IFN Working Paper No. 1228, 2018

“Post-Truth” Schooling and Marketized Education: Explaining the Decline in Sweden’s School Quality

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"Post-Truth" Schooling and Marketized Education: Explaining the Decline in Sweden's School Quality[‡]

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January 28, 2019

Abstract: The Swedish school system suffers from profound problems with teacher recruitment and retention, knowledge decline, and grade inflation. Absenteeism is high, and psychiatric disorders have risen sharply among Swedish pupils in the last ten years. In this pioneering analysis of the consequences of combining institutionalized social constructivism with extensive marketization of education, we suggest that these problems regarding school quality are to no small extent a result of the Swedish school system's unlikely combination of a postmodern view of truth and knowledge, the ensuing pedagogy of child-centered discovery, and market principles. Our study adds to the findings from previous attempts to study the effects of social-constructivist pedagogy in nonmarket contexts and yields the implication that caution is necessary for countries, notably the U.S., that have a tradition of social-constructivist practices in their education systems and are considering implementing or expanding market-based school reforms.

Keywords: For-profit schools, Marketized education, School choice, Social constructivism, Voucher system.

JEL *Codes*: H42, H44, H75, I22, I28, L88.

[‡] We are grateful for useful comments and suggestions from Viveka Adelswärd, Katarina Barrling, Daisy Christodoulou, Gabriel Heller Sahlgren, Leif Lewin, Johan Tralau, and Åsa Wikforss. We also gratefully acknowledge financial support from the Catarina and Sven Hagströmer Foundation and the Jan Wallander and Tom Hedelius Foundation.
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1. Introduction

"Post-truth," a term implying that truth is irrelevant, was voted the "Word of the Year" in 2016 by *Oxford Dictionaries* after a spike in use that year in the context of the EU referendum in the UK and the presidential election in the U.S.[1] Post-truth has since become a common expression in political discourse.

In this article, we apply the concept of "post-truth" to Sweden's school system and use it as a novel explanation for problems concerning the quality of elementary and secondary education—meaning the provision of essential knowledge and skills, the presence of qualified teachers, and the existence of structure and peace in the classroom. Two critical indicators of such problems in the Swedish school system are a sharp drop in the status and attractiveness of the teaching profession (see, e.g., Lewin, 2014) and declining results in the Programme for International Student Assessment (PISA) and the Trends in Mathematics and Science Study (TIMSS) both absolutely and relative to other countries (Henrekson & Jävervall, 2017). Moreover, the decline in knowledge among Swedish pupils according to international tests during the 2000s is not reflected in final year grades in elementary school, which improved substantially during the same period, thus suggesting grade inflation (Holmlund et al., 2014). These phenomena were examined previously in Wennström (2016a, 2016b). However, those studies only hinted at the cause that has allowed such problems to develop and persist. This article extends the previous analyses and argues that the cause is a postmodern, social-constructivist view of truth and knowledge expressed in the governing documents of the school system and increasingly implemented in pedagogical practice. Social constructivism is here understood both as a philosophical claim—heavily influenced by postmodern discourse and power analysis—about the nature of knowledge and reality, i.e., that knowledge and reality are constructed, and as a claim about teaching, contending that knowledge cannot and should not be attempted to be transferred from teacher to pupil. While social-constructivist theories about the nature of knowledge and teaching can be distinct and

[1] See https://en.oxforddictionaries.com/word-of-the-year/word-of-the-year-2016.

separate theories (Wikforss, forthcoming), we argue that they have been applied as connected in the Swedish school system.[2]

This development began in the late 1940s when ideas congruent with social constructivism were in effect designated the "official school ideology" (Lewin, 2014, p. 48). Over time, this trend became more pronounced, reaching a peak in the 1994 national curriculum. At first, the influence of this development on classroom practice was limited. More senior teachers upheld a traditional teaching culture guided by a theory of knowledge characterized by a combination of empiricism and rationalism. It took time for this culture to break down, as organizational cultures do not change quickly (Pollitt, 2008; Wilson, 2000). However, the old culture was eventually displaced, and since the creation of a new supervisory agency in 2008, the Swedish Schools Inspectorate (*Skolinspektionen*), teachers can no longer deviate from the prescribed practice.

The present article is thus a study on how a social-constructivist theory of knowledge and an associated pedagogy of child-centered discovery and experiment have undermined the quality and functioning of the Swedish school system. Our article adds to the findings of previous attempts to study this phenomenon: In a study on a universal transition to a social-constructivist teaching approach in the Canadian province of Québec in the early 2000s, Haeck, Lefebvre, and Merrigan (2014) found an adverse effect on students' math scores. Christodoulou (2014) documented the prevalence of social-constructivist pedagogical theories in the British school system, in which literacy and numeracy skills have declined. Heller Sahlgren (2015b) found that the world-renowned Finnish schools experienced a fall in PISA performance after importing Swedish-style pedagogy. Hirsch (2016) demonstrated, with the help of data compiled by the French Ministry of Education, the negative impact of a social-constructivist reform of the French school system in 1989 on French pupils' knowledge.

Sweden offers a unique opportunity to study this subject both because of the country's long tradition of incorporating far-reaching social-constructivist views into the school system (Enkvist, 2016) and because of the deregulated

[2] Terminology is discussed in depth in section 3.

and marketized character of Swedish elementary and secondary education, which is unique among Western democracies in its commitment to for-profit voucher schools and school competition (see, e.g., Gustafsson et al., 2016; Wennström, 2016b). The consequences of combining institutionalized social constructivism with full-fledged marketization of elementary and secondary education have not been previously examined in detail. Our analysis shows that this combination affects the quality of education negatively, suggesting that caution is necessary for countries, notably the United States, that have a tradition of social-constructivist pedagogy (Hirsch, 2016) and are now considering implementing or expanding market-based school reforms (DeVos, 2018).

Drawing on Kuhn (1962), we argue that the Swedish school system suffers from a "paradigmatic" problem. By this, we mean that the decline in the quality of elementary and secondary education emanates from a social-constructivist paradigm that has become widely accepted in the school system. Radical improvement is therefore likely to require a paradigm shift. Advocates of the current system will no doubt claim that this argument ignores other important and complex processes. However, the very fact that the school system is highly complex, involving numerous agents with different agendas, suggests that we should apply the principle of Occam's razor and begin by exploring the simplest and most straightforward candidate for explaining the decline in quality: An inappropriate definition of knowledge and an inadequate conception of how knowledge is efficiently acquired, which obliges schools to use inefficient pedagogical methods. Indeed, if schools fail to deliver on their function to impart knowledge, it appears reasonable to conjecture that unless there is a glaring lack of resources,[3] this failure is due to weaknesses in the content of curricula and the pedagogy used. Indeed, we show how the stipulated view of truth and knowledge—arguably the most crucial institution of the school system—and the design of the system impacts on the incentives for the various agents

[3] Sweden is one of thirteen OECD countries whose education expenditures per full-time equivalent student exceeds the OECD average at both the elementary/secondary and postsecondary levels (McFarland et al., 2017). Moreover, the pupil/teacher ratio is 13 in Sweden while the OECD average is 15, and the average class size is 18 compared to the OECD average of 21 (OECD, 2016).

involved: pupils, parents, teachers, principals, school owners, the municipality, the central government, and ultimately the general public.

The paper is organized as follows. The next section presents a brief overview of the Swedish school system and gives a summary of the problems raised in this introduction: the loss of status for the teaching profession, the decline in knowledge, and grade inflation. The third section explains the terminology we use and discusses our methodology. Section four examines the "post-truth" paradigm in depth and describes its effects on the quality of elementary and secondary education. Section five concludes.

2. The State of Sweden's Schools

Elementary school (*grundskola*) consists of nine years of schooling for pupils aged 7 to 16 years, divided into lower grades (years 1–6) and upper grades (years 7–9). Elementary school is followed by three years of secondary school (*gymnasieskola*), which is not compulsory, but more than 95 percent of graduates from 9th grade go directly to secondary school (Swedish National Agency for Education, 2014a). Academic grades determine whether students will be admitted to the secondary school of their choice and a university program after secondary school.

Following a far-reaching decentralization reform at the beginning of the 1990s, the school system is under the management of Sweden's 290 municipalities (Government Bill, 1990/91:18). Municipal tax revenues and central government grants are the schools' primary sources of finance. Before the decentralization reform, the school system was managed by the state and heavily regulated—perhaps more so than any other public school system in the world (Lewin, 2014, p. 57). The state carefully controlled the structure and content of education (e.g., the time allocated for different subjects and course syllabi) and inspected and approved textbooks (Johnsson Harrie, 2009).

When the central government renounced its function as an employer within the school system and placed most school decisions in the hands of local governments, its role was limited to setting goals and objectives. This change was made in the form of a far less detailed national curriculum implemented in 1994 by the Swedish National Agency for Education

(*Skolverket*; established in 1991).[4] The Swedish National Agency for Education also issues an official commentary on the curriculum, offering an interpretation to teachers, and certifies teachers who have completed their university-based teacher training. The Swedish Schools Inspectorate was formed to ensure that schools comply with existing legislation and agency stipulations, a task previously undertaken, but not prioritized, by the Swedish National Agency for Education.[5]

Within two years after the decentralization reform of the early 1990s, a voucher system was enacted, offering students a free choice of schools and a public voucher to cover tuition (Government Bill, 1991/92:95). The voucher reform opened the entire public school system to private providers of all sorts: foundations, parental and staff cooperatives, and for-profit firms. This reform was a radical reversal of the policy in place since the early 1960s that had resulted in a state monopoly on education.

Through the voucher system, independent schools received funding for a minimum of 85 percent of the average municipal cost per pupil, which was raised to 100 percent in 1997 (Government Bill, 1995/96:200). This change offered strong economic incentives to private providers, who began to expand rapidly. In the academic year 2015/16, 15 percent of pupils in elementary education attended one of the 800 independent schools at this level, and 26 percent of pupils in secondary school attended one of the more than 400 independent secondary schools. Seventy-four percent of independent school students attended for-profit schools (Ekonomifakta, 2018). Aside from having to follow the national curriculum (Swedish Law, 2010:800) and refrain from "cherry picking" pupils based on performance or socio-economic background,[6] there are no restrictions on independent

[4] With the latest national curriculum, enacted in 2011, the state has reclaimed some of its former regulatory functions. However, as we will demonstrate, the state does not, in effect, prescribe what should be taught in schools.

[5] The Swedish National Agency for Education has never primarily been a regulatory agency. In fact, it defined itself in opposition to traditional supervision and control. See Wennström (2016b).

[6] The law stipulates that admission to independent schools should be strictly based on queue time alone. However, this law can be circumvented with impunity since the records in the queue are not administered by an external agency. This can be contrasted to college and university admissions where all individual grades and other relevant credentials for all

schools. Indeed, there are no competence requirements on owners or limits on the right to pay dividends to owners, and schools can be sold like any other business.

Over time, it has become evident that the school system suffers from problems with the quality of education. For example, Sweden has one of the highest levels of absenteeism and late arrivals in the OECD (OECD, 2015). Depression and anxiety among children aged 10–17 also increased by more than 100 percent from 2006 to 2016. According to the National Board of Health and Welfare (2017, p. 20), the reasons for this dramatic increase are most likely linked to schooling and the transition from school to adult life. Similarly, physicians have suggested that the soaring prescriptions for ADHD drugs in Sweden, where as many as nine percent of boys are medicated for ADHD in some counties (Arbetarbladet, 2016), are related to factors within the school system, such as the heightened demands on students to develop "flexibility, self-regulation and self-efficacy" (Engström & Gustavsson, 2016, p. 6). However, there are also at least three deeper systemic problems, which we will now explore.

The Malaise in the Teaching Profession

An extensive body of literature documents the existence of "teacher effects" on student achievement (for an overview, see, e.g., Blazar & Kraft, 2017; Hattie, 2009). Hence, one would expect teaching to be an attractive profession, yet Sweden has a teacher recruitment crisis. Approximately 10 percent (or 13,000 teachers) leave the profession every year due to retirement or career change, while the annual number of newly graduated teachers is merely half as large (Henrekson, 2017).

The main reason for the shortage of teachers is a high dropout rate among teacher-training students. Teacher-training programs have the highest dropout rate of all comparable college programs (Svensson & Berlin Kolm, 2017). Among those starting a training program to become a teacher in the upper grades of elementary school and secondary school (*ämneslärare*) or a teacher in the lower grades of elementary school (*grundlärare*), 35 and 26

Swedish applicants to any college or university are stored in the same national computerized system, which precludes any local tampering with the ranking of applicants.

percent, respectively, drop out at an early stage; a mere 47 and 60 percent, respectively, eventually graduate. Additionally, in recent years, 4–5 percent of teachers in public schools and 6–8 percent in independent schools have left the profession every year for reasons other than retirement (Calmfors et al., 2016, pp. 28–29).

A further crisis component is the selection of applicants. Until at least the late 1960s, teachers enjoyed high status in society, and only top students were admitted into the profession (Wennström, 2016a). Today, only five percent of Swedish teachers deem that their profession is considered prestigious, and barely half of them would choose the same occupation again (Swedish National Agency for Education, 2014b). This fall in status is reflected in the low number of applicants to the teacher-training programs—particularly for mathematics and natural science programs—and in the sizable share of applicants with low grades from secondary school[7] and who come from homes with limited cultural capital (Bertilsson, 2014).

Teachers are one of the least satisfied groups in the Swedish labor market, even though teachers' relative wages stopped falling in the late 1980s (Persson & Skult, 2014) and their relative wage has increased sharply in recent years.[8] In a 2006 survey, almost one-fourth of teachers reported being moderately or very unhappy (Stenlås, 2009), and judging by more recent information, the situation has not improved. More than half of teachers experience stress in the workplace, and sick leave due to psychiatric disorders is more common among teachers than in other professional groups (Swedish National Agency for Education, 2013). A recent study also showed

[7] One quarter of the applicants who began their teacher training during the 2000s had less than 12 points (out of a maximum of 20 points) on the university entrance scale. In 2009, this was a 10 percentage points higher share than the average for students attending higher education in general (Bertilsson, 2014). A grade point average of 12 or less means that the student belonged to the bottom 15 percent of the graduates from secondary school.

[8] From 2010 to 2016 the average salary for teachers in elementary school and secondary school increased by 27.5 and 24.2 percent, respectively. The average increase for full-time white collar workers and engineers (with a master's degree) in the private sector was 14.5 percent and 12.4 percent, respectively. Hence, teachers' relative wage increased by more than 10 percent relative to comparable groups in the 2010s (Ekonomifakta, 2017; Swedish Association of Graduate Engineers, 2017; Swedish Association of Local Authorities and Regions, 2017).

that four of ten active teachers are considering leaving the profession (Swedish National Agency for Education, 2016a).

The Decline in Knowledge

For brevity, we will mention only a few key facts about the decline in knowledge among Swedish pupils,[9] which is possible to document due to the international comparative tests that have existed since the mid-1990s. The most important are the TIMSS, which assesses the mathematics and science knowledge of 4th and 8th graders;[10] the TIMSS Advanced, which evaluates advanced mathematics and physics achievement in the final year of secondary school;[11] and the OECD's PISA,[12] which assesses the reading, mathematics and science knowledge of fifteen-year-olds in the final year of elementary school.

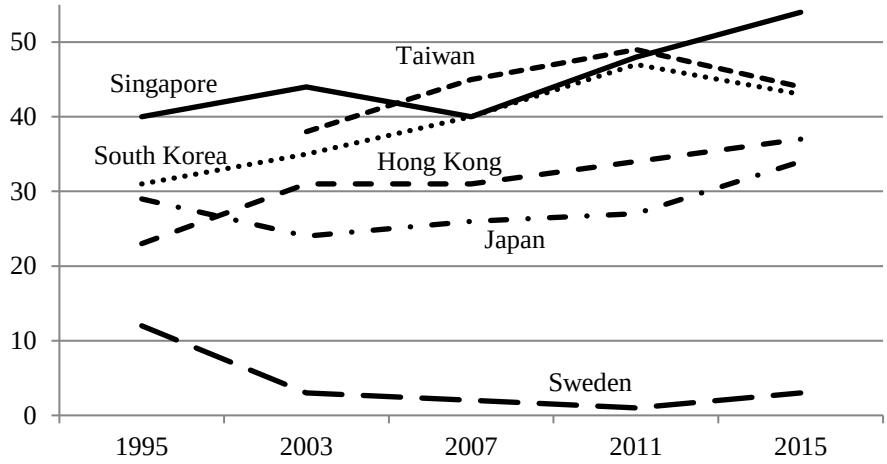
In 1995, the first year that Sweden participated in the TIMSS, Swedish 8th graders performed far above both the international average and the EU/OECD average in both mathematics and science. However, between 1995 and 2011, Swedish average results deteriorated by 56 points, which was the largest decline among all participating countries (Swedish National Agency for Education, 2012a). In the latest cycle of the TIMSS, carried out in 2015, Sweden's average result improved by 17 points. However, because the EU/OECD average also improved, Swedish 8th graders still performed well below the EU/OECD average.

Even more noteworthy is the decline in the share of pupils who perform at an advanced level on the TIMSS. In 1995, 12 percent of Swedish pupils attained the advanced level. In 2003, this share dropped to three percent, and for the TIMSS 2011, the share was as low as one percent (Henrekson & Jävervall, 2017). Despite a slight uptick in the latest cycle, the difference between Sweden and the five top-performing societies in mathematics,

[9] For a comprehensive discussion, see Henrekson and Jävervall (2017) and Gustafsson et al. (2016).
[10] Sweden has participated in every cycle except 1999.
[11] Sweden participated in 1995, 2008 and 2015.
[12] Sweden has participated in every cycle.

Singapore, Taiwan, South Korea, Hong Kong and Japan, is considerable (see fig. 1).

Figure 1. Percentage of pupils in Sweden and the top five countries at the advanced proficiency level in 8th grade on the TIMSS Mathematics, 1995–2015.



Source: Mullis et al. (2012; 2016).

Sweden and the U.S. are relatively similar in terms of culture, level of education, and economic development. However, because of the well-known weaknesses in the American education system (see, e.g., Murray, 2008) and the existence of privately funded schools, we should expect not only a considerable variation in results among U.S. pupils but also that the weakest pupils perform particularly poorly. In fact, Table 1 shows that the weakest U.S. pupils (defined as the fifth percentile in the distribution) performed significantly better than the weakest Swedish pupils on the TIMSS Mathematics 2011. In 2015, the weakest U.S. and Swedish pupils performed identically. In all other percentiles, U.S. pupils outperformed Swedish pupils, and the difference widens as one moves upward in the distribution. In contrast, Swedish pupils outperformed their U.S. peers across the entire distribution in 1995, and the Swedish advantage was larger in the lower half of the distribution.

Table 1. Comparison between the U.S. and Sweden on the TIMSS Mathematics in 1995, 2011 and 2015, disaggregated by percentile points.

	Percentile						
1995	5th	10th	25th	50th	75th	90th	95th
Sweden	384	414	460	515	579	597	661
USA	356	360	435	494	563	584	653
Sweden – U.S.	+19	+54	+25	+21	+16	+13	+8
2011							
Sweden	368	395	440	487	532	569	590
USA	381	409	457	511	562	607	635
Sweden – U.S.	–13	–14	–17	–24	–30	–38	–45
2015							
Sweden	378	406	452	504	553	590	613
USA	378	408	461	521	577	624	651
Sweden – U.S.	0	–2	–9	–17	–24	–34	–38

Note: To ensure that the Sweden–U.S. differences are statistically significant we applied the Kolmogorov–Smirnov test (e.g., Daniel, 1990, pp. 319–330). The null in this test is that the two distributions are equivalent. We performed the test for three individual years: 1995, 2011, and 2015. The null of equality was rejected for all three tests (p-value < 0.00). Thus, the between country differences are statistically significant, and a plot of all observations in the two samples in the same diagram clearly shows that all observations for Sweden is above the corresponding U.S. observation in the distribution in 1995, while the reverse is true in 2011. For 2015 the U.S. results consistently exceed the Swedish results from roughly the 9th percentile and onwards.

Source: Beaton et al. (1996) and Mullis et al. (2016).

Regarding the TIMSS Advanced, Sweden performed well in 1995—just above average in mathematics, and at the top in physics together with Norway. The next time Sweden participated, in 2008, the results fell sharply. The average result dropped by 90 points for mathematics and by 81 points for physics. In the latest cycle, in 2015, Sweden improved its result in mathematics but was still second from the bottom of all participating countries. In physics, the results continued to deteriorate (Henrekson, 2017).

Moreover, only one of every fifty students performed at the advanced level on the TIMSS Advanced 2015, compared to 10 and 7 percent, respectively, in Russia and the U.S., and two-thirds of Swedish students did not reach the intermediate proficiency level. These results become even more alarming once one realizes that the participants in the TIMSS Advanced belong to a highly select group of students that attend the most demanding secondary school programs.[13]

In regard to PISA, Swedish 9th graders have participated since the tests began in 2000. Mirroring the developments observed for the TIMSS and the TIMSS Advanced, Swedish students performed above the international average in the first PISA cycle, but since then, Sweden's results steadily deteriorated in all three areas of PISA—reading, mathematics, and science—until a low point was reached in the 2012 survey (Henrekson, 2017). The Swedish overall score was well below the OECD average, and in each area, only three OECD countries performed worse than Sweden.

Performance fell across the entire distribution. The decline in mathematics was most significant for high-performing students, while the decline in science and reading was largest for low-performing students. To gain a sense of the magnitude of the decline among low-performing Swedish students (5th percentile), we note that as late as 2006, this group scored 17 points above the OECD average in reading, while six years later, this group scored 35 points below. Sweden's overall decline in science and reading relative to the OECD during the 2000–2012 period can thus be mainly attributed to the low-performing group, while for mathematics, the fall is primarily explained by high-performing students doing worse.

It is noteworthy that another PISA assessment also revealed shortcomings (below the OECD average) in critical thinking, creativity, curiosity, and perseverance (OECD, 2013). Sweden was ranked 20th of 28 countries when this test was administered in 2012. Assertions that Swedish pupils have

[13] In 2015, the share of Swedish secondary school students qualified to participate in TIMSS Advanced was 14.1% in mathematics and 14.3 % in physics (Swedish National Agency for Education, 2016c).

gained strength in such vital skills as a substitute for knowledge retention can therefore be rejected.[14]

The latest PISA survey, released in December 2016, showed improvement in all three PISA core subjects. However, a shift to computer-based testing makes comparisons with previous results precarious (Jerrim, 2018; Komatsu & Rappleye, 2017).

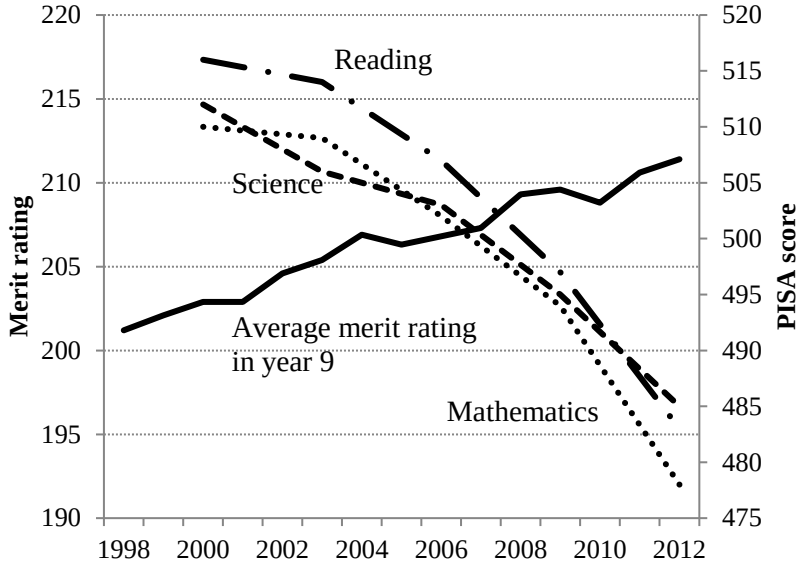
Grade Inflation

While international assessments in recent decades have indicated a decline in knowledge among Swedish students, final grades paint a different picture. Paradoxically, during the very period that PISA and TIMSS results fell sharply, the average merit rating (based on grades) in the final year of elementary school markedly improved (see fig. 2).[15]

Figure 2. Average merit rating and PISA Score, 1998–2012.

[14] For example, the chairman and the vice president of one of the largest corporate school groups in Sweden claimed that PISA 2012 did not give the whole picture of the pupils' strengths because it did not measure creativity (Emilsson & Eiken, 2013).

[15] Sweden changed its grade system in the fall of 2012, which makes comparability with previous grades difficult and explains why our figure does not include later years.



Source: OECD (2015).

This incongruous evolution of international assessments of students' knowledge and Swedish grades provides compelling evidence of grade inflation in Swedish elementary schools.[16] Grade inflation is possible because teachers have full autonomy to assign grades and even mark the standardized tests that are often used as a standard against which grade inflation is measured.[17] Indeed, "the Swedish school system is unique when leaving the entire responsibility for the grading to the schools, and consequently to the teachers" (Wikström & Wikström, 2005, p. 310).[18] In recent years, school principals, who are not required to be certified

[16] In a comparison of the distribution of final grades in 1998 and 2008, Vlachos (2016) documents a similar grade inflation at the secondary school level.
[17] For a more comprehensive discussion on grade inflation in Swedish schools, see Fredriksson and Vlachos (2011), Gustafsson et al. (2016), and Wennström (2016b).
[18] Standardized tests in elementary and secondary schools were not centrally collected until 2003 and 2011, respectively, which meant that, before that, there existed no external quality control and it was impossible to go back in time and verify potential abuse by schools in their grading practices (SOU 2016:25).

teachers,[19] have also been granted the right to give students whatever grades they deem fit (Swedish National Agency for Education, 2016b).

To summarize, this section on the state of Sweden's schools has demonstrated a general malaise in the teaching profession, a substantial decline in knowledge among students, and the existence of grade inflation. In the remainder of this paper, we will argue that the cause of these problems is a postmodern, social-constructivist paradigm. However, to do so, we must first explain what we mean by these terms.

3. Terminology and Method

Social Constructivism and Postmodernism

"Social constructivism" is often used as a collective term encompassing both its milder and more radical varieties.[20] In this article, we distinguish between two main versions.[21] The mild version of social constructivism holds that many expressions of human thinking and behavior, such as language, gestures, and interpretations of different objects and phenomena, are collectively constructed and influenced by nonuniversal cultural factors. Different communities, e.g., political, religious or scientific, have their own socially constructed cultures and practices. Individuals enter and create meaning in social situations through their own prior experiences and interactions, as well as through shared beliefs, customs and traditions (Berger & Luckmann, 1966; Linell, 2006, pp. 156–157). We will not delve deeper into this relatively uncontroversial version of social constructivism,

[19] It is noteworthy that as late as 1953, the title of principal was only given to holders of doctoral degrees. However, the development of the profession since has led to "a degradation of the principal's position and professional role, socially, academically and in terms of pay," and to pre-school teachers and other early childhood professionals increasingly becoming principals (SOU 2004:116, p. 30). Since the decentralization reform at the beginning of the 1990s, school principals are no longer required to have formal teacher training; only "pedagogical insight" is required (Lewin, 2014).

[20] The terms "social construct*ivism*" and "social construct*ionism*" are used interchangeably or subsumed under the term "social constructivism" in many works (see, e.g., Linell, 2006; Phillips, 1995; Wikforss, 2017, forthcoming). "Social constructivism" is allegedly the more widely familiar term (Hacking, 1999), and we will, therefore, stick to that term throughout.

[21] Social constructivism may have many faces (Phillips, 1995), but in the vein of Linell (2006), we differentiate between two main versions, *mild* and *radical* social constructivism. Elder-Vass (2012) similarly uses a scale that stretches from *trivial* arguments, through *moderate* arguments, to *radical* or *extreme* claims. Cf. Latour (1992, p. 276).

as it is beyond the scope of this study.[22] What our analysis of the Swedish school system focuses on, and what we mean when we use the term social constructivism, is a more radical version, which holds that an objective reality does not exist and that the objects and phenomena themselves—and not just our perceptions and interpretations of these phenomena—are socially constructed (Linell, 2006). As stated by Elder-Vass (2012, p. 6; emphasis in original):

> Realists divide the world into that which depends on how we (individually or collectively) think about it and that which does not. For realists—and moderate constructionists—only the former can be socially constructed; the latter cannot. Radical constructionists tend to deny any such distinction on the ground that *everything* depends on the ways in which we think about it, or at least to include in the socially constructed category things that realists would not.

This radical form of social constructivism is heavily influenced by postmodernist thinking, particularly Foucauldian discourse and power analysis (Berger, 1992; Linell, 2006).[23] Postmodernism, in turn, can be understood as a critique of modern Enlightenment ideals, such as the elevation of truth, reason, science, and knowledge (Constas, 1998). Postmodernist philosophers, most notably Michel Foucault (1970) and Jean-François Lyotard (1979/1986), have claimed that these ideals are open to question and are, in fact, mere "narratives" and linguistic "discourses" concealing subjective interests and the exercise of power by some authority (Ferraris, 2014; Lather, 1991). Insofar as postmodernism has any particular ambition,[24] it is hence to uncover the "real" behind that which is taken for granted. Wållgren (2017, p. 69; emphasis in original), drawing on Ricoeur (1970), poignantly describes postmodernism as "a *hermeneutics of suspicion*, where the interpretation of the world originates from an underlying view that one should suspect, question and often be critical of what is studied."

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[22] See, e.g., Hacking (1999) and Linell (2006) for a comprehensive discussion.
[23] In this study we mean postmodernism in the vein of Foucault and Lyotard. As noted by Klein (forthcoming), there are also more pragmatic forms of postmodernism, embraced, e.g., by McCloskey (1983).
[24] In a review of Gilles Deleuze's *Difference and Repetition and Logic of Sense*, Foucault stated that thinking should be an ironic masquerade (Ferraris, 2014).

Postmodernism brings to social constructivism, as we use the term, the belief that "everything is discourse and constructed" and that, for instance, no theory can be separated from discursive practice and valued based on how it corresponds to reality (Linell, 2006, p. 159). Emanating from this worldview is a relativistic negation of facts and any knowledge beyond subjective opinion and experience.[25] Knowledge imparting, or indeed the very claim that something is universally true, may even be seen as indoctrination and oppression (see, e.g., Apple, 1979, 1982; McLaren, 1988; Young, 1971).[26] Consider, for example, the following claim by Moira von Wright (1998, p. 26), who was President of Södertörn University in Sweden 2010–15, in a publication from the Swedish National Agency for Education: "The fact that natural science is formulated within Western culture might cause problems for those who belong to another culture. To them, the values of natural science … might be interpreted as a critique and an attack on their own culture."

Because a postmodern, social-constructivist perspective rejects the existence of objective facts and knowledge, proponents of this perspective also tend to reject ordered thinking and the structure and hierarchy of knowledge within disciplines.[27] In the context of schooling, this translates, among other things, to freedom of choice for students in their learning, nonhierarchical teacher-student relationships, the mixing or breaking up of disciplines, an emphasis on general skills in contrast to domain-specific knowledge, and curricula that are grounded in everyday experience and culture (see, e.g., Aronowitz & Giroux, 1991; Doll, 1993; Kincheloe et al., 2000; Linderoth, 2016). In the

[25] Which is different from how social constructivism was initially conceived by Berger & Luckmann (1966) in their classic study. As Berger (1992, p. 2) observed: "It is one thing to say that all social reality is interpreted reality (which is what Luckmann and I said in all our various propositions); it is an altogether different thing either to say that there are privileged interpreters or, on the contrary, to say that all interpretations are equally valid."

[26] For example, a popular textbook featured on many university education departments' reading lists, Kelly's *The Curriculum: Theory and Practice* (as cited in Christodoulou, 2014, p. 110), states that "one must see the imposition of any one version of knowledge as a form of social control and as a threat to all of the major freedoms identified as essential constituents of a free and democratic society."

[27] Doll's (1993) concept of a chaotic, "dancing curriculum" is arguably one of the more pronounced expressions of this characteristic when applied to pedagogical practice.

next section, we demonstrate that step-by-step this notion became emblematic of the Swedish school system.[28]

Document Analysis

While it may seem far-fetched to connect abstract philosophical ideas with the actions of practical people who design curricula and inspect schools, we, like Christodoulou (2014, p. 6), believe that "it is entirely possible to be influenced by ideas of someone you have never heard of."[29] In conducting this study of the underlying philosophical rationale of Sweden's educational policy and the ensuing laws and regulations governing the school system, we mainly draw on primary sources, such as government commission reports, government bills, documents from the Swedish National Agency for Education (including the 1994 and 2011 national curricula and the official commentary on the current [2011] curriculum) and its predecessor the National Board of Education, as well as official inspection reports from the Swedish Schools Inspectorate. In those documents, both practice and language are presented and analyzed to uncover the underlying ideology and to explain their effects on the quality of elementary and secondary education. We also rely on secondary sources to complement our analysis and to provide a historical background for our study. Extensive quotations, the translations of which have been performed by the authors in all cases but one,[30] are used to substantiate the claims made.

A document analysis alone may not seem sufficient to account for the existence of a postmodern, social-constructivist paradigm in the Swedish

[28] A postmodern, social-constructivist view of truth and knowledge is not the sole origin of these pedagogical concepts in the Swedish school system. Ideas about cognition outside mainstream cognitive science and extreme optimism about the prospects that information technology would "liberate us from the burden of having to know things" (Christodoulou, 2014, p. 61) also played a role. However, such ideas fitted the postmodern, social-constructivist view of truth and knowledge hand in glove and contributed to its rise as a paradigm. To draw on a term from analytic philosophy, the ruling postmodern, social-constructivist paradigm was *overdetermined* in this sense.

[29] This is also congruent with the thinking of Fleck (1935/1979), whose theory of "thought collectives" and associated "thought styles" anticipated many of Kuhn's (1962) ideas about scientific communities and paradigms. According to Fleck (1935/1979, p. 41), the "individual within the collective is never, or hardly ever, conscious of the prevailing thought style."

[30] The 2011 national curriculum was translated by the Swedish National Agency for Education (2011).

school system. However, as Gibton (2016, p. 62; emphasis in original) stated, "documents are often *the policy*, the heart of policy, and the result of the policy process." Therefore, "studying documents that are the foreground and the display window of policy to the public is … a stand-alone pathway to understanding policy" (p. 68) and one we will pursue in the remainder of this article.

4. The Ruling Paradigm and Its Effects on School Quality

The rise of the postmodern, social-constructivist paradigm was slow but steady. Sweden's first modern school system, established in the late 1800s, was instead founded on the ideas of the philosopher Johann Friedrich Herbart. Herbart's belief that every child could realize his or her full potential through intellectual self-improvement and character development, brought about by a structured and teacher-led education focused on imparting knowledge,[31] remained a dominant intellectual influence on Swedish schools until the Second World War (Heller Sahlgren & Sanandaji, forthcoming).

However, in large part based on the mistaken premise that the traditional, knowledge-oriented German schools had made it easier for the Nazi regime to exert authority over the German population,[32] it became a widely held notion after the war that the German-inspired school system needed to be reformed. This view dovetailed with the Social Democratic Party's long-standing ambition to create a unitary school common for all children.[33] A school commission staffed by prominent Social Democratic thinkers on education was thus appointed in 1946 to redraw the Swedish school system.

[31] It is noteworthy that the idea was not that pupils would mechanically follow the teacher's prescribed procedures, but rather that pupils would internalize and learn to apply knowledge by repetition and practice under the teacher's instruction and supervision. The Herbartian teaching ideal thus closely resembles modern notions about the importance of the teacher, neither as an agent of control nor as a mere "facilitator of learning," but as someone who leads the work in the classroom on the strength of his or her knowledge (Biesta, 2017; Linderoth, 2016).

[32] See chapter 5 in Heller Sahlgren and Sanandaji (forthcoming).

[33] Before 1962, Sweden had a parallel schooling system with both public and private schools, which divided education after elementary school (*folkskola*) into two separate tracks: (i) intermediate school (*realskola*), which could be followed by college-preparatory school (*gymnasium*), and (ii) vocational schooling.

The Purpose of Schooling

The school commission ushered in new ideas about the purpose of schooling.[34] The commission's final report expressed the view that the principal objective should not be to provide a traditional education but rather to contribute to the social development of the child (SOU 1948:27). Therefore, the school commission favored the abandonment of teacher-led instruction, which it characterized as "authoritarian to its core" and "designed to instill subservience, belief in authority, passivity and in the worst case a general loathing of school and work" (p. 5). Instead, the commission called for methods that would promote "pupils' independence and critical thinking, their will to work and to work independently, their sociality and capacity to co-operate" and allow "pupils to develop activities and initiatives themselves" (p. 5) and for a curriculum that was grounded in the pupils' everyday experiences. Moreover, the school commission compared general skills favorably with domain-specific knowledge and argued that it was "increasingly more obvious how seldom acquired knowledge can be considered fixed" (p. 148), motivating a reduced common core of learning.

The deprecatory view of traditional education became more pronounced in the report from the 1957–1961 school commission, which was appointed to provide the final design for the unitary school system.[35] This report explicitly stated (SOU 1961:30, p. 150) that "the concept of education must … become subordinate to the concept of nurture. In the following presentation of the goals of school, the term nurture is therefore used in a wider sense, as a common label for nurture and education."

In effect, this view amounted to an amalgamation of values, emotions and the teaching of facts, and to an emphasis on the subjective over the objective

[34] While these ideas are often called "progressive," they have become associated with the later philosophical term social constructivism and are often referred to in that way (see, e.g., Enkvist, 2016; Labaree, 2005). We, therefore, treat progressivism and social constructivism as overlapping sets of ideas—indeed, as one "thought style" (Fleck, 1935/1979).

[35] Trials with unitary education were conducted during the 1950s. Assessments of pupils' knowledge showed that pupils who were assigned to unitary schools performed worse than those who remained in the old system. However, these results were disregarded by the Social Democrats and the National Board of Education (Hadenius, 1990).

(Ohrlander, 1981). Indeed, according to a 1958 book coauthored by Stellan Arvidson, a member of both school commissions, the new school system would provide a more "natural" education, catering to the particular interests and personality of each child.[36] Pupils would henceforth "*not* be trained in the art of writing traditional essays, not be trained in writing grammatically correctly in foreign languages, not be exposed to traditional numerical assignments."[37]

The first two national curricula for the unitary school system reflected these ideas. While in Herbartian philosophy, pupils were believed to mature through the self-disciplined study of domain-specific knowledge, the 1962 curriculum indicated that such traditional teaching was at risk for being dull and stultifying.[38] The curriculum stressed that schools "should work from norms that the pupils accept and rules that they help to develop" (Swedish National Board of Education, 1962, p. 16). The 1969 curriculum also called for a breakup of the structure of the traditional subject disciplines. The curriculum suggested that any subject "could for some pupils be given a more concrete and practical content, while other pupils could study the subject on a more theoretical level" (Swedish National Board of Education, 1969, p. 44). The curriculum explicitly stated that it was not necessary for all pupils to study all parts of subjects. Moreover, all types of knowledge measurement were discouraged: "If one only measures the easily measurable, the goal of school will once again be reduced to simple cognitive memory functions … and cramming of facts" (p. 73).

The third curriculum, enacted in 1980 by a center-right government, made further advances toward a more clearly expressed social-constructivist view of schooling. According to the government bill that proposed the curriculum (Government Bill, 1978/79:180, p. 28): "Pupils must not perceive school as an establishment with massive [sic] and set values. They should get used to

[36] Interviewed in 1979, Arvidson stated that the ideal would have been that 30 children in a classroom studied from 30 different curricula (Ohrlander, 1981).
[37] As cited in Enkvist (2016, p. 27).
[38] According to Hadenius (1990), the enactment of the unitary school system in 1962 indeed constituted a change of course from a view of education where the aim was to impart knowledge deemed to be essential for all citizens, to a view where the process of schooling *per se* was considered more important than the result.

analyzing, seeing problems and considering goals and guidelines as something that must constantly be evaluated and questioned." A close reading of the full text raises the possibility that the center-right government intended to make pupils aware of the inherent paradoxes of the Social Democratic school system, such as the extreme individualization within a unitary system. Nevertheless, and although mostly implicit, the message was that pupils should call the very notion of systematic schooling into question.

Moreover, the bill harshly criticized the differentiation between different subjects, arguing that the natural sciences and technical subjects "cannot be isolated from the social sciences" and that "traditionally structured content" in physics and chemistry should be abandoned (p. 76). The bill disapprovingly observed that much "educational material [in physics and chemistry] still has a troubling subject-focus, a narrow perspective and a high level of abstraction" (p. 76). The bill also clarified that the "well-structured mass of knowledge that has accumulated within different traditional subjects can never be a starting point for schoolwork" (p. 80). Instead, the bill called for schoolwork to reflect "the pupils' view of reality," which it claimed is inherently different from adults' perception of reality, and "build on their curiosity and their questions" (p. 80). The curriculum itself stated that both the content of education and the teaching methods used should be adapted to each pupil based on his or her interests since there is "no way of studying that is best for all pupils" (Swedish National Board of Education, 1980, p. 52).

To summarize thus far, we have argued that the antecedents of the postmodern, social-constructivist paradigm extend back to the 1940s and demonstrated that both political blocs embraced these currents of thought. Against this background, one might wonder why a deterioration of knowledge among Swedish pupils cannot be unequivocally ascertained before the 1990s (Gustafsson et al., 2016). We argue that the main reason is that more senior teachers upheld a traditional teaching culture.

The Resilience of the Old View

According to Pollitt (2008, p. 16), organizational culture is a "constraint from the past," the endurance of which public sector reformers frequently

underestimate. As Wilson (2000, p. 368) described, “Every social grouping, whether a neighborhood, a nation, or an organization, acquires a culture; changing that culture is like moving a cemetery: it is always difficult and some believe it is sacrilegious.” In the case of Swedish teachers, a strong professional ethos and culture was in place that was at odds with the political ambitions to abandon teacher-led instruction in favor of self-directed learning, which indeed took time to dismantle (for evidence, see, e.g., Sjöberg, 2006a, 2006b; Wennström, 2016a). The public agency that was expected to implement the Social Democratic school policies, the National Board of Education, also had a traditional organizational culture that was difficult for the Social Democrats to influence (Rothstein, 1986/2010). In fact, little changed from the 1960s to the 1980s regarding the methods used in Swedish schools (Heller Sahlgren & Sanandaji, forthcoming; Rothstein, 1986/2010).

The Social Democrats acknowledged this state of affairs in a government bill (1975/76:39, p. 220): “Changing the methods of education … has been a significantly harder task than changing the [politically decided] framework. Such change takes time because it is in part a question of the staff’s positive attitude … Introducing new methods in the daily school work means that a long tradition that is often perceived as self-evident and thereby almost value neutral is pitted against new ideas and innovations.” At the party congress of 1975, Minister of Schools Lena Hjelm-Wallén also said that “we [the Social Democrats] are forced to acknowledge that today’s schools to a large extent are characterized by the classical imparting of knowledge, which has been inherited from school system to school system and fashioned on values from a society completely different from ours.”[39] Social reformer Alva Myrdal, who sat on both school commissions in the 1940s and 1950s, more bluntly stated that the older generations of teachers had to die before the desired changes to the school system could take effect (Ohrlander, 1981).

In the early 1990s, something akin to this notion happened. Large groups of older teachers retired and were replaced by younger teachers who had been trained in the social-constructivist ideas that are prevalent in modern teacher-

[39] As quoted in Rothstein (1986/2010, p. 114).

training institutions in Sweden (Fiévet & Henrekson, 2017). In these institutions, the practices of older teachers were explicitly criticized, and concrete training in how to instruct pupils was not given (Linderoth, 2016). Indeed, according to an analysis in the newspaper *Dagens Nyheter* (2015, p. 6), the "displacement of teachers trained before the 1970s should have peaked around 1990." Thus, the previous generations of teachers disappeared, and with them the old view of knowledge.[40] At the same time, the Social Democrats abolished the old National Board of Education and replaced it with the Swedish National Agency for Education, which, in contrast to the previous agency, was staffed with Social Democrats (Svenska Dagbladet, 1991) and pedagogues influenced by postmodern, social-constructivist ideas (Kornhall, 2013). A new center-right coalition government (1991–1994) then enacted an even more radical national curriculum (Swedish National Agency for Education, 1994).

The 1994 National Curriculum

At least two factors made the 1994 curriculum stand out from its predecessors. First, the curriculum did not include a prescribed content to be covered in the form of detailed course syllabi; it merely established a number of goals and objectives that it expected schools to concretize at the local level.[41] One set of goals consisted of general aims that "schools should strive for," mostly emphasizing the facilitation of critical thinking and self-directed learning and the development of personal opinion, while another set of goals were content-specific objectives for the individual pupil (see pp. 9–10). Both sets of goals were unspecific and open to interpretation. Some

[40] This hypothesis is supported by Markey-Towler's (2018) theory of the evolution, competition, and eventual decay of ideas that are powerful enough to become institutions guiding many individuals' thought and behavior. When the population carrying a particular institution (idea) contracts or is overcome by another population adhering to a contradictory idea, *their* institution fades and decays into irrelevance.

[41] Despite the ideological intentions of the previous curricula, they stipulated in detail how teaching time should be allocated across the different subjects and spelled out the course syllabi. Enkvist (2016, p. 62) notes that the 1962 curriculum in this sense was "a text characterized by both the old and the new." She also notes that the 1969 curriculum provided a detailed commentary for each subject "written by experts in the field that often conveys enthusiasm for subject learning" (p. 69). This likely contributed to the limited impact of social-constructivist ideas on classroom practice. However, such detailed instructions were not included in the 1994 curriculum (Linell, 2007).

content-specific goals included “masters basic mathematical thinking and can apply it in everyday life”; “is familiar with and comprehends basic terms and concepts within the natural science, technical, social science and humanities knowledge fields”; and “has deepened knowledge within a few subject areas of his/her choosing.”

The second important feature of the 1994 curriculum and a precondition of the first feature was that it was based on an explicit social-constructivist view of truth and knowledge. In 1991, a committee consisting mostly of researchers in pedagogy and education was given the task of drafting the curriculum, and its final report emphasized what it considered the constructivist and subjective nature of knowledge.[42] The report stated (SOU 1992:94, p. 63), “what is knowledge in one place is not necessarily knowledge in other places. … In different kinds of societies, the content and form of knowledge are different.” The report also claimed that “there are no ‘pure’ facts,” only facts that take on meaning from what we can see or detect (p. 65). This view of knowledge was summarized as follows (p. 76; emphasis in original):

> Theoretical knowledge is not a “reflection” of the world, but a human construction to make the world manageable and comprehensible. *Knowledge is hence not true or untrue but something that can be argued for and appraised*. Knowledge is up for discussion. To establish such a view of knowledge among the pupils, it is stated in the curriculum that *the subjects should be given a historical dimension*. This means that knowledge should not merely be taught as set answers, free from a specific historical context, but as answers that have come about in specific contexts under specific circumstances and in specific ways.

In line with these arguments, the report suggested that the “selection of facts can vary locally” and that “not all pupils everywhere need to work with the same facts to reach a common understanding” (p. 77). The report recommended that schools not structure the content of education into different subjects at all in the early grades but to initially focus on sparking pupils’ curiosity and use “the children’s questions” as a starting point (p. 79). Indeed, what was most important in school was to facilitate “the activity

[42] According to Linderoth (2016, p. 49), this report is a ”key text for anyone wishing to understand the development of the Swedish school system since the 1990s.”

of knowing" (*kunskapande*), which is a term for the idea of pupils as participants in a collaborative enterprise of constructing knowledge. The report stressed that an integral part of schooling was allowing pupils to become involved in "the processes that [knowledge] is an outcome of" (p. 67) and insisted on the centrality of theorization and verbal communication to this work: "Pupils need to be allowed to discuss a lot, be trained in expressing and formulating their views and appraising different arguments" (p. 68). An illustrative example was provided in a discussion on including the "pupils' media world, their knowledge and media interest" in the content of education, in which it was suggested that pupils should "learn to 'deconstruct' the media, their messages and their ways of working" (p. 98).

The 1994 curriculum was the first Swedish curriculum to include a discussion on the concept of knowledge (Wikforss, 2017, forthcoming). The curriculum stated (Swedish National Agency for Education, 1994, p. 8):

> The task of school to impart knowledge presupposes an active discussion in the individual school about knowledge concepts, what constitutes important knowledge today and in the future, and how knowledge develops. Different aspects of knowledge are natural starting points for such a discussion.
>
> Knowledge is not an unambiguous concept. Knowledge is expressed in different forms … which presuppose and interact with each other. Schoolwork must focus on giving room for different forms of knowledge and learning in which these forms are balanced and become a whole for the individual pupil.

The curriculum also emphasized that pupils should assume successively greater responsibility for their learning (pp. 6–7):

> The structure of the learning environment shall be characterized by democratically determined learning processes and prepare pupils for active participation in civic life.[43] It shall develop their ability to take personal responsibility. By choosing courses and subjects and by taking part in the planning and evaluation of their daily learning, pupils will develop their ability to exercise influence and take responsibility.

[43] In the corresponding paragraph in the official English translation of the 2011 national curriculum it is expressed as follows (p. 10): "Democratic working forms should also be applied in practice and prepare pupils for active participation in the life of society." However, we find that an analogous direct translation from Swedish fails to convey the true meaning of the pronouncement.

Ensuring that pupils would be given greater responsibility for and influence over the planning and content of their education was proclaimed to be the teacher's main priority. He or she should "assume that pupils are able and want to assume personal responsibility for their learning and their schoolwork" (p. 14). In fact, the teacher's official responsibilities were all concerned in one way or another with supporting self-directed learning and creating a democratic classroom environment. It is striking—and indicative of the document's stance with regard to knowledge—that there are no statements to the effect that he or she was expected to impart domain-specific knowledge to the pupils (see pp. 12–14).

Hence, the 1994 curriculum transferred the responsibility for determining the content of and methods for elementary and secondary education from the state to individual schools and their pupils. This change was motivated in part by the decentralization reform at the beginning of the 1990s.[44] However, the change was also due to the postmodern view of knowledge as subjective and locally constructed that was expressed in the curriculum committee's report (SOU 1992:94). Contrary to what had happened when new curricula were introduced in previous decades, the teaching methods used in schools gradually changed.

The share of individual work during lessons increased from an average of 26 percent in the 1980s to 41 percent in the 2000s (Granström, 2003). When the Swedish National Agency for Education asked 9th graders how often they worked individually in school in a 2003 survey, 50 percent of the respondents answered that they did so several times a day, which reflected an increase from 25 percent in the early 1990s (Swedish National Agency for Education, 2004). In mathematics, 79 percent of the pupils reported working individually every, or almost every, lesson. These results added to an emerging "image of an increasingly isolated and individualized education in which pupils are working in isolation from both the teacher and the other schoolchildren" (Swedish National Agency for Education, 2004, p. 47).

In tandem with the 1994 curriculum, a new "absolute", i.e., criterion-referenced, grading system was enacted. One of the system's defining

[44] See section 2.

features was that it eliminated the anchoring function of centrally administered standardized tests and gave individual teachers full autonomy to assign grades.[45] Teachers were in turn instructed to "utilize all available information about the pupil's knowledge … and arrive at an all-round judgment" when assigning grades (Swedish National Agency for Education, 1994, p. 16), i.e., not just focus on test results and other traditional and externally verifiable forms of assessment.

Schools were also required to consider the curriculum's goal that the pupils should "develop the ability to evaluate their results and relate their own and others' judgment to their performance and inherent capacity" (p. 16), which implied some degree of pupil influence over grading. These grading instructions were in line with the social-constructivist view that objectively measurable knowledge does not exist, a conception that was expressed both in the curriculum committee's report (SOU 1992:94) and in the curriculum itself. In effect, these instructions opened the door for arbitrary grading decisions and complaints about bad grades that could be easily dismissed as subjectively determined, leading to *de facto* negotiations between teachers and pupils or the emergence of a "didactic conspiracy."[46]

School Choice and Marketization

The moral hazard problem created by the combination of a social-constructivist curriculum and a subjective grading system was amplified by Sweden's school choice reform enacted in 1992, which opened the education system to private competition from independent for-profit and nonprofit schools funded by vouchers. With the changes to the curriculum and the grading system, there were no longer any institutional barriers to school

[45] In the previous relative grading system, teachers were required to justify in writing why they wanted to assign grades that significantly diverged from the result of standardized tests (Swedish National Agency for Education, 2005). In the current grading system it is unclear to what extent standardized tests are used as a guide in grading. Moreover, they are sent out to schools in advance and are therefore frequently subject to cheating and online distribution by pupils, which greatly impairs comparability and reliability since schools are not obligated to give the test at exactly the same time across the country.

[46] "Didactic conspiracy" refers to a phenomenon where teachers come to an unspoken understanding with their pupils to not conduct rigorous assessments of the pupils' knowledge. In exchange, the teachers will not have to face criticism from their pupils (see Alexandersson, 2005; Linderoth, 2016).

competition in dimensions other than educational quality, including grading (Wennström, 2016b). Indeed, as noted by Vlachos (forthcoming), the Swedish school system now "combined market principles such as decentralization, choice, competition, and corporate providers with an evaluation system that is highly trust-based and where teacher-set school grades are high-stakes for the students." Independent schools seem to have quickly taken advantage of this opportunity, as demonstrated by the fact that independent secondary schools were prone to inflate grades as early as 1997 (Wikström & Wikström, 2005).

Most plausibly, the improvement in final grades during the period that PISA and TIMSS results fell sharply is due to this unlikely marriage between social constructivism and a full-fledged marketization of education. The lax institutional framework of the school system, which did not specify in detail what was to be taught or what criteria pupils had to meet to be assigned different grades, allowed independent schools to begin inflating grades. This phenomenon, in turn, gave pupils and parents an incentive to choose independent schools to receive good grades and forced public schools, as well as independent schools with high academic standards,[47] to gradually adapt to remain competitive. It is now well established that well-functioning systems of school choice and competition presuppose that the state holds schools accountable for their performance by measuring what knowledge their pupils have acquired through, for example, external exit exams (Woessman, 2016).[48] But the regulatory documents issued by the Swedish state had – at least with regard to schooling – already invalidated the very conception of objective knowledge; therefore, both "producers" and

[47] More recent research shows that all categories of independent schools, but particularly schools belonging to two of the largest corporate groups, have higher teacher-set grades than public schools at the elementary level and that this advantage can be fully accounted for by more lenient grading standards (Vlachos, forthcoming).

[48] In the Swedish context, studies on the effect of school competition on educational outcomes find that the expansion of independent schools within the current system has improved outcomes (Ahlin, 2003; Björklund et al., 2004; Böhlmark & Lindahl, 2015; Sandström & Bergström, 2005). However, these studies concentrate on easily measured and corruptible outcomes, i.e., teacher-assigned grades and the results of Swedish "standardized" tests. Only one study includes a convincing measure of quality, i.e., TIMMS, but the results are not impressive (Böhlmark & Lindahl, 2015). None of these studies consider the lax institutional framework of the Swedish school system.

"consumers" of education in the marketized school system became susceptible to fraudulent behavior, if not in a strictly legal sense, at least relative to the fundamental purpose of elementary and secondary education.

Since 2008, there is even a supervisory agency whose task is, in effect, to ensure that neither independent nor public schools deviate from the prescribed view of knowledge (which is codified in Swedish law since the curriculum is enacted by Parliament). The Swedish Schools Inspectorate "arrives in schools with the curriculum in hand and 'ticks off' whether the teachers and the principals have done precisely what the curriculum prescribes" (Enkvist, 2017, p. 113). If teachers and principals are deemed not to have complied, the agency will punish schools, e.g., with threats of closure, and demand that they rectify the identified aberrations.

The Swedish Schools Inspectorate regularly expresses its disapproval of schools that teach in a traditional way and according to a classical view of knowledge.[49] For example, a recent report on common teaching practices within the natural science disciplines in inspected schools noted (Swedish Schools Inspectorate, 2017, p. 5; italics in original) that "the emphasis has often been on … *imparting what the natural sciences have concluded so far*—established terms and models. *The scientific process*—how one has obtained what we today view as received knowledge and how it is possible to gain such—has been overlooked."[50] The same report also made critical observations about inspected lessons in which "teachers have the most speaking time"[51] and concluded (p. 9) the following:

> An education in which the natural sciences are presented as a set of facts becomes misleading since rhetoric and argumentation are central aspects of

[49] See chapter 8 in Heller Sahlgren and Sanandaji (forthcoming).
[50] Considering that a view of knowledge as socially constructed is consistently expressed in the governing documents of the school system, this quote should not be interpreted to mean that schools ought to teach the scientific method, but rather that they should question its universal relevance.
[51] However, and interestingly, the report (p. 10) also describes occasions when the social-constructive practice is taken too far: "[M]any pupils are left without support to understand what they are doing and why. One of the pitfalls that the Swedish Schools Inspectorate has observed is that the pupils are allowed to formulate hypotheses and make observations without any restrictions. The experiment and the likely outcomes are not put into context for the pupils, which may lead to guessing beyond the limit of what is reasonable."

> natural science practice. Pupils need to be given room for active participation in which they have the opportunity to grasp the essence of the questions and develop their arguments. A greater understanding of natural science practice will also help pupils understand that the natural sciences are not about static facts and eternal truths—new discoveries may discard what we hold true today.

In a similar vein, a report on common teaching practices in history stated that good history education should encourage pupils to understand that "all historiography is an interpretation of the past, which is affected by the sender's experiences" (Swedish Schools Inspectorate, 2015, p. 9). The report also criticized inspected schools that did not allow schoolchildren "to work like historians and create history" (p. 22).

The 2011 National Curriculum

With the current national curriculum, enacted by the then center-right government (2006–2014) in 2011, the state appears to have reclaimed some of its former regulatory functions. There are now more detailed course syllabi and grading criteria for each school subject. In theory, this change should lead to greater consistency across schools and reduce the undesired side effects of school competition. However, as the cited reports from the Swedish Schools Inspectorate have already indicated, a close reading of the current curriculum reveals it to be as influenced by a postmodern, social-constructivist view of truth and knowledge as the 1994 curriculum. It also does not explicitly specify what knowledge pupils have to acquire to be assigned a particular grade.

The current curriculum contains an almost identical formulation to that of the 1994 curriculum that the task of schools to "promote learning presupposes an active discussion in the individual school about concepts of knowledge" (Swedish National Agency for Education, 2011, p. 12).[52] The curriculum also states that a "historical perspective" should be applied in all

[52] It is noteworthy that the phrase "impart knowledge" in the 1994 curriculum has been changed to "promote learning" in the otherwise same sentence in the current curriculum. See Biesta (2009, p. 36) for a discussion on the "'learnification' of education," in which the term "learning" is used to reduce the concept of education to an individualistic activity, removed from the traditional teacher-student relationship.

school subjects (p. 11).[53] Moreover, the list of teachers' prescribed duties does not explicitly mention any responsibility to impart domain-specific knowledge (pp. 14–16). Like the previous curriculum, the current curriculum asserts that pupils should exercise "increasingly greater influence over their education" and the organization of their schoolwork (p. 17). The 2011 curriculum goes further in that it emphasizes that both parents and pupils have a "right to exercise influence" over goals, content and ways of working (p. 10). As noted by Enkvist (2017), this change raises the question of what a teacher should do if different families in a class make opposing demands and whether there are, in fact, any set goals for the education system if these can be continually altered and renegotiated by parents and pupils.[54]

A cursory reading of the 2011 curriculum, which is just under 300 pages, gives the impression of a detailed description of the knowledge content of each school subject. However, a close reading clarifies that the curriculum in fact stipulates that the different subjects should not be taught based on a conception of knowledge as objective and verifiable. Consider, for example, the following emblematic description of the primary purposes of teaching biology (p. 105):

> Teaching in biology should aim at helping the pupils to develop knowledge of biological contexts, and their curiosity and interest in getting to know more about themselves and nature. Through teaching, pupils should be given the opportunity to put questions about nature and Man based on their own experiences and current events. In addition, teaching should give the pupils the opportunity to look for answers to questions by using systematic studies and different types of sources. In this way, teaching should contribute to pupils developing their critical thinking over their own results, the arguments of others and different sources of information. Through teaching, pupils should also develop an understanding that statements can be tested and evaluated by using scientific methods.

[53] The social-constructivist meaning of the phrase "historical perspective" was explained in the curricular committee's discussion on the subjective nature of knowledge (SOU 1992:94, p. 76).

[54] According to the curriculum, every pupil has the right to veto any classroom task or homework assignment that he or she perceives as too challenging for him or her and demand that the teacher produces study materials and assessments uniquely customized to that pupil (Helmér, 2015).

> Teaching should give pupils opportunities to use and develop knowledge and tools for expressing their own arguments and examining those of others in contexts where knowledge of biology is of importance. As a result, pupils should be given the preconditions to manage practical, ethical and aesthetic situations involving health, use of natural resources and ecological sustainability.
>
> Teaching should also contribute to pupils developing familiarity with the concepts, models, and theories of biology, as well as an understanding of how these are developed in interaction with experiences from studies of nature and people. In addition, teaching should contribute to pupils developing the ability to discuss, interpret and produce texts and various forms of aesthetic expressions with scientific content.
>
> Teaching should create the conditions for pupils to be able to differentiate between scientific and other ways of depicting the world. Through teaching, pupils should get an insight into the worldview of science with the theory of evolution as a foundation, and also get perspectives on how this has developed and what cultural impact it has had.

This general and highly abstract description does not dwell on the specific biology knowledge pupils are expected to learn. Instead, the description emphasizes that pupils should ask questions and seek answers based on their own subjective experiences, learn to express their thoughts verbally, and develop a critical mindset.[55] When the text, almost *en passant*, mentions "familiarity with the concepts, models, and theories of biology" in the third paragraph, the meaning is not clearly defined regarding what pupils should know and how the level of their understanding should be gauged. The reason for this vagueness may be found in the official commentary on the biology course syllabus. The commentary explains that "concepts, models and theories are the result of people's observations and thought" and "because theories have been developed in social and cultural contexts, they are changeable", making biology an "open and creative enterprise" (Swedish National Agency for Education, 2017, p. 8). Hence, according to school authorities, there is no objective knowledge of biology to be acquired and

[55] The school system's idea of what constitutes critical thinking is demonstrated in a guide for grading the standardized test in religion in grade 9, issued by the Swedish National Agency for Education (2012b, pp. 29–30). Here, it is stated that a pupil who bases an answer on one single fact-checked source deserves a lower grade than a pupil who utilizes two subjective sources with differing views on the same topic, thus making them "fair" or neutral when combined in the pupil's opinion.

subjected to examination and grading. The same concept is stated in relation to physics and chemistry.

Moreover, elements from other subjects are incorporated into biology. For example, the goal that pupils should learn to "manage practical, ethical and aesthetic situations involving health, the use of natural resources and ecological sustainability" seems to belong more in the social sciences than in biology. The goal that pupils should develop their ability to "produce texts and various forms of aesthetic expressions" would appear to be more relevant to the study of their native language and the arts, respectively. Other examples of mixing of disciplines can be found in the subject's "core content" (Swedish National Agency for Education, 2011, pp. 106–109),[56] which, for instance, prescribes verbal discussions on "current societal issues involving biology." Furthermore, the statement that pupils should "be able to differentiate between scientific and other ways of depicting the world" and have "insight into the worldview of science with the theory of evolution as a foundation" implies that the facts of biology can be described as a "worldview" competing with other equally valid theories.[57]

The national curriculum presents all school subjects in this ambiguous way. Critical thinking, verbal expression, and discussion are integrated into every course syllabus, usually in combination with social science perspectives. For example, teaching in art includes analysis of pictures dealing "with questions of identity, sexuality, ethnicity and power relations" (Swedish National Agency for Education, 2011, p. 24). "Physical education and health" (formerly denoted sports) includes "talking about experiences and outcomes from different physical activities and forms of training" as well as discussions about "how the individual's choice of sports and other physical activities are influenced by different factors, such as gender" (p. 52). Even

[56] The "core content" is supposed to represent the compulsory content of each school subject. However, as made clear in the official commentary to the biology course syllabus (Swedish National Agency for Education, 2017, p. 10), teachers can combine and give different importance to various elements however they want to. Hence, the "central content" does not constitute a common core of knowledge.

[57] According to an interview-study with teachers by Sjögren (2011), the theory of evolution is indeed presented in some schools as a life stance equal to the myth of creation rather than a scientifically proven fact.

the teaching of the pupils' native language is predominantly focused on verbal communication, and civics is almost exclusively restricted to "reflection," "analysis," and "expressing standpoints."

Grading in the 2011 National Curriculum

That the knowledge content of each subject is less emphasized becomes evident when studying the grading criteria, which are "based on the view of knowledge expressed in the curriculum" (Swedish National Agency for Education, 2017, p. 29). The grading criteria are entirely subjective and open to interpretation. Consider, for example, these criteria for a passing grade (E) in physical education in grade 9 (Swedish National Agency for Education, 2011, p. 54; bold in original): "Pupils can participate in games and sports involving complex movements in different settings, and vary and adapt their movements **to some extent** to activities and context. In dance, and movement and training programs to music, pupils adapt **to some extent** their movements to beat, rhythm and context." "To some extent" is replaced with "relatively well" in the criteria for grade C and with "well" in the criteria for grade A. However, the criteria do not state how, and with what legitimacy, teachers should determine whether a pupil adapts his or her movements "to some extent," "relatively well" or "well."

This arbitrariness is not exclusive to physical education; it is typical of the grading criteria in all subjects. For instance, the "knowledge requirements" for grade E in biology at the end of grade 9 include the following (p. 112; bold in original):

> Pupils can talk about and discuss issues related to health, natural resource use and ecological sustainability, and differentiate facts from values, and formulate their views with **simple** reasoning and describe some of the possible consequences. In discussions, pupils can put questions, and put forward and respond to views and arguments in a way, which **to some extent takes the discussions forward**. Pupils can search for information on the natural sciences and use different sources and apply **simple and to some extent** informed reasoning to the credibility and relevance of their sources and information. Pupils can use information in a **basically** functional way in discussions and create **simple** texts and other communications with **some** adaptation to purpose and target group.

The knowledge requirements for grade A in biology use the same vocabulary but with different adjectives, such as "well developed" and "good." Again, and in line with the social-constructivist view of knowledge,[58] it is not clear on what grounds teachers should determine pupils' grades. According to the Swedish National Agency for Education (2017, p. 30), this ambiguity is intentional to ensure that the grading criteria are "manageable" and not unnecessarily strict. However, there is an obvious risk that pupils will attempt to "game" such vague grading criteria, i.e., spend more time trying to determine what their teachers read into the criteria and meeting that subjective standard than on improving their understanding of the subject. Grading conflicts between teachers and pupils are also likely to arise.[59]

Summary of Section 4

To summarize this section, we have demonstrated that the Swedish school system is governed by a postmodern, social-constructivist paradigm. The teaching methods used did not change much before the early 1990s, but when they did, it became successively more difficult to deviate from the prescribed view of knowledge and the ensuing teaching methods. Paired with competition from corporate and nonprofit providers, a social-constructivist national curriculum incentivizes schools to compete in dimensions other than educational quality. The current national curriculum is merely a more detailed version of the radical 1994 curriculum. The current curriculum does not even once mention the word "truth," which suggests that "post-truth" schooling remains the official doctrine of the Swedish school system.

[58] It is not only that criteria are subjective that reveals their social-constructivist foundation, but also that they sometimes demand too much of pupils, blurring the hierarchy between elementary education and university. Consider the following criterion for grade A in the pupils' mother language (Swedish National Agency for Education, 2011, p. 221; bold in original): "Pupils can apply **well developed and well** informed reasoning about the history of the Swedish language, its origins, and special characteristics, and compare these with closely related languages and clearly describe important similarities and differences."

[59] As well as with parents, especially since the national curriculum obligates teachers to "work together with and continuously inform parents about the pupil's school situation" (Swedish National Agency for Education, 2011, p. 18).

5. Concluding Discussion

What students do in school and how they react to their experiences during that time predicts long-term life outcomes above and beyond family background, broad traits, and cognitive ability (Spengler et al., 2018). Hence, it is essential that schools be as good as possible and impart the knowledge and skills that are critical for individuals and, ultimately, society.

The structures, techniques, and methods critical to efficient knowledge acquisition and skill development are well established. The most critical factor for pupil achievement—even more important than teacher quality—is a detailed, coherent and carefully sequenced curriculum organized around subject disciplines. Indeed, "a better curriculum can range from being slightly to dramatically more effective than a better teacher" (Hirsch, 2016, p. 39). Furthermore, guidance and repetition are necessary for committing knowledge to long-term memory and not overload the working memory, creating frustration and disruptive behavior (Clark et al., 2012; Ingvar, 2017).Teacher-centered direct instruction has been found to be the most effective method for achieving this outcome (Hattie, 2009; Jerrim et al., 2019; Kirschner et al., 2006; Mayer, 2004). Similarly, reading and math skills need to become automated for pupils to become proficient in using these tools. However, because strong reading skills and cross-topic reading comprehension presuppose domain-specific knowledge (Recht & Leslie, 1988; Willingham, 2009), a well-rounded and knowledge-oriented education provides the basis for proficiency. The same is true of the development of other vital skills, such as critical thinking (Willingham, 2010) and problem-solving (Larkin et al., 1980; Simon & Chase, 1973) skills. Moreover, the psychosocial environment in the classroom plays an important role. A lack of structure and peace causes pupils' survival instincts to react to perceived dangers and crowds out cognitive capacity for knowledge acquisition (Ingvar, 2017).[60] Testing and stringent and consistent grading are other preconditions for learning (Betts & Grogger, 2003; Bonnesrönning, 2004; Brown et al., 2014; Figlio & Lucas, 2004).

[60] For more evidence, see, e.g., Lee et al. (2017).

Our analysis of the consequences of combining institutionalized social constructivism with extensive marketization of education has demonstrated that the Swedish school system adheres to a philosophy where nurture and the development of the child's personality are considered the primary purposes of schooling. Starting in the early postwar period, official documents including the national curriculum began to call the very existence of objective knowledge into question. This process culminated with the 1994 and 2011 national curricula, which both assert that knowledge is socially constructed, emanating from within the individual, and therefore cannot be transmitted from teacher to pupil through direct instruction. Instead, self-directed learning became the norm not only in theory but also in practice. Measurement of knowledge attainment was discouraged and, paradoxically, was even more discouraged when the education system was opened to competition from private schools in the early 1990s.

We argue that the broader problems of the school system explored in this study are to no small extent a result of this view of knowledge and the ensuing pedagogy. It is unsurprising that a large number of teachers find their job unsatisfactory and want to leave their profession when subject knowledge is secondary and the governing documents confer extensive influence to pupils and parents regarding content and planning. This institutional attitude toward knowledge, resulting in a diminished role and influence for teachers, undermines the moral dimensions of the employment relationship that explain why workers commit to their job. As observed by Lopes (2018, p. 117), "the perception that authority is illegitimate, or that the employer is disloyal, may damage the perceived meaningfulness of work," as will the perception that teaching in the classical sense lacks social utility, which is implied in the social-constructivist view. Moreover, teacher-training students are not trained in how to instruct pupils, likely causing worry about not being able to master the job and leading many to drop out of teacher-training programs. The fact that the academic component of teachers' work has gradually given way to social responsibilities has likely contributed to the declining status of the teaching profession and a resultant decline in the quality of applicants.

The falling results in international comparative assessments are consistent with the fact that pupils are left to discover knowledge on their own instead of benefitting from being taught according to what have proven to be the most efficient methods.[61] It is also logical that school competition takes place in dimensions other than educational quality if, in effect, there is no common core of knowledge requirements and assessment is left to teachers, who are not provided with an external measuring rod to ascertain the validity of their grading. The deleterious effects likely became manifest more quickly as a result of school choice and the presence of for-profit schools that saw the school market as any other market and were therefore less reluctant than existing providers to exploit weaknesses in the rules and regulations governing the system. In order to survive, competing schools were forced to follow suit.

The sharp rise in absenteeism, ADHD diagnoses, depression, and anxiety among Swedish pupils is not unexpected in a learning environment that continuously overloads the pupils' working memory, as they have to piece together information on their own.[62] Supporting evidence for the view that the postmodern, social-constructivist paradigm has contributed to the increase in psychiatric disorders among Swedish adolescents comes from

[61] One additional factor that we have not hitherto mentioned is the large immigration to Sweden in recent years. According to one study (Heller Sahlgren, 2015a), 29 percent of the overall decline in PISA between the years 2000–2012 can be mechanically explained by the change in student composition. However, that study does not heed the fact that immigration has increased in other comparable countries as well during this period, and our main point is that Swedish results have deteriorated *relative* to the results in other comparable countries. Moreover, we maintain that the decline in knowledge cannot be explained away by immigration. It is not surprising that non-Swedish students, who often do not master the Swedish language, perform worse than Swedish students under "post-truth" schooling, in which verbal communication is paramount. There is now considerable knowledge about which teaching methods are efficient, and research shows that by using these methods children from underprivileged environments can also perform well (e.g., Chabrier et al., 2016; Fryer & Dobbie, 2013; Woessman, 2016).

[62] As suggested by Lukianoff and Haidt (2018) in the American context, the spread of social media and smartphones into the lives of teenagers may have contributed to the rapid rise in rates of anxiety and depression among American adolescents, particularly girls, during the 2010s. While we can only speculate, it does not seem implausible that a combination of discovery-based pedagogy overloading the working memory during school hours and heavy presence on social media and smartphones in the pupils' free time may, in the Swedish context, help to explain the rise in mood disorders.

Québec.[63] Haeck et al. (2014) found that hyperactivity, anxiety, and physical aggression increased among Québecois pupils relative to pupils in the rest of Canada following a school reform in Québec in the early 2000s that was similar to the Swedish reforms.

Sketching an alternative paradigm is outside the scope of this study, but based on this account, it should be clear that the broader problems of the Swedish school system are likely not intractable. A shift to a moderate form of social constructivism in schools would in all probability result in some improvement. However, a reform strategy including a complete paradigm shift in what is arguably the most crucial institution of the school system—the stipulated view of truth and knowledge—has the potential to yield radical improvement.[64]

Future studies could contribute to developing such a reform strategy in the following ways: First, by increasing the knowledge about the effect of social constructivist learning approaches on educational outcomes by providing additional evidence from other countries. Second, by detailing the measures needed to counter the decline in Swedish school results and the deficiencies in the education systems of countries that have adopted similar reforms. Third, by studying the view of knowledge at the micro-level, e.g., by administering surveys to teachers, and the mechanics of grade inflation in individual schools. These directions for future empirical and institutional analysis would add to the findings of this study and broaden our understanding of how to design a new and more efficient approach to elementary and secondary education.

[63] We are naturally aware that this is a research question that calls for other methods than the ones employed here to be fully addressed.

[64] It is in this context noteworthy that Germany has gone the opposite way to societies such as Sweden and Québec. After the PISA 2000 test exposed large deficiencies and substandard-results in the German school system, the country took an "empirical turn" (Knodel et al., 2013). It began to stress empirical evaluations in German schools and created "common core" standards for student performance, as well as procedures for reviewing individual schools by external experts. German PISA results have then risen substantially.

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