Changes in individualized teaching practices in municipal and independent schools 2003, 2008 and 2014 - student achievement, family background and school choice in Sweden

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ABSTRACT
The study investigated student experiences of teaching practices in grade 9 at 2003, 2008 and 2014 after the Swedish education reforms of the 1990s. Teaching practices in both municipal and independent schools were related to student achievement and family background. Data from three nationally representative cohorts within the ongoing Swedish longitudinal ETF-project have been used. The results show changes from more conventional to more individualistic teaching practices. Independent schools emphasize more self-regulated learning. Child-centred forms of work are though found to be equally beneficial for student achievement as more conventional teaching methods. In spite of education reforms, family background is equally important for student achievement as earlier. Obtained results are discussed in relation to increased school competition in Sweden.

Introduction

In the early 1990s, the Swedish school system went through a series of education reforms. These are the largest since the 1940s, when the idea of ‘a school for all’ was processed (Giota & Emanuelsson, 2016). After an extended period of preparation in the 1950s, the mandatory nine-year comprehensive school model was formally introduced in 1962. This model geared towards democratic ambitions and equity (Lundahl, 2005) gained substantial success during the 1970s and 1980s and prominent reputation worldwide as Swedish students scored relatively high on international assessments of mathematics and reading literacy (IEA) that preceded PISA (Adamson, Åstrand, & Darling-Hammond, 2016).

The Swedish reforms coincide with the introduction of reforms also in the other Nordic countries (Carlgren, Klette, Myrdal, Schnack, & Simola, 2006; Daun, 2003; Lindensjö & Lundgren, 2000) and the US (Cuban, 2016) and can be seen as part of a global reform movement (Plank & Sykes, 2003) and the rise of neo-liberalism (Daun, 2003), which refers to a New Public Management philosophy, entailing a marketization of public services to improve efficiency.

The rapid implementation of these reforms turned the education system in Sweden within few years from being strongly government-dominated to become one of the most decentralized with a high level of choice (OECD, 2013). By eased regulations, school choice and privatization became allowable (schools owned by companies, but financed by the government through vouchers). At the same time, a new national goal-oriented curriculum for compulsory school (Lpo94) was introduced, along with a new criterion-referenced grading system.

After the implementation of the reforms in 1996, the landscape of the Swedish school world has changed (SOU, 2014, p. 5). For example, the voucher system enacted since 1992 with the free school choice has released a competition between schools to show high teaching quality and marketing themselves in a way that attract certain groups of students and/or their parents (Holmlund et al., 2014). When the free school reform was introduced, it was argued that educational quality, equity and efficiency would be improved through choice and competition, especially for less advantaged students (Börjesson, 2016). The opposite trend has been observed, though school choice seems to have augments achievement gaps (Böhlmark, Holmlund, & Lindahl, 2016) as well as school segregation with respect to SES and migration background, especially for schools in disadvantaged areas (Yang Hansen & Gustafsson, 2019).

Gustafsson and Blömeke (2018) investigated the development of achievement in compulsory school in the Nordic countries between 1964 and 2012, by the use of published results concerning literacy and numeracy from different international large-scale assessments (IEA, TIMSS, PIRLS, PISA and...
In a national evaluation, the Swedish National Agency for Education (SNAE, 2009) concluded that after 1996 not only independent schools had increased significantly, but also new ways of working in school and methods had appeared (Carlgren et al., 2006; Vinterek, 2006). In particular, the number of independent schools in compulsory education increased from less than 2% in 1992 to 14% in 2014 (SNAE, 2015). Teacher-led instructions for the whole class (traditional class teaching) had diminished in favour of more individualistic teaching practices (child-centred) and independent work in particular, where ‘students have to rely on their own ability to search for knowledge and reach the curriculum goals’ (SNAE, 2009, p. 28). Thus also changes in teaching practices from more traditional to more individualistic, along with the free school choice, has been put forward by SNAE (2009) as a main reason for Sweden’s overall decreasing performance on international and national knowledge assessments from 1992 onwards (SNAE, 2003). For example, Sweden’s PISA 2012 scores have dropped faster than those in almost any other country (SNAE, 2013).

In the national evaluation (SNAE, 2009), it is hypothesized that forms of self-regulated learning that put the responsibility for learning on the students are better suited for students from high-SES (parental education). Already vulnerable students such as those from homes with low-SES or those in need of special education support (cf. Giota & Emanuelsson, 2011, 2016; Giota, Lundborg, & Emanuelsson, 2009) appear to become ‘the losers’ (cf. Giota, 2013; Vinterek, 2006). The increased use of independent work, in particular is therefore hypothesized to account for at least a part of the increasing relationship between SES and achievement (SNAE, 2009; Yang Hansen & Gustafsson, 2019).

Beside Sweden, also Norway has emphasized self-regulatory individualized ways of working in compulsory school, but this is not as obvious in Finland (Carlgren et al. (2006). Self-regulating ways of working in school are not only practiced in the Nordic countries, but are in accordance with the global discourse on flexible learning (OECD, 2001).

Research limitations in the field

A difficulty when it comes to teaching practices is that such studies are very rare in Sweden and conducted mainly in the 1960s and 1970s (e.g. Stukát & Engström, 1966) with a handful examining changes over time (Giota & Emanuelsson, 2018; Ekholm & Kull, 1996; Granström, 2003; Granström & Einarsson, 1995). Another difficulty lays in the fact that there are almost no data allowing comparisons over time and few possibilities to link teaching practices to student achievement on the national level (Gustafsson et al., 2016). There are actually only two possibilities where this can be done. One within the framework of the national evaluation of the Swedish compulsory school (NU03) where data have been collected at three occasions (1992, 1995 and 2003) in grade 9 (SNAE, 2004) and the other within the framework of the ongoing Swedish longitudinal project Evaluation Through Follow up (ETF; Svensson, 2011), where data have been collected at several occasions since the 1960s. Data on the national level concerning teaching practices in independent schools are as far as we know only available within ETF and haven’t been analyzed until now within the present study.

Moreover, it is remarkable that although Sweden has a high level of choice such studies have increased only in recent years. The few studies available address most of the time school choice in relation to residential segregation and stratification of students, showing that segregation between schools has increased more than segregation between municipalities. This trend in mainly seen in the metropolitan areas and in large cities, and seems to be driven by the increasing number of independent schools, growing opportunities to choose schools and increasing residential segregation (Yang Hansen & Gustafsson, 2016, 2019). This development points to that school choice itself has an impact on school segregation (Böhmark, Holmlund, & Lindhl, 2015; Holmlund, 2016).

Another difficulty is that student achievement is influenced by different factors at different levels at the same. For example, student achievement is both directly affected by a school’s SES composition and the management practices of the school at the same time as it interacts with the quality of teaching practices and the ways students interact with each other in that social context (Yang Hansen & Gustafsson, 2019).

Aims of the present study

In a previous study (Giota & Emanuelsson, 2018), we addressed theoretical and methodological limitations in

PIAAC). In spite of all their differences, also in the implementation of educational policy over time (Carlgren et al., 2006), these researchers found some common patterns. One was a small, but consistent increase in the level of achievement from the mid-1970s to around 1990 for both literacy and numeracy for most of the Nordic countries. For all countries, a decline in achievement levels was found from the late 1990s/early 2000s up to 2012 (p. 401). The factors that caused the achievement decline in all Nordic countries do not need to be the same. When it comes to Sweden, Gustafsson and Blömeke (2018) point out the decentralization, deregulation and marketization reforms as the main reasons for the decline. That is because these reforms impacted negatively on the teaching profession and because they caused increasing school segregation (Gustafsson, Sörlin, & Vlachos, 2016; Astrand, 2016; cf. Holmlund et al., 2014).

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In a previous study (Giota & Emanuelsson, 2018), we addressed theoretical and methodological limitations in
the field, by investigating changes in teaching practices and classroom processes as seen from a student perspective from 1980 to 2014. The comparisons of results were based on identical statements in questionnaires given to six nationally representative student cohorts within the framework of ETF who attended year 6 or 9 of the Swedish compulsory school. The findings confirm the hypothesized changes in teaching practices from the early 1990s to 2003 and the increase of independent work, in particular (SNAE, 2003, 2009; Granström, 2003; cf. Vinteręk, 2006) in both grade 6 and grade 9 on the national level. The identified changes were discussed in relation to curricula goals and the concept of individualization central to the Swedish curricula (from Lgr62 to Lgr11) as well as findings in the limited number of Swedish empirical studies in the field.

In the present study, the same identical statements about teaching practices will be used in order to investigate a) how changes in student experiences of such practices in year 9 at 2003, 2008 and 2014 relate to student achievement, as measured by attained average merit ratings at these time periods, and parental education (SES). Of particular interest is to explore the benefits of child-centred or individualized teaching practices vs the benefits of more conventional such as class teaching and the use of testing in relation to SES (SNAE, 2009).

Given that independent schools are expected to increase educational quality through pedagogical innovations or new teaching methods and practices (e.g. Lundahl, Erixon Arreman, Holm, & Lundström, 2013) the present study aims b) is to investigate the teaching practices emphasized by independent schools as compared to those of municipal in relation to student achievement and SES. Of particular interest is to explore whether independent schools have used more child-centred or individualized teaching practices as a sign of such progressive teaching approaches.

These issues will be investigated by data from three nationally representative student cohorts (born in 1987, 1992 and 1998) collected within ETF. The results are to be discussed in relation to increased school competition and inequality (OECD, 2013).

**Changes in teaching practices and student achievement**

Among the handful studies on changes in teaching practices in Sweden are those conducted by Granström, where the appearance of specific acts from the mid-1960s to 1980s and 2000s are compared. On the basis of classroom observations of teachers’ behaviour in studies conducted by Stukát in the 1960s (Stukát & Engström, 1966), Granström and Einarsson (1995) concluded that class teaching was the dominant teaching practice in the mid-1960s. By analyzing 800 protocols or evaluations of lessons, distributed equally over year 1 to year 9, it was concluded that class teaching had diminished from 60% in the mid-1960s to 50% in the late 1980s, while group work had increased from 18% to 24%. The proportion of time that students were spending on individual work during a lesson had also increased, from 22% to 26%. From the mid-1990s, this picture changed (Granström, 2003). Between 1980 and 2000 had not only class teaching diminished from 50% to 44%, so had group work (from 24% to 12%), while between the mid-1960s and 2000s individual work had increased from 22% to 41% (cf. Giota & Emanuelsson, 2018; SNAE, 2004).

These changes in teaching practices and the increase of individual work in particular have been interpreted by SNAE (2009) partly as an effect of the national curriculum 1994 (Lpo94) for compulsory school that was introduced in the early 1990s along with the other reforms. The 1994 curriculum differs from the earlier curricula in that only learning objectives were prescribed, but not content or teaching methods (cf. Giota & Emanuelsson, 2018; Giota, 2013). As in the other Nordic countries, the introduction of this curriculum aimed to reduce centralization (Gustafsson & Blömeke, 2018, p. 389). The rapid implementation of the curriculum reform and the absence of concrete curriculum instructions provided a large space for teachers’ own interpretations (cf. Carlgren, 2009). Other factors than curriculum intentions are thus assumed to have also influenced teachers’ teaching practices, and the use of more individual work in schools, in particular (Gustafsson et al., 2016; SNAE, 2009).

In an ongoing vivid public debate, Heller Sahlgren (2016) argues that the emphasis on child-centred or individualistic forms of work in the Swedish schools is a consequence of the language in this curriculum (Lpo94), which increased the emphasis on student influence and own responsibility (p. 38). Child-centred red forms of work are argued as being bad for cognitive achievement, while more traditional class teaching is to be preferred (cf. Schwert & Wuppermann, 2011).

Findings in our previous study (Giota & Emanuelsson, 2018) show class teaching to be evident also in the early 1990s and actually increase from 2005 to 2011 in year 6 of the Swedish compulsory school. Consequently, even though politicians in the USA or Sweden have attempted to reform teaching in favour of child-centred teaching approaches already in the 1930s and 1940s the continuing persistence of conventional teaching (Diamond, 2012) indicates that these reforms and reforms in the 1990s were not at all as that influential as debated (Cuban, 2009, 2016; Ekholm & Kull, 1996; Giota, 2013).

However, while the importance of teaching practices for student outcomes is undisputable, the evidence on the link between teaching practices (teacher-centred vs child-centred) and student achievement in the literature is complex and can be diverse. Meta-analyses (Seidel & Shavelson, 2007)
show specific teaching practices such as time for learning, differentiation/adaptive instruction, structured teaching, cooperative learning and feedback to have consistently small (direct) effects on student outcomes (between 0.01 and 0.04). When it comes to the traditional mediation pedagogical teaching practices of the 1960s and 1970s, research reviews show that these practices have not been more successful than child-centred approaches (Walberg, 1984). Students who take greater responsibility for their own learning in schools, where student active forms of work are practiced, seem to do equally well on conventional tests as students who participate in more traditional teacher-led classes. Research reviews (Boekaerts, Pintrich, & Zeidner, 2000; Meyer, Haywood, Sachder, & Faraday, 2008) on the other hand highlight a number of benefits when it comes to self-regulated forms of learning. Besides enhanced academic performance, self-regulated learning is linked to improved motivation and confidence and lays the foundations for children to develop as lifelong learners (Giota & Emanuelsson, 2018).

**Independent schools, pedagogical innovations and grade inflation**

In 1992, when the free school choice was introduced, the most salient arguments raised by the Swedish government included: increased variety among schools and educational innovation to meet the future, better results/attainment at lower costs, but also profiling towards the needs of individuals, families and communities (Governmental proposal, 1991/92:95, p. 8). Such arguments are also central among policy makers at the international arena (Cuban, 2016; Plank & Sykes, 2003).

Note that in Sweden independent schools existed already in the 1950s and 1960s, but these were restricted to focus on pedagogically motivated experimentation, novelty and innovation, in order to influence the regular school (Governmental proposal, 1962:54. Kungl, pp. 366ff). After the implementation of the education reforms in 1996, the specialized or alternative pedagogical focus of independent schools shifted quite rapidly towards a more general pedagogical profile, along with the introduction of private actors as principle organizers and a for-profit model (Åstrand, 2016; Holmlund et al., 2014). In 2014, 88% of the independent schools had a general pedagogical profile (SNAE, 2015), while independent schools organized by for-profit companies accounted during that period for nearly 70% of all private schools in Sweden.

Regardless of ownership structure, independent schools are to be equivalent options to municipal schools. Since 1996/97, independent schools adhere to the same legislation and curricula and must fulfil the same goals and quality indicators of education. However, even though independent schools are smaller on average than municipal schools, they are likely to have larger class sizes and higher student–staff ratios (Holmlund et al., 2014). As in international studies, the largest student–staff ratios are found among for-profit independent schools (Adamson et al., 2016; Holmlund et al., 2014). Moreover, official statistics indicate that students from homes with high-SES are overrepresented in these schools (SNAE, 2015) and even though independent schools vary considerably (SNAE, 2005), they generally show higher educational attainments than municipal schools (SNAE, 2006, 2009, 2013).

Increasing grades since the introduction of the criterion-referenced grading system in the early 1990s and more often in large cities, where independent schools are overrepresented, is today an undisputable fact in Sweden (SNAE, 2003, 2006, 2012b). As this development is not consistent with the picture of Sweden’s low results on national and international large-scale assessments (Gustafsson & Blömeke, 2018; SNAE, 2009), researchers have interpreted this trend as evidence of grade inflation (Gustafsson & Yang Hansen, 2011) related to school choice and a consequence of increased school competition (Vlachos, 2010).

**Methods**

**Sample, measures and procedures**

The aims of the present study were investigated using data on teaching practices from three nationally representative student cohorts (born in 1987, 1992 and 1998), attending grade 9 of the Swedish compulsory school (when the students were 16 years-old) during the period of 2003, 2008 and 2014, collected within the Swedish longitudinal ETF-project (Svensson, 2011). In collaboration with Statistics Sweden, ETF has since its start in 1961 collected data in the Swedish compulsory school (in grade 6 and for some cohorts in grade 3 and 9) and upper secondary school (mostly in grade 12) from 10 nationally representative student cohorts (the oldest born in 1948 and the youngest in 2012).

All students in the present study were sampled by Statistics Sweden when they attended grade 3. The sample size of each student cohort is about 10% of the total age cohort. In addition to survey data, test and administrative data, and register data are collected and added throughout the life span.

The cohort born in 1987, consisted of 9,548 students. In total 6872 students responded to the questionnaire, implying a response rate of 72%. The cohort born in 1992, consisted of 9,890 students; out of which 6010 responded to the questionnaire,
giving a response rate of 61%. The ETF-cohort born in 1998, consisted of 9549 students. In total, 4573 responded to the questionnaire resulting in a response rate of 48%. As the attrition rate is larger for the 1998 cohort, there may be reasons of caution. However, analyses within the ETF-project show that the application of calibration weights calculated by Statistics Sweden removes most of the bias associated with systematic non-responses in the different ETF-surveys in grade 9.

Variables

Student questionnaire responses on teaching practices

The grade 9 followups were conducted by postal surveys, with questionnaires distributed to the students’ home addresses, by Statistics Sweden. The participants responded to statements about teaching practices with five response alternatives. Note that for the 1987 cohort the responses ranged from (1) Never to (5) Very often. For the cohorts born in 1992 and 1998 the response format was changed to range from (1) Never/Almost never to Always/Almost always (5).

Student achievement

In 1998, a new criterion-referenced grading system was introduced in Sweden with four scale-steps. The scale-steps were assigned letter grades and numerical values according to the following rules: not passed (IG) = 0, passed (G) = 10, passed with distinction (VG) = 15 and passed with special distinction (MVG) = 20. In the present study, we use students’ average merit rating from grade 9 to study the link between teaching practices and achievement. The merit rating for each of the students in the 1987- and 1992-cohorts is the summation of the 16 best subjects in the student’s final grades, giving a maximum total score of 320 points. In 2013 the grade scale was changed into a six-step scale (F-A). The not passed (grade F) yields 0 points while the lowest pass grade (E) yields 10 points. For each of the grades D to A an additional 2.5 points is earned, giving a maximum of 20 points. In school year 2014/2015 the calculation of students’ merit rating also changed to include their 17 best subjects, implying a maximum total score of 340 points. The achievement results for the 1987 and 1992 cohorts are thus not completely comparable with those for the 1998 cohort, whose achievements were attained on the basis of the latest six-step scale grading system. In order to be able to present the results based on the two different grading systems within the same framework, grades based on the six-step scale grading system (2014/2015) was recoded into the following grade categories: A = Pass with Specific Distinction, B + C = Pass with Distinction, and D + E = Pass.

Data analysis

Distributions of students with respect to teaching practices, for each ETF cohort, and with divisions by head of compulsory school (municipal or independent) were examined using contingency table analysis. Mean differences of average merit rating were significance tested using analysis of variance (ANOVA) and independent samples t-tests.

Note that the proportions of students in municipal and independent schools across the three time periods are not evenly distributed with respect to parental educational levels (SES). The proportions of students with parents whose educational level exceed upper secondary schooling (high-SES) are higher in independent schools. This pattern in our study is in line with official statistics (SNAE, 2014). In 2003, the proportion was 41% for municipal and 69% for independent schools, while in 2008 it was 51% for municipal and 69% for independent schools. The proportions in 2014 were 45% and 59%, respectively.

The proportions of students in independent and municipal schools for the three cohorts are neither evenly distributed across municipalities. These results are not presented in any table, but show 60% of the students back in 2003 who attended independent schools to have chosen schools located mostly either in or near by to the three metropolitan areas in Sweden (Stockholm, Gothenburg and Malmö), while 34% selected schools in larger cities. In 2008, an increase of students selecting independent schools in larger cities has been noted (43%). This increase is no longer present in 2014, and independent schools in metropolitan areas are once again more preferable to students (58% vs 47% in 2008). Moreover, the results show an increasing proportion of students across the three time periods attending municipal schools located in metropolitan areas (from 26 in 2003, 37 in 2008, to 41% in 2014). The proportions of students attending schools located in larger cities or smaller cities and rural areas have on the other hand been relatively stable over time. The overrepresentation of independent schools in the three metropolitan areas in Sweden noted in our study is also in line with official statistics (SNAE, 2014). Information on whether these schools are for-profit is not available within the framework of the ETF-project.

Results

Changes in teaching practices in municipal and independent schools at 2003, 2008 and 2014

In Table 1, student opinions on teaching practices in grade 9 are displayed. These findings show a tendency of reduced time for teacher-led instructions for the whole class between 2003 and 2008 at the same time as the amount of discussions between
teachers and students along with independent work have increased. The largest opinion change between 2003 and 2014 has to do with having tests, where a gradual decrease in this opinion is observed from 2003 and 2014 has to do with having tests, where a gradual decrease in this opinion is observed from 75% to 63%. Group work and being involved in the planning of the teaching display no change over time.

Table 2 shows student opinions on teaching practices in grade 9 for municipal and independent schools across the three cohorts, along with students’ average merit ratings. As can be seen, the opinion that the teacher is talking to the whole class most part of the lesson was more frequent among students in municipal schools back in 2003, while in 2014 this difference in opinion is no more present. With regard to teachers and students discussing together, substantially less students (about 20%) in municipal schools are of the opinion that such discussions did take place very often/often in their class in 2003. The findings show a pattern of reduced time for class teaching in both municipal and independent schools between 2003 and 2014, while the pattern of more discussions between teachers and students in independent schools persists.

In 2003 substantially more students in municipal schools (69% as compared to 57 in independent schools) report that they were working with independent work very often/often. Between 2003 and 2008, an increase in independent work both in municipal and independent schools can be noted; especially for independent schools. At the same time, substantially more students in independent schools (40% as compared to 25) are of the opinion that working in groups was highly frequent in their class back in 2003. This pattern persists between 2008 and 2014 even though a small decrease in group work can be noted in 2014 for independent schools. Working with large assignments/projects has also been more frequent in independent schools back in 2003 (50% as compared to 32). Between 2003 and 2008 working with large assignments/projects in independent schools increased with 7%, while between 2008 and 2014 it decreased with 14%. For municipal schools a pattern of gradual decrease in this activity between 2003 and 2014 can be observed.

In 2003 and 2008 substantially more students in municipal schools report that they were doing tests very frequently. In 2014, this difference is almost erased. For municipal schools the findings show a gradual decrease in doing tests between 2003 (77%) to 2008 (72%) and 2014 (63%). For independent schools, the pattern is slightly different. Independent schools show a decrease between 2003 (59%) and 2008 (53%), but an increase in 2014 (62%).

With regard to student influence, substantially more students in independent schools report that they were participating in the planning of teaching very often/often or always/almost always regardless of year of investigation. While the proportions of students in municipal schools expressing this opinion are relatively stable across cohorts (about 12%), in independent schools the proportions show a gradual decrease (from 30% in 2003 to 26 and 18 between 2008 and 2014).

**Student achievement**

When it comes to student achievement in grade 9 (Table 2), the findings show the questions about students working with large assignments/projects, doing tests, and student influence to be significantly associated to average merit rating (One-way ANOVA, p < 0.05, not shown in a table). Note that the differences are significant also after adjusting for head of compulsory school (municipal or independent) and parental educational level. Students experiencing that they very often/almost always are working with large assignments/projects in school, are doing tests, and are participating in the planning of the teaching, do thus attain significantly higher merit ratings compared to students experiencing these teaching practices as less frequent in their school. This pattern is persistent across all three cohorts (One-way ANOVA, p < 0.05, not shown in a table).
Table 2. Teaching practices in grade 9. Proportions in the response categories Very often or Often/Almost never or Never, (number of participants), and [Average Merit Rating], divided by head of compulsory school, for the EFT cohorts 1987, 1992 and 1998.

| A The teacher is talking most part of the lesson | Teachers and students are discussing together | The students are working in groups | The students are working individually | Students are working with large assignments or doing projects | Students are doing tests | Students participate in planning instruction |
|-------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-----------------|---------------------------------|
| [A] The teacher is talking most part of the lesson | Teachers and students are discussing together | The students are working in groups | The students are working individually | Students are working with large assignments or doing projects | Students are doing tests | Students participate in planning instruction |
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During the school year 2014/2015 a new grading system was implemented. Merit Ratings for the 1987 and 1992 cohorts (maximum score 320) should therefore be compared with caution when compared to those for the 1998 cohort (maximum score 340).
Students who report doing tests seldom or never in grade 9, across the three time periods, show substantially lower merit rating as compared to those who report doing tests frequently (Independent samples t-test, \(p < 0.05\), not shown in a table). A similar pattern is found with regard to individual work, implying that students reporting doing independent work seldom/never show lower merit rating compared to those who report doing independent work frequently. These findings are statistically significant for the 2003 and 2008 cohorts, but not for 2014 (independent t-test, \(p < 0.05\), not shown in a table).

The findings from Table 2 also reveal that students in independent schools, regardless of cohort or year of investigation and teaching practice, obtain higher average merit ratings, overall compared to students in municipal schools (One-way ANOVA, \(p < 0.05\) not shown in a table).

In order to find out whether the association between teaching practices and student achievement differs between students in municipal and independent schools, interaction terms (head of compulsory school by teaching practices) was included in the ANOVA analyses. Two of these interaction terms where significant (One-way ANOVA, \(p < 0.05\)). First, the association between the frequency of doing tests and student achievement differed between students in municipal and independent schools (i.e. head of compulsory school doing tests was significant) in 2003 and 2008, but not in 2014. The association was stronger for students in municipal schools in 2003 and 2008. Second, the association between student influence and achievement differed (i.e. the interaction term head of compulsory school student influence was significant) in 2003, but not in 2008 and 2014. The association was stronger for students in independent schools in 2003. However, when taking into account also parental educational level, the influence of the interaction terms turned non-significant.

**Discussion and conclusions**

Our first research question concerned changes in teaching practices as seen from a student perspective in grade 9 of the Swedish compulsory school between 2003, 2008 and 2014. Based on nationally representative ETF-data, the results show major changes in teaching practices to have taken place during this time period. A major change concerns

### Table 3. Parental educational level and Average Merit Rating divided by head of compulsory school.

|                | 1987 Cohort          | 1992 Cohort          | 1998 Cohort          |
|----------------|----------------------|----------------------|----------------------|
|                | Overall Sample       | Public School        | Independent School   | Overall Sample       | Public School        | Independent School   | Overall Sample       | Public School        | Independent School   |
| Not upper      | 183.9 (1281)         | 183.5 (1228)         | 192.1 (533)          | 183.3 (256)          | 186.2 (242)          | 169.6 (14)           | 176.2 (714)          | 172.5 (383)          | 205.2 (105)          |
| secondary school | 194.2 (4074)         | 193.9 (3944)         | 203.3 (130)          | 208.4 (2454)         | 207.9 (2317)         | 215.4 (147)          | 208.2 (4131)         | 206.4 (3393)         | 220.2 (700)          |
| Upper secondary school | 233.1 (3010)      | 231.9 (2755)         | 245.4 (255)          | 242.2 (2719)         | 249.1(349)           | 251.6 (1182)         | 244.7 (4450)         | 242.2 (3223)         | 251.6 (1182)         |

During the school year 2014/2015 a new grading system was implemented. Merit Ratings for the 1987 and 1992 cohorts (maximum score 320) should therefore be compared with caution when compared to those for the 1998 cohort (maximum score 340). Different subscripts (marked A and B) within cohorts indicate significant differences (between two groups) at \(P < 0.05\), using One-way ANOVA.
individual work, which shows a significant increase even after the establishment of this tendency in the national evaluation 2003 (SNAE, 2004) and research studies (Granström, 2003; cf. SNAE, 2009; Vinterek, 2006). Class teaching on the other hand was found to diminish, which goes even for testing.

As discussed in our previous study (Giota & Emanuelsson, 2018), we believe that the trend of increasing individual work in schools may be more of a teacher response to changed conditions of teaching after the implementation of the reforms in 1996 than a gross misinterpretation of curricula intentions and ambitions of individualization, embedded in the goals of the national curriculum 1994 (cf. Giota, 2013). According to Carlsgren, the reforms of the 1990s created a stronger pressure to develop tools for keeping track of every student, thereby the increasingly use of individualistic forms of work, and individual work in particular (Carlsgren et al., 2006, p. 307). In Sweden, the latter change was also endorsed by the teacher’s unions (Swedish Teacher union & National Teacher Union, 2001). Other explanations given to the increased use of individual work in schools are deficits in teacher education and decreases in teachers’ collective competence from 2006 onwards (SNAE, 2009; Gustafsson et al., 2016; Holmlund et al., 2014; OECD, 2014b; cf. Heller Sahlgren, 2016) as well changes in society towards more individualistic values (e.g. Carlsgren et al., 2006).

The second research question asked whether the teaching practices in independent schools differed compared to those emphasized by municipal schools. Both in Sweden (Holmlund et al., 2014; Lundahl et al., 2013) and the US (Adamson et al., 2016; Cuban, 2016), the more progressive or so-called new and alternative pedagogics of independent/charter schools were thought to be the source of positive influence on municipal/public schools. The question was in particular whether independent schools emphasized more self-regulatory individualized ways of working as a sign of such more progressive teaching approaches.

**Changes in teaching practices in municipal vs independent schools**

We found independent schools back in 2003 to emphasize teaching practices that were more in line with the purpose of individualization in the national curriculum 1994 (Lpo94) (Giota & Emanuelsson, 2018; Giota, 2013) and its constructivist and progressive inspired approaches to learning (SOU 1992, p. 94; Lundgren, 2009). In research studies, learning that is more student-led/influenced and paced, and working with larger assignments/projects or group work over more extended periods of time in ways that involve collaborations and extensive discussions between teacher and students, as emphasized by independent schools in our study, are all teaching practices characteristic for more progressive schools (Cuban, 2016; Seidel & Shavelson, 2007; Walberg, 1984). Besides being more in line with the intentions of the national curriculum 1994 (Lpo94) in emphasizing more self-regulatory individualized ways of working, but also different collaborations between teachers and students and students themselves, independent schools back in 2003 were consequently also in line with core ideas regarding the establishment of independent schools. Municipal schools back in 2003 were found to have put more emphasis on class teaching and testing, which can be seen as more conventional teaching practices (Diamond, 2012).

Between 2003 and 2014 this picture partly changed. In particular, municipal schools show a clear decrease in class teaching and testing, while independent schools show a sharp increase in independent work. Still, even though these changes in teaching practices are to be noticed, the stronger emphasis on child-centred learning conditions of independent schools (i.e. the relatively high student influence, the higher frequency of discussions between the teacher and students, and group work) persisted across the three time periods. The somewhat less focus on these teaching practices of independent schools between 2003 and 2008, and 2014 in particular, may be due to the substantial increase of these schools that took place between 2005 and 2009, along with a gradual shift towards a more general pedagogical profile and a for-profit model (Holmlund et al., 2014; SNAE, 2012a).

In Sweden, the right to have influence on working methods and content in study courses – along with the right to choose school and programs – was one of the most prominent features of the reforms in the 1990s (Lundahl et al., 2013). But even with this strong emphasis in policy documents on student involvement and decision making in learning, this child-centred learning condition is low in Sweden (Giota & Emanuelsson, 2018; Carlsgren et al., 2006; Giota, 2013; Granström, 2003). Our findings show student influence to be particularly low in municipal schools.

In an international comparative study, Lubinski (2009) concluded that the innovation in quasi-market education systems has actually been more about efficient administration and marketing/branding, rather than developing and applying new teaching methods and classroom practices, in contrast to the initial intentions. To what extent teaching practices in both municipal and independent schools in Sweden have been used to improve collaborations in solving common problems and sharing best practices between these schools, as intended, offering in this way new possibilities for good teaching and successful learning for all students, is still to be investigated.

**Teaching practices and student achievement**

In spite of changes and differences in the use of teaching practices between municipal and independent schools,
our findings show some specific teaching practices to relate positively to student achievement in all schools. This finding is evident even after adjusting for head of compulsory school and parental educational level. Consequently, there seem to be some specific teaching practices, and thus ways of thinking about teaching and learning, that may be more universal, and can help give all students, irrespective of family background, equal opportunities to success (cf. Universal Design for Learning. UDL, e.g. Hall, Meyer, & Rose, 2012). In particular, students in both municipal and independent schools who experience that they frequently are engaged in larger assignments or projects, can influence the teaching planning and thus their own schooling, and can show what they can by doing tests, do attain significantly higher achievements as compared to students who experience these teaching practices as being less frequent in their schools. This pattern is persistent across 2003, 2008 and 2014. Interesting enough, students who report doing tests more seldom, but also working with individual work more seldom they do perform significantly worse across all three time periods. Common to these teaching practices, including individual work, is that they offer flexibility in the ways students engage in school work and differentiate the ways they can show what they know, which stimulate their motivation to learn and achieve (Hattie, 2009).

In line with previous research (e.g. Boekaerts et al., 2000; Hattie, 2009; Meyer et al., 2008; Seidel & Shavelson, 2007; Walberg, 1984) our findings suggest consequently that child-centred and problem-solving oriented learning conditions, including self-regulated learning as expressed in individual work, are not worse than more conventional (in this case the use of testing or summative assessment), but equal beneficial for student learning and achievement. In spite of our finding that testing has diminished in municipal schools between 2003 and 2014, testing comes thus up as being positively related to academic performance. As argued by Cuban (2016), in real classrooms these particular teaching practices are not in opposition, but are often combined and used in a flexible way, highlighting in this way the different learning process in the teaching environment (Hattie, 2009). Our findings contradict thus voices in the Swedish public debate (Heller Sahlgren, 2016), where the opinion of child-centred or more progressive approaches to learning as being bad for cognitive achievement is debated.

Thus, the findings of our third research question show that during the period between 2003, 2008 and 2014, there have been both municipal and independent schools that were successful, and whose success can be interpreted as the result of their productive educational and management techniques. These techniques encouraged student engagement in active, but also collaborative contexts, irrespective of family background.

**Student achievement, family background and school choice**

While the impact of teaching practices for student outcomes is undisputable (Seidel & Shavelson, 2007), so is parental education (SES). In Sweden, the impact of parental education on student achievement is found to have increased during the period between 1998 and 2014 (Yang Hansen & Gustafsson, 2019) (cf. Holmlund et al., 2014). In our study, we found students from homes with high-SES across 2003, 2008 and 2014 to demonstrate higher achievements than students from homes with lower-SES. Consequently, after almost 25 years of extensive education reforms in Sweden, and in some countries longer (Adamson et al., 2016), the impact of these reforms seems to be little on reducing socioeconomic inequality in education (cf. Marks, 2013).

In line with previous research (SNAE, 2014), we found grade-9 students in independent schools from homes with high-SES to demonstrate between 2003 and 2014 significantly higher average school grades than their peers in municipal schools. Interesting enough, students in independent schools were found to obtain significantly higher achievements also given the same low-SES. A significant increase in achievement between 2003 and 2008 for students from homes with high-SES in municipal schools (10.3 merit points) was also found, while the achievement increase for their peers in independent schools between 2003 and 2014 is marginal. Consequently, our results show that parental education not only is equally important for students’ school results in 2014 as back in 2003 and in the early 1990s (Holmlund et al., 2014), but as also found by Yang Hansen and Gustafsson (2019) it has increased slightly.

We believe that these differences in achievement patterns between independent and municipal schools are not likely to be explained merely by differences in the use of specific teaching practices at the classroom level and/or by individual students’ family background (SES). They must be seen also as partly reflecting the increased differences in the quality of education offered between 1998 and 2014 (Yang Hansen & Gustafsson, 2019) as a consequence of the free school choice that released a competition between schools (Holmlund et al., 2014) as well as strengthened the school segregation with respect to SES, and particularly so in municipalities in the metropolitan areas.

As argued by Holmlund et al. (2014), even though children and parents do value good learning and the long-term effects of education, the consequence of the difficulty to have insights in a school’s teaching quality, is that school choice will often be based on the school’s high grading and test results over time. Our finding that between 2008 and 2014 independent
schools increased their use of testing can be seen as an indication of these schools’ urge to guarantee high student achievements as a sign of high teaching quality and inform students and/or their parents about their choice accountability. This urge was also important as the number of independent schools increased dramatically between 2005 and 2009 (SNAE, 2012a).

Seen from an international perspective, but in line with Holmlund et al. (2014), Adamson et al. (2016) argue that test scores and grades are also tools used to ‘drive’ teachers or schools to attract students who score well. These students are most often from homes with high-SES, which independent schools manage to attract by the ways they market themselves, but also by their geographical location. Independent schools, including those driven by for-profit companies, are most often located in metropolitan areas, like the majority of the independent schools in our study (about 60%), where the level of parental education is higher (Yang Hansen & Gustafsson, 2019).

Taken together our findings we may speculate in how for-profit independent schools could also make a profit, besides being successful in attracting high-achieving students. In our study, independent schools between 2003 and 2014 showed a much higher increase in their use of independent work than municipal schools, while group work has been much more frequent among these schools across all three time periods. Consequently, given that students in independent schools can manage much of the school work by themselves and/or together with their classmates, while their progress can be monitored by standardized means (the use of tests), are most often high-achieving and motivated students with high-educated parents, who can support them with their studies (Giota & Bergh, 2019), independent schools can manage to achieve and show high teaching quality/student achievements by less teachers (less cost) (Adamson et al., 2016; Holmlund et al., 2014). This pattern of findings reveals also some of the mechanisms that make independent work more beneficial for students from high-SES homes (SNAE, 2009; Yang Hansen & Gustafsson, 2019).

Moreover, the much higher student influence in independent schools across 2003, 2008 and 2014 found in our study implies that students in these schools can also make their voice heard and thus influence their schooling and school results. Given the high-SES composition of these schools it means that also their parents can influence the process of teaching and grading, resulting in that school may adapt to the voices of strong groups of both students and parents. This mechanism of strong student and parental voices together with the competition between schools can be part of the explanation to the observed trend of increasing or inflated grades in Sweden from the early 1990s and onwards, and more often in large cities (Gustafsson & Yang Hansen, 2018, 2011; SNAE, 2003, 2006, 2012b; Vlachos, 2010).

Considerations and future research

That some specific teaching practices can dominate in certain school subjects such as class teaching or direct instruction in math and English is confirmed by some studies (Seidel & Shavelson, 2007; SNAE, 2009). The statements on teaching practices used in the present study are all central to the Swedish national curricula from the 1960s till today and not related to any specific subject to be taught in school (Giota & Emanuelsson, 2018; Giota, 2013). Given the wide-ranging methodological approaches to studying teaching practices and classroom processes in school effectiveness research and the almost non-existing Swedish studies on such practices on the national level (Giota & Emanuelsson, 2018) to study how the effects of certain teaching acts vary within school subjects hasn’t been within the scope of present study. This is a question to be considered in future research.

The issue whether the patterns of increased average grades among students from homes with different SES in both municipal and independent schools partly reflect higher or inflated grades, as compared to scores on national tests, is to be investigated in the nearest future. That grade increases can’t be explained by local school policies or changes in resource allocation is a fact in Sweden (Holmlund et al., 2014).

Conclusions

The present study shows child-centred forms of work (working with large assignments/projects and student influence) during the period 2003, 2008 and 2014 to be equally beneficial for student achievement as more conventional tests, irrespective of head of compulsory school and parental education. Less independent work was related to lower achievements. During 2003, independent schools were found to have put greater emphasis on child-centred forms of work than municipal schools, in line with central ideas in the free school choice reform. Even though some changes can be noted, the greater student influence, group work as well as discussions with the teacher of independent schools as compared to municipal remained across 2003, 2008 and 2014. Irrespective of teaching practices, and education reforms in Sweden, we found in line with previous research, parental education to be equally important for students’ school results across 2003, 2008 and 2014 as in the early 1990s (Holmlund et al., 2014), and actually increase slightly from 2003 to 2008 (cf. Yang Hansen &
Gustafsson, 2019), for students in municipal schools, while the increase in independent schools is marginal. Thus, the impact of reforms introduced in the early 1990s seems to be little on reducing socioeconomic inequality in education in Sweden.

The question is whether the found differences in learning opportunities offered by independent and municipal schools in relation to student achievement and parental education have increased even more from 2014 onwards. This finding together with the notion of assigned higher or inflated grades in Sweden as a consequence of the free school choice and increased competition between schools may have as a consequence that already vulnerable students’ learning and life opportunities are at risk with subsequent increased inequality and social class differences in Sweden.

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