit also creates typologies of people and schools in terms of success/failure and winners/losers. International large-scale assessments (ILSA) can be analyzed as a technology that is in line with meritocratic ideals and the specific reasoning framing these kinds of assessments.

Society tends to make the incommensurable comparable by reducing it to abstract quantities; a strategy that is most visible in the field of international comparative research (e.g. Durkheim, 1894/1938, cf. Steiner-Khamsi & Waldow, 2012), a forerunner of ILSA. In the late nineteenth century, the production of numbered data was introduced and employed in order to stimulate new visions of the socioeconomic world. It was also linked to the creation and management of the development of the self-defined "democratic" state. Numerical data thus provided more than an "objective way" of seeing reality, in that it "instituted" the reality by creating a "common cognitive space" that could be both observed and described through data (Lussi Borer & Lawn, 2013). After World War II, data was gradually considered to be the most objective way of understanding "reality".

Beginning in the late 1950s, comparative educational research developed rapidly in terms of research programmes and number of studies and publications (e.g. Forsberg & Pettersson, 2014). This reorganization required a standardized system of accounting. One result of this was the creation of ILSA of students' performances. The idea behind this development was that if custom and law defined what was educationally permissible within a nation, educational systems beyond national boundaries suggested the educationally possible (Foshay, Thorndike, Hotyat, Pidgeon, & Walker, 1962). This vision was employed when the first international comparative pilot study in mathematics was introduced in the early 1960s and conducted by the International Association for the Evaluation of Educational Achievement (IEA).

This first international large-scale comparative test foreshadowed the exceptional growth of comparative assessment studies that followed and an emergent scientific field based on data and comparisons (Owens, 2013). However, “numbers” have become something more than simply relating to students’ results. They have also become the over-all reasoning of how schools perform, how a country manages, what the future will look like etc.

The practice of comparing in the ILSA tradition has been described in different ways. Here, debates related to comparisons of cases, variables (Nóvoa & Yariv-Mashal, 2003) and countries (Schriewer, 2009) are important for comprehending controversies in the field. Very few educational comparative studies integrate cases and variables on a conceptual basis (Stiegler & Hiebert, 1999) and data from empirical studies is often under-analyzed (Lindblad, Pettersson & Popkewitz, 2015) Further, a quest for a reflexive turn has been emphasized (Schriewer & Martinez, 2004). Today, ILSA are vital for the development of scientific discourses in education and for counteracting theoretical chauvinism (e.g. Archer, 2013).

ILSA create practices that illustrate what is considered real and educationally possible. Also, meritocracy and ILSA facilitate the “leaving” of the old world and an “entrance” into modernity. When introduced in Sweden, ILSA were not regarded as heterologous. The reasoning behind these kinds of assessments was already well-established in the educational system. We will now turn to the Swedish case to show how Swedish educational scholars developed theories and thinking in tandem with the evolution of a specific interpretation of the Swedish welfare system, and how this development created a specific comparative curriculum code. We do this by first of all presenting Swedish educational research that works in tandem with politics and national agencies and continue by illuminating the educational reforms and assessment culture that evolved. This then leads to a discussion about lending and borrowing in relation to ILSA and the comparative curriculum code.

The Swedish case: frames, curriculum code and context

ILSA and the governance of curricula have developed in tandem in Sweden since the introduction of the comprehensive school system in the 1960s. Depending on the outcome of international tests like TIMSS and PISA, Sweden has either been a lender or a borrower of policy and educational programmes.

Swedish educational reformation and researchers as state intellectuals

The interplay between research, politics and national agencies in the launching of the comprehensive school in Sweden gave rise to a specific position for researchers and the interpretation of curriculum studies. The implementation was closely monitored by educational researchers, some of whom served more or less as “state intellectuals”. Torsten Husén, an internationally renowned Swedish researcher who was involved in the establishment and development of IEA was also a significant player in the reformation of the school system (e.g. Husén & Boaldt, 1968). Interested in comparisons of social and economic heritage and the development of a comprehensive school system, Husén embodied two separate yet interrelated themes: the relation between education, social justice and meritocracy, and social efficiency and the allocation of individuals.

During the reformation, Swedish researchers were engaged as instruments for research-based policies. A number of empirical studies were conducted in order to decide on and evaluate the educational reforms. However, there was a sharp dividing line between politicians determining which questions to address and researchers finding the answers (Säfström, 1994). The role that Husén occupied as a “state intellectual” was later followed by others.

Frame factor theory and curriculum codes in context

Urban Dahllöf developed the frame factor theory within the paradigm of “state intellectuals” and paid attention to what at the time was known as the black box of educational research (e.g. Dahllöf, 1967; 1971). Dahllöf inquired whether and how unstreamed groups of students in the comprehensive school system affected classroom processes and school results. He introduced the concept of frames to highlight processes that were beyond the control of teachers and students, but were dependent on policymaking and manageable through reforms.

In the 1970s, Dahllöf’s concept of frames was further elaborated in terms of steering group, curriculum code and context by Ulf P Lundgren when studying classroom processes. Code related to the purpose, content and method of a curriculum in a multilevel way of reasoning that focused on formulation, realization and mediation (Lindensjö & Lundgren, 1986; 2000). In addition, Lundgren demonstrated how the curriculum and the frames were contextualized, historically constituted and based on relations between production and reproduction (Lundgren, 1983). Four curriculum codes manifested in the selection and organization of school knowledge, and norms and values were distinguished as the classical, the moral, the rational and the realistic (e.g. Lundgren, 1977).

During this period, curriculum research in Sweden was primarily presented as a pedagogical problem of the transfer of knowledge from one generation to the next and the part played by education in reproduction (Kallos & Lundgren, 1979). At the same time, a change in emphasis from a positivistic behavioural tradition to research inspired by sociology and history took place. The research of Basil Bernstein and Pierre Bourdieu was now employed in Swedish curriculum studies. Of special relevance for this paper is Bernstein’s codification of educational knowledge in relation to three educational message systems: curriculum, pedagogy and evaluation.

[...] curriculum defines what counts as valid knowledge, pedagogy defines what counts as valid transmission of knowledge, and evaluation defines what counts as valid realization of this knowledge on the part of the taught (Bernstein, 1975 p. 47).

This quote captures a complex reality that is especially relevant for analyzing the changes and movements of contemporary education (cf. Forsberg, 2011).

Curriculum as a political problem and the linguistic turn

In his studies of curriculum issues in the 1980s, Tomas Englund introduced the curriculum as a political problem and as a site for different groups struggling over education and its content (Englund, 1986). Analyzing the curriculum changes in the twentieth century, Englund suggested that the civic curriculum code consisted of patriarchal, scientific-rational and democratic conceptualizations. In the late 1980s and early 1990s, the “linguistic turn” directed attention towards meanings inherent in the curriculum and textbooks (e.g. Östman, 1995; Selander, 1992;

Linné, 1998). Emphases on the political and language have also been significant in the 2000s, often stressing issues of power, discourse, place and time in relation to globalization and its effect on the national curriculum (e.g. Forsberg, 2000; Forsberg & Pettersson 2014; Nordin, 2012; Pettersson, 2008; 2014; Sundberg, 2005).

Policy analyses, pilot studies and evaluations of implementation processes linked to the reformation of education have together established a platform for a rather tight interplay between politics and research. This has furthered the tradition of “state intellectuals” as well as an assessment culture that already from the beginning was linked to international comparative tests as democratic and comparative devices. Although the tradition of researchers as state intellectuals has changed and been reduced in strength, the culture of assessment, including ILSA, has evolved, expanded and become more important.

In the following section we discuss reforms that have had significant impact in the Swedish context and elaborate on the evolvement of an assessment culture relating to policy, practice, research and ILSA.

Swedish educational reforms

The comprehensive school that developed after World War II and was almost exclusively run by local authorities formally emphasized the rights of everyone to an equal education and development on the basis of their own contexts and conditions. This set the agenda for constructing and negotiating the concept of “a school for all” based on meritocracy. Students usually attended schools close to their homes and when tracking was used it took place within the schools.

The welfare state reasoning

The post-war expansion of education made central planning important and further strengthened the interplay between national agencies, politics and researchers (Marklund, 1985). Education was regarded as an essential part of an all-embracing welfare policy based on meritocratic beliefs, and the concept of equality was a guiding principle for reform. Standardization and uniformity, with funding and other important decisions made at the national level, characterized the period (Lindblad & Wallin, 1993). Politics set the priorities and decided on goals and resources to guarantee success. National educational planning included concepts like social engineering and was embedded in a rational paradigm (Forsberg & Pettersson, 2014; cf. Marklund, 2008).

During the 1970s, internal and external push-and-pull factors challenged the perception of the welfare state. Globalization, new communication technologies, unstable political situations and debates about the so-called “knowledge society” changed the relations between policy, the labour market and the economy (SOU, 1990:44), as well as results from the first ILSA. In addition, the better-educated citizen called for more influence. Criticism of the welfare state emphasized the inadequacy of governance, increased costs, inefficiency and task overload (cf. Held, 1997). In spite of implemented school reforms, resource allocations and a changed social and geographical distribution of education, the system did not deliver as expected. Social background was still the best predictor of educational attainment (Härnqvist, 1992). At least in part, the Swedish model, with a strong public sector, was regarded as a problem, rather than an effective instrument for the distribution of welfare, social change and democracy (cf. Forsberg & Lundgren, 2004/2009).

Governance changes on the vertical and horizontal axes

In the last three decades, the Swedish public sector and the education system have been radically and extensively transformed (Englund, 1995; Lundahl et al. 2014; Forsberg & Román 2017). More recently, changes in the governance of Swedish education have taken place on the vertical and horizontal axes and can be seen as expressions of how the relationship between the state, society and the individual has changed.

On the vertical axis, the globalization of education is seen in transfers of policy and participation in programmes initiated by international organizations such as OECD and the EU. At the same time, decentralization and deregulation have distributed responsibilities in new ways, with local authorities now being chiefly responsible for compulsory and upper secondary schools. However, curricula, syllabi and systems for control and evaluation remain at the national level, even though there have been changes over time in the amount of detail and degree of precision.

On the horizontal axis, a number of suppliers of education can be identified, such as private companies and non-profit organizations running independent schools alongside local authority-driven schools. The so-called shadow education sector is also growing, and for example offers homework support (Forsberg et al, 2015). Changes on both the vertical and horizontal axes have together contributed to an increase in the number of players involved in the governance of education. These now include governmental organizations (GOs), non-governmental organizations (NGOs), international governmental organizations (IGOs) and grey-zone actors (Lindblad, Pettersson & Popkewitz, 2015).

Changed frames for education

Since the late 1980s, the number of reforms has significantly changed how education is framed and which knowledge, values and norms are codified in education. There was first a move from centralism, universalism, social engineering and consensus to decentralization, particularism and polarization (Lindblad & Wallin, 1993). The aim of these reforms was to increase democracy, professionalism and efficiency (e.g. Lindblad & Popkewitz, 2001). Later, a movement towards marketization (Lindensjö & Lundgren, 2000) and re-centralization took place (Forsberg & Lundgren 2004/2009), which meant that the state was once again regarded as the key source of action, change, control and evaluation.

Local authorities, local schools and their actors were then made responsible and accountable for the organization of education, the allocation of resources, student achievements and school results. Hard and soft governing instruments rooted in a performance-based discourse were also introduced (Bergh, 2010; Lundahl, 2006; Nyttell, 2006). The curriculum and the assessment system became more aligned and international large-scale assessments were included in the national system and discourse on assessment and evaluation (Pettersson, 2008). This period has been described as the reclamation of a more homogeneous and teacher-proof school system, where subject content and knowledge have once again become more nationally uniform (Forsberg & Román, 2014). All in all, changes in governance, curriculum, assessments and their relations have created new frames for education.

The assessment culture of Swedish education

Over the last 25 years there has been a strong emphasis in Swedish education on tests focusing on performance output, in particular ILSA and activities that monitor, value and judge outcomes (cf. Forsberg & Wallin, 2006; Lundahl, 2006). This section describes and analyzes an assessment culture that has grown in both scope and impact.

The Swedish assessment culture is a multilevel phenomenon, with a variety of assessment activities at the international level (large scale assessments and international cooperation on evaluations and inspections), the national level (assessment criteria related to syllabi, grading system, national tests, guidelines for assessment, system for information and involvement of parents, follow-up, evaluation and inspection), among local school boards and agencies (follow up tasks and quality responsibilities) and at the school/classroom level (teachers' formative and summative assessments of students' performances). In addition, the requirement for teaching certificates and more differentiated teacher salaries have increased the demand for the documentation of teachers' performances and qualifications. Conclusively, during the last 20 years of educational reforms in Sweden there has been an intensified formalization of assessment practices in three key arenas: politics/bureaucracy, school practice and educational sciences (cf. Forsberg & Román, 2014). In the following we present three important practices that describe the assessment culture of education in Sweden, namely international assessments, national performance tests and school inspections.

International assessments: legitimacy, stability and the future

Sweden has been involved in international assessments from their inception - at first as one of the co-founders of IEA and later as an active member of OECD and the EU. From the 1960s onwards, international large-scale assessments were regarded as making the process of schooling more effective and as such fitted with the dominant ideology of social engineering and the strong belief of meritocracy for building a "new" society. The discourse on international assessments in Sweden is ongoing and covers several issues. Pettersson (2008) studied the reception of PISA in the Swedish politic/bureaucratic arena and concluded that ILSA as important sources of information are used differently by various actors in different ways, depending on their purposes and goals. International tests, and the national discussions that they lead to, reflect the actors' views of education. The meaning-making of ILSA that takes place in the context of politics, administration and the media and is used to describe educational visions of the future. Moreover, ILSA are used to distribute shame, blame or glory (cf. Steiner-Khamsi, 2004). In the media, the assessments often serve as a marker of legitimation and are used as arguments for stability and change (e.g. Forsberg & Román, 2014).

National performance tests: the importance of "numbers"

The former practice of more complex assessment tools and the use of formative assessments are now on the wane. One reason for this is that numerical marks are more clear-cut and, paradoxically, may appear more informative than more elaborated verbal assessments (Forsberg & Lundahl, 2006). Another reason is linked to the marketization of the school system and the school reform in the 1990s that enabled parents and students to make informed decisions about which school to attend. As a result, schools now market themselves in order to attract students. Accordingly, the grading system and ILSA have an economic function, in that schools need students in order to survive (Lundahl et al. 2010).

In Sweden, the previous national system involved the testing of students' proficiencies by means of national tests. From the 1940s up to the middle of the 1990s, these national tests were based on a system of norm-referenced grades. The main aim of the tests was to standardize teacher grading. In a first wave of reforms in the 1990s, a new grading system was introduced to coincide with new curricula and syllabi. At the same time, national tests were introduced in three subjects in year 9 to serve as professional guidance and to complement other kinds of assessments performed by an individual teacher. During a second wave of reforms, the number and extent of national tests gradually increased and laid a stronger foundation for summative evaluations. The purpose of the national tests has changed from primarily being a tool for professional guidance to being a guardian of meritocratic ideology (cf. Lundahl, 2006).

National inspections: new ways of legitimating meritocracy

Starting in 2003, all schools in Sweden have been inspected over a six-year cycle. A control of output was introduced in an organizational tradition that previously mainly targeted input, processes and school development. Consequently, control of performance is now seen as a prerequisite for improvement, as well as a gatekeeper for meritocracy and students' life chances. In 2008, the Swedish Schools Inspectorate became an agency in its own right, with strengthened responsibilities and intensified inspections.

School inspection dates back to the 1860s and its purpose, function, intensity and scope have varied over time. In the first wave of extensive school reforms in the 1990s, inspection was based on control. An overall pattern of change can be identified in the state's use of inspection as a mode of governance in local authority- and independent schools. There has also been a shift in focus from the inspection of soft aspects, such as norms and values, to hard issues like knowledge and attainment (Lindgren et al. 2012). This change is closely connected with new inspection techniques and a growing reliance on evidence from national and international tests. When state inspections focus on these aspects of education, research and practice do the same.

The comparative curriculum code

In the new context of Swedish education, changes in governance on both the vertical and horizontal axes have taken place with regard to how education is formulated, realized and mediated. Major and critical reforms concern the extended assessment culture and ILSA, now a regular component in the national test system. In recent decades, several debates, also identified in international reviews of educational research, have characterized Swedish policymaking and research. Most of the themes are closely related to changes in the assessment culture and the increased use of national and international tests. These themes include the consequences of restructuring and accountability and the tracking and keeping track of students. Further, value added models and high-stake testing are among the topics discussed (cf. Saha & Dworkin, 2009).

What, then, are the implications for the codification of educational knowledge, norms and values considering the new educational context, the framing of education policy, practice and research and the governance system, including the assessment culture and its national and international practices? Although we argue that it is relevant to introduce a new curriculum code, we do not regard earlier codes as outdated – on the contrary many aspects of them are still current and relevant. However, major shifts have taken place and the former relatively self-referencing national system has been influenced by and directly linked to international activities and global

changes impacting the relation between society and education. Thus, the code encompasses ideas and activities that are significant at the societal/ideological level, the curriculum level and the teaching and classroom level (Lundgren, 1989).

Meritocracy - the foundation of the comparative curriculum code

Like modernity, the comparative curriculum code is anchored in the meritocratic ideal, which emerged as an important symbol of a fair allocation of life chances relative to student achievement and as a combination of intelligence/ability and effort/performance. Achievements, grades, exams and entrances to higher education or working life are expected to be established by comparisons based on specific criteria, or in relation to the performances of other individuals. With comparison at the hub of the educational system, the foundation for a new curriculum code is set.

Globalization, the knowledge economy and competition

Today's educational landscape of governance is multilevel, multifaceted and complex. This is mostly due to globalization processes, new technologies and discourses on the knowledge society, with a special focus on the knowledge economy and competition. Restricted to education, the latter includes competition amongst individuals, schools and the national educational system; ILSA being an instrument of the latter.

A key issue is a lack of legitimacy with special reference to shortcomings in the mission and efficiency of the welfare state as well as students' results and school performances in national and international tests. The establishment of a school market and voucher system can be seen as indications of the competitive nature of the Swedish educational scene. In some ways, being able to choose which school to attend has enhanced the influence of parents and students, but has also made schools more vulnerable. In fact, a damaged reputation may result in the closure of a school. In a challenged system – marked by changes in the distribution of authority, responsibility and accountability – issues of control and complexity reduction enter the policy-making agenda and the management arena.

Reduction of complexity – measurability, numbers and quantification

Comparisons based primarily on data relating to students' performances have strong implications for the standardization and formalization of education. Quantification, ranking, clear-cut and evaluable objectives, standards and curricula have all become popular political tools for school management. In order to assist both policy and practice, shortcuts to knowledge about the educational system are provided through research reviews on practice-relevant issues. Here, a number of different knowledge brokers have appeared, such as the newly established Swedish Institute for Educational Research.

In sum, standardization, the evidence movement, an empirical turn in research and the educational assessment culture as a whole have contributed techniques for the collection and selection of data, documentation, evaluation, ranking and dissemination of performance and results. In the reduction of complexity, ILSA tell stories about success and failure, trends and possible futures to come. In addition, the relation between policy, practice and research is rewritten.

Simplification of the educational mission and forms of knowledge

With comparison as the guiding principle for the selection and transfer of knowledge, and learning assessments and standardization, formalization and measurable evidence as ways of handling complexity, the risk of simplifying the educational mission and forms of knowledge is evident. The Swedish Education Act and the curriculum emphasize the different democratic values and knowledge that schools are expected to safeguard, employ and promote.

However, the curricular and pedagogical message systems are less in focus than the evaluation system and the overall assessment culture, including ILSA. We have identified a shift from input and processes to output, where curriculum is side-lined and where there is a risk of regarding knowledge and values as separate entities. Similarly, knowledge tends to be reduced to prescribed and measurable knowledge. Also, the pedagogy and transfer system is affected, with diagnoses, keeping track and documentation now becoming more prominent aspects of the transfer process.

With reference to Hopmann (2003), we conclude that several findings indicate that Sweden has abandoned the German Didaktik tradition of process control in favour of the performativity product control model used in the Anglo-Saxon world. The former is characterized by professional self-control and self-evaluation, whereas the latter mainly focuses on outcome and efficiency – aspects that are especially prominent in national and international assessment cultures.

References

- Archer, M. (2013) Solidarity and Governance. *Governance in a Changing World: Meeting the Challenges of Liberty, Legitimacy, Solidarity, and Subsidiarity*. Pontifical Academy of Social Science, Extra Series 14, Vatican City: Vatican State. <http://www.pass.va/content/dam/scienze-sociali/pdf/es14/es14-archer.pdf>
- Bergh, A. (2010) *Vad gör kvalitet med utbildning? Om kvalitetsbegreppets skilda innebörder och dess konsekvenser för utbildning*. Örebro: Örebro universitet.
- Bernstein, B. (1975) *Class, Code and Control. Volume 3. Towards a Theory of Educational Transmissions*. London: Routledge & Kegan Paul.
- Dahllöf, U. (1967) *Skoldifferentiering och undervisningsförlopp: komparativa mål- och processanalyser av skolsystem 1*. Gothenburg: Göteborg studies in Educational Sciences.
- Dahllöf, U. (1971) *Ability grouping, content validity, and curriculum process analysis*. New York: Teachers College Press.
- Durkheim, E. (1894/1938) *The Rules of Sociological Method*. New York: Collier-Macmillan.
- Englund, T. (1986) *Curriculum as a political problem: changing educational conceptions, with special reference to citizenship education*. Lund: Studentlitteratur.
- Englund, T. (1995) På väg mot undervisning som det ordnade samtalet? G. Berg, T. Englund & S. Lindblad (Eds.) *Kunskap, organisation, demokrati*. Lund: Studentlitteratur.
- Forsberg, E. & Lundgren, U. P. (2004/2009) Sweden: A Welfare State in Transition. Change and Tradition in Global Education Reform. I. C. Rotberg (Ed.) *Change and Tradition in Global Education Reform*. Oxford: Scarecrow Education. Addendum.
- Forsberg, E. (2000) *Elevinflytandets många ansikten*. Acta Universitatis Upsaliensis. Uppsala Studies in Education. Uppsala: Uppsala University.

- Forsberg, E. (2011) *Curriculum theory revisited: curriculum as content, pedagogy and evaluation*. Saarbrücken: LAP, Lambert Academic Publishing.
- Forsberg, E., Hallsén, S., Karlsson, M., Melander, H. & Svahn, J. (2015) *Homework Support as Shadow Education*. Stockholm: The Swedish Research Council.
- Forsberg, E. & Lundahl, C. (2006) Kunskapsbedömningar som styrmedia. *Utbildning & Demokrati*. 15(3) pp. 7–29.
- Forsberg, E. & Pettersson, D. (2014) European Educational Transfer and Curriculum Displacement: The Swedish Case. A. Nordin & D. Sundberg (Eds) *Transnational policy-flows in European education: Conceptualizing and governing knowledge*. East Greenwich: Oxford Studies in Comparative Education. Symposium Books.
- Forsberg, E. & Román, H. (2014) The Art of Borrowing in Swedish Assessment Policies. A. Nordin & D. Sundberg (Eds) *Transnational policy-flows in European education: Conceptualizing and governing knowledge*. East Greenwich: Oxford Studies in Comparative Education. Symposium Books.
- Forsberg, E. & Román, H. (2017). Styrningen av den obligatoriska skolan : mellan stabilitet och förändring. I U.P. Lundgren, R. Säljö och C. Liberg (Eds) *Lärande, skola, bildning : grundbok för lärare* (4th edition.). Stockholm: Natur och kultur.
- Forsberg, E. & Wallin, E. (2006) *Skolans kontrollregim – ett kontraproduktivt system för styrning?* Stockholm: HLS Förlag.
- Foshay, A. W., Thorndike, R. L., Hotyat, F., Pidgeon, D. A., & Walker, D. A. (1962) *Educational Achievements of 13 Year Olds in Twelve Countries*. Hamburg: UNESCO Institute of Education.
- Hacking, I. (1992) “Style” for historians and philosophers. *Studies in History and Philosophy of Science Part A*. 23(1) pp. 1–20.
- Held, D. (1997) *Demokratimodeller: från klassisk demokrati till demokratisk autonomi*. Gothenburg: Daidalos.
- Hopmann, T. S. (2003) On the evaluation of curriculum reforms. *Journal of Curriculum Studies*. 35(4) pp. 459-478.
- Husén, T. & Boalt, G. (1968) *Educational research and educational change: the case of Sweden*. Stockholm: Almqvist & Wiksell.
- Härnqvist, K. (1992) Utbildningsreformer och social selektion. R. Åberg (Ed.) *Social bakgrund, utbildning, livschanser*. Stockholm: Carlssons.
- Kallos, D. & Lundgren, U. P. (1979) *Curriculum as a pedagogical problem*. Lund: Liber Läromedel Gleerup.
- Lindblad, S. & Wallin, E. (1993) On transition of power, democracy and education in Sweden. *Journal of Curriculum Studies*. 25(1) pp.77-78.
- Lindblad, S. & Popkewitz, T. S. (2001) *Education governance and social integration and exclusion: Studies in the powers of reason and the reasons of power. A report from the EGSIE project*. Uppsala Reports of Education 39, Department of Education, Uppsala: Uppsala University.
- Lindblad, S., Pettersson, D. & Popkewitz, T. S. (2015) *International Comparisons of School Results: A Systematic Review of Research on Large Scale Assessments in Education*. Stockholm: Swedish Research Council.
- Lindensjö, B. & Lundgren, U. P. (1986) *Politisk styrning och utbildningsreformer*. Stockholm: Liber Utbildningsförlag.

- Lindensjö, B. & Lundgren, U. P. (2000) *Utbildningsreformer och politisk styrning*. Stockholm: HLS Förlag.
- Lundgren, J., Hult, A., Segerholm, C. & Rönnerberg, L. (2012) Mediating school inspection – Key dimensions and key words in agency text production 2003-2010. *Education Inquiry* 3(4) pp. 569-590.
- Linné, A. (1998) *Moralen, barnet eller vetenskapen? En studie a tradition och förändring i lärarutbildningen*. Stockholm: HLS Förlag, Studies in Educational Sciences, 6.
- Littler, J. (2013) Meritocracy as Plutocracy: Marketising of “Equality! Under Neoliberalism. *New formations: a journal of culture/theory/politics*. 80(81) pp. 52-72.
- Lundahl, C. (2006) *Viljan att veta vad andra vet. Kunskapsbedömning i tidigmodern, modern och senmodern skola*. Uppsala & Stockholm: Uppsala universitet & Arbetslivsinstitutet.
- Lundahl, L., Erixon Arreman, I., Holm, A-S. & Lundström, U. (2014) *Gymnasiet som marknad*. Umeå: Boréa.
- Lundahl, L., Erixon Arreman, I., Lundström, U. & Rönnerberg, L. (2010). Setting things right? Swedish upper secondary school reform in a 40-year perspective. *European Journal of Education*, 45(1) pp. 49-62.
- Lundgren, U. P. (1977) *Model analysis of pedagogical processes. Studies in Curriculum Theory and Cultural Reproduction 2*. Stockholm: CWK Gleerup.
- Lundgren, U. P. (1983) *Between hope and happening: text and context in curriculum*. Victoria: Deakin University Press.
- Lundgren, U. P. (1989) *Att organisera omvärlden*. Stockholm: Utbildningsförlaget.
- Lussi Borer, V. & Lawn, M. (2013) Governing Education Systems by Shaping Data: from the past to the present, from national to international perspectives. *European Educational Research Journal*. 12(1) pp. 48-52.
- Marklund, S. (1985) *Skolsverige 1950-1975: 4. Differentieringsfrågan*. Stockholm: Skolöverstyrelsen & Liber utbildningsförlag.
- Marklund, C. (2008) *Bridging Politics and Science: The Concept of Social Engineering in Sweden and the USA, Circa 1890-1950*. Department of History and Civilization, European University Institute.
- Nordin, A. (2012) *Kunskapens politik: en studie av kunskapsdiskurser i svensk och europeisk utbildningspolicy*. Växjö: Växjö University Press.
- Nóvoa, A., & Yariv-Mashal, T. (2003) Comparative Research in Education: a mode of governance or ahistorical journey? *Comparative Education*. 39(4) pp. 423-438.
- Nytell, H. (2006) *Från kvalitetsidé till kvalitetsregim. Om statlig styrning av skolan*. Acta Universitatis Upsaliensis. Uppsala Studies in Education no. 114. Uppsala: Uppsala University.
- Owens, T. L. (2013) Thinking Beyond League Tables: a review of key PISA research questions. H-D. Meyer & A. Benavot (Ed.) *PISA, Power and Policy: the emergence of global educational governance*. Oxford Studies in Comparative Education; 23:1. Oxford: Symposium Books.
- Pettersson, D. (2008) *Internationell kunskapsbedömning som inslag i nationell styrning av skolan*. Acta Universitatis Upsaliensis. Uppsala Studies in Education No 120. Uppsala: Uppsala University.
- Pettersson, D. (2014) Three Narratives: National Interpretations of PISA. *Knowledge Cultures*. 2(4) pp. 172-191.

- Porter, T. M. (1995) *Trust in numbers: The pursuit of objectivity in science and public life*. Princeton: Princeton University Press.
- Saha, L. J. & Dworkin, A. G. (Eds.) (2009) *International Handbook of Research on Teachers and Teaching*. New York: Springer.
- Schriewer, J. & Martinez, C. (2004) Construction of Internationality in Education. G. Steiner-Khamsi (Ed.) *The Global Politics of Educational Borrowing and Lending*. New York & London: Teachers College Press.
- Schriewer, J. (2009) *Discourse Formation in Comparative Education*. Frankfurt am Main: Peter Lang.
- Selander, S. (1992) *Forskning om utbildning: en antologi*. Stockholm: Symposium.
- SOU, 1990:44. *Maktutredningen. Demokrati och makt i Sverige: Maktutredningens huvudrapport*. Stockholm: Allmänna förlaget.
- Steiner-Khamsi, G. (2004) *The Global Politics of Educational Borrowing and Lending*. New York & London: Teachers College.
- Steiner-Khamsi, G. & Waldow, F. (2012) *World Yearbook of Education 2012: Policy Borrowing and Lending in Education*. Milton Park: Routledge.
- Stiegler, J. & Hiebert, J. (1999) *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. New York: The Free Press.
- Sundberg, D. (2005) *Skolreformernas dilemman: En läroplansteoretisk studie av kampen om tid i den svenska obligatoriska skolan*. Växjö: Växjö universitet.
- Säfström, C. A. (1994) *Makt och mening: förutsättningar för en innehållsfokuserad pedagogisk forskning*. Uppsala: Uppsala University.
- Östman, L. (1995) *Socialisation och mening: No-utbildning som politiskt och miljömoraliskt problem*. Uppsala: Uppsala University.

pages = "93--114", journal = "International Journal of Foundations of Computer Science", issn = "0129-0541", publisher = "World Scientific Publishing Co.", number = "1", } Gonze, F, Gusev, VV, Jungers, RM, Gerencsr, B & Volkov, MV 2019, 'On the Interplay Between Cerny and Babai's Conjectures' International Journal of Foundations of Computer Science, vol. 30, no. 1, pp. 93-114. <https://doi.org/10.1142/S0129054119400057>. On the Interplay Between Cerny and Babai's Conjectures. / Gonze, Franois; Gusev, Vladimir V.; Jungers Recent multi-pillar pension reforms tighten the link between payroll contributions and benefits, leading critics to argue that they will hurt women. In contrast, supporters of these reforms argue that women will be helped by the removal of distortions that favored men and the better targeted redistributions in the new systems. In order to test these conflicting claims and to analyze more generally the gender impact of alternative pension systems, this paper examines the differential impact of the new and old systems in three Latin American countries - Chile, Argentina and Mexico. Part C investigates proposals for reform and security. What is the case for greater targeting? How can we design a social safety net? What is the future of European social protection policy? View. Show abstract. The ERA and Education Reform in the 1990s (I) 1. The 1988 Education Reform Act (ERA) - Compulsory National Curriculum for all pupils in state schools from ages 5 to 16 - National Achievement Tests at ages 7, 11, 14 (Standard Assessment Tasks) and 16 years (GCSE) - A system of Local Management of Schools (LMS) - Parents™ right to vote for Grant-maintained Schools (GMS) -. Open enrolment for school choice 2. Quango (Quasi-autonomous non-governmental organization) - NCVQ (1986-97): NVQ based NQF - OFSTED(1992-): Inspection - FEFC(1993-2001): Funding - QAA(1997): Assessment in HE. The main role of LSCs is to promote œplanning collaboration between employers, program providers and community groups.