

Denominational School Output Differences

Subjects: Education & Educational Research

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Abstract

In many education systems both public and private schools can be discerned. Differences pertain to the way they are governed and are financed, their pupil population, their curriculum and outcomes. Despite a high level of secularization in the Netherlands, most primary schools still are private denominational schools. One explanation for this paradox is that parents choose a denominational school because of its high quality and output in terms of academic achievement. This study aims at answering the question whether this argument holds true. Using large-scale data, a difference is made between gross outcomes ('raw scores') and net outcomes (after correcting for the schools' 'input' in terms of parental social and ethnic backgrounds). The study finds there to be hardly any net denominational differences. In so far as gross differences exist, these might be explained by the pupils' social and ethnic backgrounds. In other words, there is a discrepancy between parental perceptions of gross outcomes and the reality of net scores that present a fairer indication of the actual performance of a school.

Keywords: primary school ; denomination ; value added ; religious schools ; the Netherlands ; output ; multilevel analysis ; effect size

1. Public and private schools

In many education systems both public and private schools can be discerned. Differences pertain to the way they are governed, the way they are financed, their pupil population, their curriculum, and their outcomes. The Netherlands is a nation with 17 million inhabitants of whom nowadays more than half indicate that they do not adhere to any religion. Despite this high level of secularization, most Dutch schools still are privately governed denominational schools. In 2018, on a total of 6,288 primary schools, 32% was public, 30% Protestant, 30% Catholic, and the rest, 7%, were smaller denominations, such as Hindu, Jewish and Islamic. There are 52 Islamic primary schools with a total of 12,500 pupils, mostly of Turkish and Moroccan descent.

The Dutch education system is characterized by two key features. The first feature, the constitutional "Freedom of education", implies that everyone has the right to establish a school and is entitled to full state funding. In the Netherlands there are public and private schools, but the only difference is the way they are governed; public schools are administered under the auspices of the community government, private schools by a private foundation or association. Public and private schools all receive the same budgets from the Ministry of Education. Private schools are free to determine what is taught and how, but the Ministry does set quality standards which apply to both public and private education; it prescribes the subjects to be studied, the attainment targets, and the teacher qualifications.

The second feature of the Dutch Education system pertains to the funding of the schools. Under the Educational Disadvantage Policy, additional resources are allocated to schools based on the socio-ethnic composition of its pupil population. The aim of this policy is to combat educational disadvantage resulting from factors in the child's home situation. Schools are free to use this extra subsidy, for instance, for class size reduction or extra pupil support. There exist big denominational differences in pupil composition. The Protestant and Catholic denomination cater to much less pupils with immigrant and low educated parents than the public schools. The Islamic denomination deviates the most from the other denominations: more than half of its pupils have low or very low educated parents and more than three quarter have an immigrant background. Because of these differences, Islamic schools (and to a lesser degree also public schools) receive much more funding than the other denominations.

There are several explanations as to why there still are so many denominational schools in a highly secularized country. One is that the Christian parties still have much influence and are the main driving force behind the preservation of the Freedom of Education act. Another is that the denominational school is the only school in the proximity. A third is that

highly religious parents choose the school for its specific attention to religious beliefs and values. A last explanation is that parents choose a denominational school because of its high quality and output in terms of academic achievement.

2. Research question and method

The present study (Driessen, Agirdag & Merry, 2016) focuses on the last explanation. The main question is whether denominational schools really achieve better than public schools. To answer this question use was made of the data of the Dutch national large-scale study COOL⁵⁻¹⁸. From the school year 2010/2011 wave, a representative sample was drawn of 386 schools including a total of 27,457 pupils in grades 2, 5 and 8 (6-, 9- and 12-year-olds) of 143 Public, 101 Protestant, 125 Catholic and 17 Islamic schools.

In the COOL⁵⁻¹⁸ study the following measures were used: in grades 2, 5 and 8 standardized Language and Math tests; in grades 5 and 8 two standardized scales to establish the pupils' motivation: Self-efficacy and Task motivation; in grade 8 the Citizenship Competences Questionnaire, which consists of four subscales: Knowledge, Reflection, Skills, and Attitudes; in grade 8, which is the final grade of Dutch primary education, the Primary School Leavers' Test with in addition to total test scores, scores on the Language, Math, and Study skills subtests; in grade 8 the secondary school recommendation which was given by their class teacher and which discerned five secondary school level tracks.

The central variable here is the denomination of the school. To correctly appreciate the schools' cognitive and non-cognitive output according to denomination, two measures were calculated: the gross and the net output. To arrive at the net output the gross output (or 'raw' scores) was corrected for by several factors at the level of the pupil and at the level of the school. This output often is seen as an indicator of a school's learning outcomes. Here two correction variables were used, which are also central in the Educational Disadvantage Policy to award the schools extra budgets to combat educational disadvantage. At the pupil level this is parental educational level (low, very low) and country of origin (non-Western immigrant). At the school level comparable factors were used: the percentages of pupils with low and very low educated parents and the percentages of non-Western immigrant pupils. Because of the nested structure of the data, i.e. pupils within schools, multilevel analysis was performed using the SPSS mixed models module.

3. Results

In the table below the results of the analyses are presented. For each of the outcome measures the table shows the standardized effects of school denomination. These effects are the differences between each of the categories Protestant, Catholic and Islamic schools versus the reference category of public schools. In the left panel are the gross effects, and in the right panel the net effects, that is after correction for differences in parental education and ethnicity both at the pupil and school level. These effects can be interpreted according to the rule of thumb: 0.20 is a small effect, 0.50 a medium effect and 0.80 a strong effect.

Effects of denomination on outcome measures. Gross (not corrected) and net (corrected for parental education and ethnicity, and school composition in terms of parental education and ethnicity; reference category: public education)

Grade	Domain	Gross effects			Net effects		
		Protestant	Catholic	Islamic	Protestant	Catholic	Islamic
2	Language	0.14*	0.07	-0.70***	-0.00	-0.06	-0.10
	Math	0.07	0.09	-0.23	-0.02	-0.01	0.06
5	Reading	0.14*	0.17**	-0.37***	0.02	0.06	0.10
	Math	0.18***	0.12**	-0.24*	0.07	0.03	0.27*
8	Reading	0.09	0.16*	-0.25	-0.08	-0.00	0.29

Grade	Domain	Gross effects			Net effects		
		Protestant	Catholic	Islamic	Protestant	Catholic	Islamic
8	Math	0.19*	0.15*	0.13	0.06	0.03	0.25
	Language	0.22*	0.09	-0.34*	0.08	-0.03	0.05
	Math	0.16*	0.09	-0.00	0.05	0.00	0.20
	Study skills	0.20*	0.12	-0.23	0.06	0.02	0.06
	Total	0.20**	0.14*	-0.20	0.06	0.03	0.13
8	Recommendation s.e.	0.13*	0.07	-0.15	0.02	-0.01	0.03
5	Self-efficacy	-0.08*	-0.06	0.29***	-0.04	-0.02	-0.01
	Task motivation	-0.10*	-0.02	0.27***	-0.05	0.02	0.04
8	Self-efficacy	-0.07	-0.05	0.37***	-0.04	-0.03	0.10
	Task motivation	-0.08	0.04	0.60***	0.00	0.11**	-0.08
8	Knowledge c.s.	0.03	0.09	-0.44***	-0.08	-0.01	-0.12
	Reflection c.s.	-0.11*	-0.06	0.55***	-0.06	-0.02	0.10
	Skills c.s.	-0.14**	-0.03	0.57***	-0.10	0.00	0.00
	Attitudes c.s.	-0.10	-0.02	0.59***	-0.06	0.02	0.05

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$; s.e. = secondary education; c.s. = citizenship

Regarding the gross effects, the table shows that with regard to the cognitive measures Protestant schools perform somewhat better than public schools; regarding the non-cognitive measures they perform somewhat worse. In terms of academic performance, Catholic schools do not differ much from public schools. Islamic schools perform the worst on nearly all cognitive measures. It is striking, however, that on almost all non-cognitive measures they perform better or even much better than the other denominational schools.

As regards the net effects, the table shows that of the thirty significant gross effects only two net effects remain significant. Surprising is the fact that after having corrected for social and ethnic differences in pupil backgrounds, Islamic schools even achieve better (though only in one case significantly) than the other denominational schools on nearly all output measures.

Thus, although in an absolute sense Islamic schools achieve lowest on all cognitive measurements, they succeed in raising their pupils' achievement more than the other denominational schools. With regard to almost all of the non-cognitive measurements they already score highest in an absolute sense.

4. Conclusion

This study aimed at answering the question whether parents are right to choose denominational schools because of their better academic output. The results suggest that Protestant and Catholic schools initially perform better on all academic outcomes than non-religious public schools, but that after taking the input differences (parental education and ethnicity) into account, no significant output differences remained. The difference between the gross and net effects can help explain the paradox of the continued popularity of Christian denominational schools in a secularized society. That is, the higher raw academic scores in religious schools probably are interpreted by many parents as an indication of their superior performance. Islamic schools, on the other hand, tend to have low raw scores, which may be regarded by parents as an indication of low quality. However, when net differences in achievement scores are examined, it becomes clear that Islamic schools are by far adding the greatest educational value. Regarding the non-cognitive outcomes, the results show that Christian denominational schools score somewhat lower than public non-religious schools, while Islamic schools perform much better, especially concerning citizenship. The latter finding suggests that the distrust of many opponents to Islamic schools are unwarranted. But again, as was the case with the cognitive outcomes, after controlling for pupil and school backgrounds no relevant denominational differences remain. In fact, the findings show there to be hardly any net denominational differences. In so far as gross differences exist, these might be explained by the pupils' social and ethnic backgrounds.

Note

This item is based on: Driessen, G., Agirdag, O., & Merry, M. (2016). The gross and net effects of primary school denomination on pupil performance. *Educational Review*, 68(4), 466-480.

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