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Social diversity in middle schools : first results from experiments conducted in France[1]

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Abstract

Social segregation between schools is substantial, and may have consequences on students' academic achievement and well-being, as well as for social cohesion in the longer term. In 2015, the French ministry of Education launched an initiative to promote greater social diversity in middle schools. By comparing students in middle schools participating in this initiative (« pilot middle schools ») with those in similar, non-participating middle-schools (« control middle schools ») we analyse the effects of the measures undertaken on the social composition of participating middle schools, as well as on students' academic outcomes, and their personal and social well-being. Findings show that :

- Measures aimed at increasing social diversity didn't lead to greater avoidance of the public system in favour of private schooling ;
- Students enrolled in schools where social diversity increased substantially did not experience any significant change in academic achievement compared with students in control schools, regardless of their socio-economic background, indicating that the policy had neither positive nor negative effects on learning outcomes ;
- However, greater social diversity did have positive effects on both personal and social well-being, for students from disadvantaged as well as advantaged backgrounds.

1 This CSEN note is based on research conducted by Julien Grenet, Élise Huillery, Youssef Souidi, Ghazala Azmat and Yann Algan and published in Chapter 3 of Youssef Souidi's doctoral thesis: School Allocation Policies, Social Segregation and Pupil Skills: Essays on the French School System, doctoral thesis, EHESS, 2022. The authors would like to thank Fabienne Rosenwald and the staff of the Directorate for Evaluation, Forecasting and Performance at the Ministry of National Education and Youth (MENJ-DEPP) for their invaluable collaboration in collecting and providing access to the data used in the context of this research.
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In France, social segregation between schools is significant: in some lower secondary schools, the share of students from disadvantaged social backgrounds is almost zero, whereas it can reach nearly 100% in other schools (see Figure 1). As a result, many students are educated in environments that offer them few opportunities to interact with students from different social backgrounds. To what extent does this segregation contribute to strengthening the correlation between academic success and students' social origin, which is stronger in France than in other OECD countries? To what extent does it compromise social integration, openness to others, and solidarity, which underpin our society's ability to live together and to demonstrate cohesion?

In 2015, the Minister of National Education, Higher Education and Research, Najat Vallaud-Belkacem, launched a national initiative in favor of social diversity in lower secondary schools, which pursued two objectives: fostering social cohesion through the development of diverse social and friendship ties, and promoting greater equality of opportunity by reducing social segregation between schools. The initiative consisted in mobilizing regional education authorities, departmental academic directors, departmental councils, and school principals to devise solutions adapted to each territory. Those who volunteered designed locally the actions to promote social diversity in middle schools identified as particularly segregated. To evaluate the actions implemented and measure their effects on students, the Ministry set up a scientific council composed of sociologists and economists, including two of the authors of this report.

This initiative raised concerns. A first source of concern related to the effectiveness of the proposed actions, which might fail to achieve their objective of bringing together in the same school children from varied social backgrounds if they encountered resistance from families. The first challenge was therefore to determine whether families would cooperate with social diversity policies or, on the contrary, oppose them by enrolling their children in private schools or in schools located outside their assigned catchment area. The second concern questioned the fairness of these actions in favor of social diversity: the academic success of some students might suffer from the academic difficulties of others, and the school climate might deteriorate, so that some students could be disadvantaged in terms of their well-being and educational trajectory.

This report by the CSEN aims to provide some answers to these questions by presenting the scientific results drawn from the impact evaluation of the national initiative in favor of social diversity in lower secondary schools. After defining the measure of social diversity used in this study (section 1), the report describes the actions that were implemented in 2016 and 2017 in the 56 middle schools that took part in this initiative and the methodology used to determine the effects of the actions implemented in these schools (section 2). The results are then presented in two stages: first, the effects on the social composition of schools, then the effects on students' academic outcomes and their subjective experience (section 3). The final part of the report puts these results into perspective by comparing them with those of the international literature (section 4).

1. Indicators used to measure social diversity

A student's social background can be measured based on the profession and socio-professional category (SPC) of their legal guardian, as recorded in the administrative data of the Ministry of National Education[3].

The SPC classification used by the Ministry comprises four categories: highly advantaged SPCs (executives and equivalent positions, business owners, intellectual professions, liberal professions), advantaged SPCs (technicians and intermediate professions), middle SPCs (employees, farmers, artisans, shopkeepers), and disadvantaged SPCs (manual workers and individuals without professional activity). For the purposes of this study and for the sake of simplicity, the first two categories have been grouped under the label "advantaged background" and the other two under the label "disadvantaged background." This choice to distinguish only two social groups can naturally be debated, insofar as it does not fully reflect the diversity of social configurations observed in the field.

Within a defined territory, the level of social diversity in lower secondary schools is measured by calculating the exposure rate of students from a given social group to students from the other social group. The exposure rate of students from advantaged backgrounds to students from disadvantaged backgrounds corresponds to the average proportion of disadvantaged students enrolled in the schools attended by advantaged students; symmetrically, the exposure rate of students from disadvantaged backgrounds to students from advantaged backgrounds corresponds to the average proportion of advantaged students enrolled in the schools attended by the former. Social diversity is maximal when these two exposure rates are equal to the share of advantaged and disadvantaged students at the level of the territory considered. More generally, the closer the exposure rates are across schools within a given territory, the less segregated these schools are.

It should be noted that other measures of social diversity have been proposed in the literature: dissimilarity index, entropy index, etc. (for the properties of these indices, see Givord et al., 2016).

3 The socio-professional category (SPC) of the second legal guardian is sometimes also recorded. However, this information is not taken into account in the analyses presented in this report, insofar as it is not available for a sufficient number of students.

Our choice to rely on the exposure index is due to its relative simplicity, which facilitates the understanding and interpretation of the results.

2. Measures implemented in France to strengthen social diversity in lower secondary schools

At the start of the 2016 school year, or the following one, 22 sites committed to local actions to reduce social segregation between public lower secondary schools within the same territory, by bringing their social compositions closer together. These sites included between two and six public schools each, for a total of 56 public middle schools located in metropolitan France. In the remainder of the study, these middle schools located within these sites are referred to as "pilot" schools.

Figure 1 shows, on average over the period 2010–2015, the proportion of disadvantaged students in the schools which, within each pilot site, displayed the strongest social contrasts prior to the implementation of the national initiative in favor of social diversity. In the vast majority of cases, the most disadvantaged schools in each pilot site (in red in the figure) were among the most disadvantaged in France, with proportions of disadvantaged students close to 80%. Conversely, the most advantaged schools in each pilot site (in blue in the figure) were generally around the national average or somewhat more advantaged. However, a few atypical cases can be observed in which the most advantaged school in the site was in fact disadvantaged relative to the national average (blue points located above the average) and, conversely, sites where the most disadvantaged school was more advantaged than the national average (red points located below the average).

One or more actions were undertaken within each site to rebalance the social ntake of the public middle schools located there.

iThe objective was not always to equalize their social composition exactly but, at a minimum, to make them converge in order to reduce the initial gaps. Five types of approaches were implemented:

1. A first approach consisted in setting up multi-school catchment areas, that is, merging the catchment areas of several middle schools into a single one, and assigning students through a regulated school choice procedure: families express placement preferences for the different schools whose catchment areas have been merged, the regional education authority defines priority rules, and assignment takes into account the preferences expressed and the relative priorities, within the limits of each middle school's capacity;

2. A second approach consisted in creating multi-school catchment areas but without implementing a regulated choice procedure: all students in the new single catchment area who are enrolled in a given grade level (6th, 7th, 8th, or 9th grade) are assigned to the same school, and it is the grade levels that are distributed among the different schools.

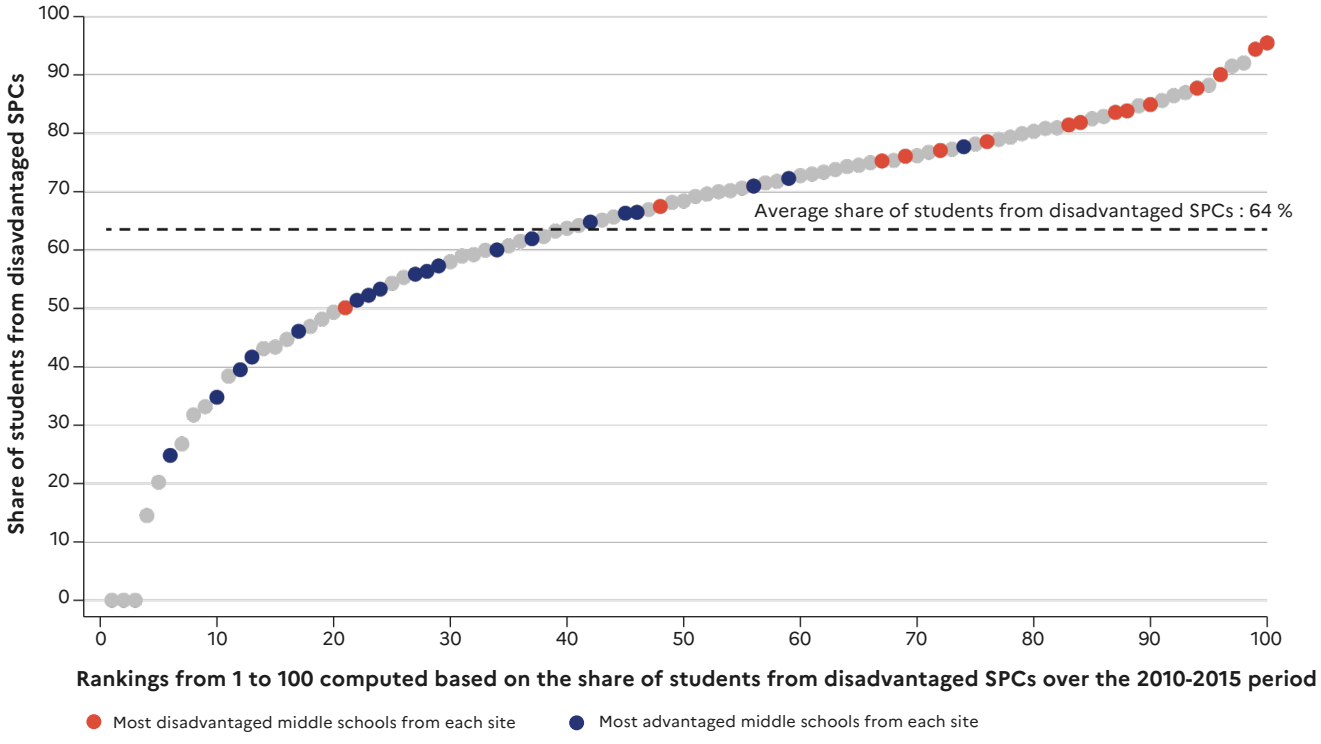


Figure 1. Proportion of pupils from disadvantaged backgrounds in middle schools with the most contrasting social compositions at each pilot site

Key: the proportion of pupils from disadvantaged socio-economic backgrounds is calculated using DEPP data for the period 2010–2015. The middle schools represented by a red dot (or blue dot) are the most socially disadvantaged (or most advantaged) mliddle schools at each site. The middle schools represented by a grey dot correspond to all other public and state-funded private middle schools in metropolitan France.

For example, in the case of a catchment area with two schools, students in 6th and 7th grade are assigned to school A, and students in 8th and 9th grade to school B. Students may also be assigned to the different schools according to the so-called "alternating cohort" principle, which was for example implemented in the Berlioz–Coysevox two-school catchment area, located in the 18th arrondissement of Paris (Grenet and Souidi, 2021): in even-numbered years, all students entering 6th grade are assigned to school A and remain there until the end of 9th grade; in odd-numbered years, the configuration is reversed: entry into 6th grade takes place in school B and students complete their entire schooling there;

3. A third approach consisted in modifying school catchment areas: the catchment areas of several schools were redrawn in order to try to rebalance the social composition of their recruitment area, for example by removing disadvantaged neighborhoods from the catchment area of priority education middle schools and incorporating them into the catchment area of nearby but more socially advantaged schools;

4. A fourth approach consisted in closing or opening schools, in order to reconfigure the catchment areas of surrounding schools so as to promote greater social diversity;

5. Finally, a fifth approach consisted in introducing selective-track programs (music sections, bilingual sections, European sections, international sections) in socially disadvantaged schools, in order to make these schools more attractive to advantaged families and to reduce avoidance toward the private sector.

The regional education authorities, departments, and schools that volunteered to participate in the initiative selected locally the actions that appeared to them the most relevant given the social and geographical constraints specific to their territory. Table 1 below presents the list of pilot sites and the actions that were implemented there.

Thanks to the administrative data made available by the DEPP, we were able to measure the social composition of the schools concerned by these different actions in the volunteer territories before their implementation, focusing on the period 2010–2015. This analysis led to distinguishing two groups of territories:

- the first corresponds to sites where the initial social composition of the schools was fairly similar, such that the potential for increasing social diversity was low. These sites (shown in white in Table 1) were not retained for evaluating the effects of social diversity on students, insofar as this type of analysis can only be carried out if social diversity varies significantly between two periods of observation;
- the second group corresponds to sites in which the initial social composition of the schools was contrasted and which therefore presented a relatively high potential for increasing social diversity. These sites (highlighted in grey in Table 1) were considered the most relevant for evaluating the effects of social diversity on students and were therefore selected by the research team to take part in the survey design.

Table 1. Typology of actions implemented to promote social diversity

	Attractiveness of the school	Redesign of the school catchment area	Opening/closing of middle schools	Regulated choice procedure	Alternating intake
Brest	□		□	□	
Toulouse		□	□		
Montpellier	□				
Redon				□	
Saint-Malo		□	□		
Rive-de-Gier				□	
Roanne		□			
Nancy - 1				□	
Briey				□	
Lunéville				□	
Nancy - 2	□		□	□	
Arras		□			
Clermont-Ferrand		□			
Strasbourg - 1	□				
Strasbourg - 2		□			
Bischwiller					□
Paris 18 - 1				□	
Paris 18 - 2					□
Paris 19				□	
Paris 17		□			
Castres	□				
Noisy-le-Grand		□			
Total (entire sample)					
Numbre of sites	5	8	4	9	2
Numbre of middle schools	15	24	16	22	4
Total (sample of surveyed schools)					
Numbre of sites	4	4	4	3	1
Numbre of middle schools	12	12	16	10	2

Note : The shaded rows correspond to the sites included in the sample of surveyed schools..

3. Methodology used to measure the effects of the social diversity initiative

To measure the effects of the actions implemented as part of the national initiative in favor of social diversity, we compared the evolution of the social composition of the middle schools that participated in this initiative ("pilot" schools) with that of schools presenting similar characteristics but which were not affected by these actions ("control" schools).

To construct the group of control middle schools, we used the administrative information made available by the DEPP on the social composition of schools and the results of their students in the Diplôme National du Brevet (DNB) over the period preceding the implementation of the social diversity actions (2010–2015). Each of the 22 pilot sites was matched with a statistically comparable site not affected by these actions, that is, having the same

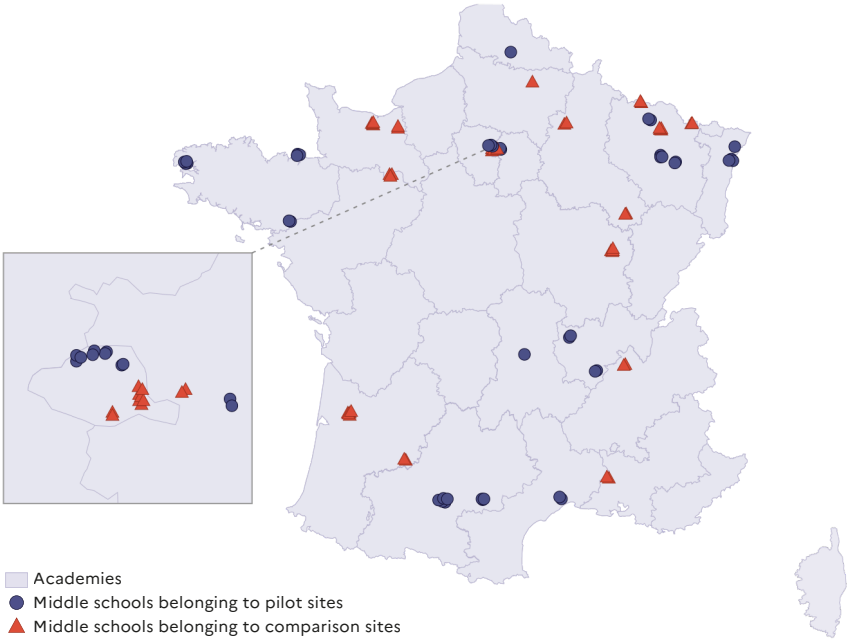


Figure 2. Collèges participant à l'étude selon leur statut expérimental

number of middle schools and displaying the same levels of achievement in the DNB and the same exposure rates of advantaged students to disadvantaged students (and conversely).

In total, the study sample comprises 44 sites for a total of 112 lower secondary schools: 22 sites including 56 pilot middle schools and 22 sites including 56 control middle schools. Figure 2 shows the geographical distribution of the middle schools selected for the study, according to their experimental status (in blue, pilot schools; in red, control schools).

Over the six years preceding the implementation of the social diversity actions (2010–2015 for the sites where they began at the start of the 2016 school year, and 2011–2016 for the schools where they began at the start of the 2017 school year), the exposure rates of advantaged and disadvantaged students to students from the other social group were almost identical in the schools of the pilot and control sites (see Figure 3). The differences observed between these two groups of schools after the implementation of the initiative can therefore reasonably be interpreted as measuring the causal impact of the actions implemented.

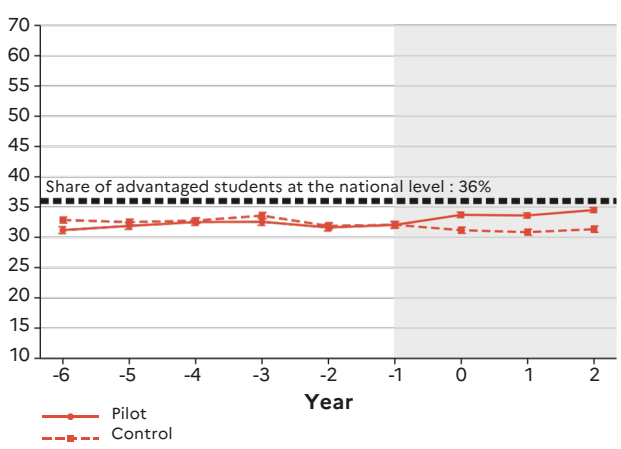
4. Effects on the social composition of lower secondary schools

A limited overall impact on social diversity

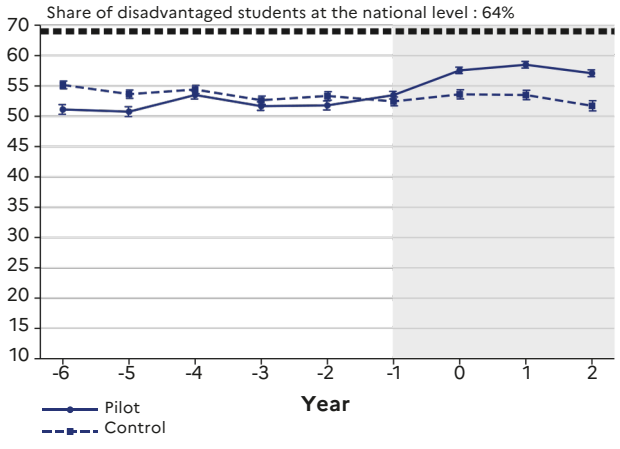
The first issue of the evaluation was to determine to what extent the actions undertaken succeeded in strengthening social diversity in the middle schools concerned. The impact of these actions on the exposure rates of students from a given social group (advantaged or disadvantaged) to students from the other group is presented in Figure 3 for the three years following their implementation (school years 2016, 2017, and 2018 for the first wave, and 2017, 2018, and 2019 for the second wave).

On average, in the 56 pilot middle schools, exposure rates increased in a statistically significant way compared with the 56 control schools, which means that social diversity improved. This improvement, however, was limited: the exposure rate of disadvantaged students to advantaged students increased from 31% to 34% over three years (Figure 3.A), while the exposure rate of advantaged students to disadvantaged students rose from 52% to 57% (Figure 3.B). It should be recalled that, at the national level, the proportion of students from disadvantaged backgrounds according to our definition is 64%, while the

Figure 3. Impact of the actions on social diversity at the school level (112 schools)



A. Exposure rate of students from disadvantaged backgrounds to students from advantaged backgrounds



B. Exposure rate of students from advantaged backgrounds to students from disadvantaged backgrounds

Key: The exposure rates of students from one group to students from the other group are expressed in percentage points. The years are shown on the horizontal axis, with year 0 corresponding to the first year of implementation of the actions (i.e., 2016 for the first wave and 2017 for the second wave).

while the proportion of students from advantaged backgrounds is 36%. The actions undertaken therefore slightly brought the schools concerned closer to a hypothetical situation of perfect social diversity across the territory.

One of the strengths of the data used is that they make it possible to measure social diversity not only within schools but also within classes. It is indeed important to verify whether the distribution of students across classes generates social segregation that could at least partly offset the effect of the actions implemented at the school level. The analyses we conducted largely refute this hypothesis, insofar as the effects on social diversity within classes in the same school are of the same order of magnitude as those at the school level. The actions implemented to reduce social segregation between schools in the pilot sites therefore did not have the effect of increasing internal segregation within these schools.

No increase in avoidance toward the private sector

The fact that social diversity improved only modestly across all pilot sites could, at first glance, be explained by opposition from families, some parents possibly having reacted to these actions by enrolling their child in a middle school other than the one initially assigned. Under this hypothesis, one would expect to observe an increase in enrollments in the private sector or in a public school located outside the pilot site through a waiver or through enrollment in a selective-track program (music and dance programs with adjusted timetables, sports sections, international sections, etc.). Our results do not reveal any such phenomenon: as indicated in Figure 4, the proportions of students enrolled in the private sector (red) or in a public school located outside the site (purple), around 15% each, did not change significantly in the pilot sites compared with the control sites following the implementation of the social diversity actions.

Logically, the implementation of these actions led, in the pilot sites, to an increase in the proportion of students enrolled in a public school within the site different from the one to which they were initially assigned (bright blue), and a corresponding decrease in the proportion of students enrolled in their original catchment school (turquoise). These changes result mechanically from the actions undertaken. As expected, no change is observed in the control schools. These results confirm the absence of a shift toward the private sector or a more frequent use by families of waivers in response to the actions. This absence of an average effect corresponds, in some cases, to good acceptance of the approach by families and, in others, to a balance between departures to the private sector and returns to the public sector, depending on the catchment middle school to which students were initially assigned.

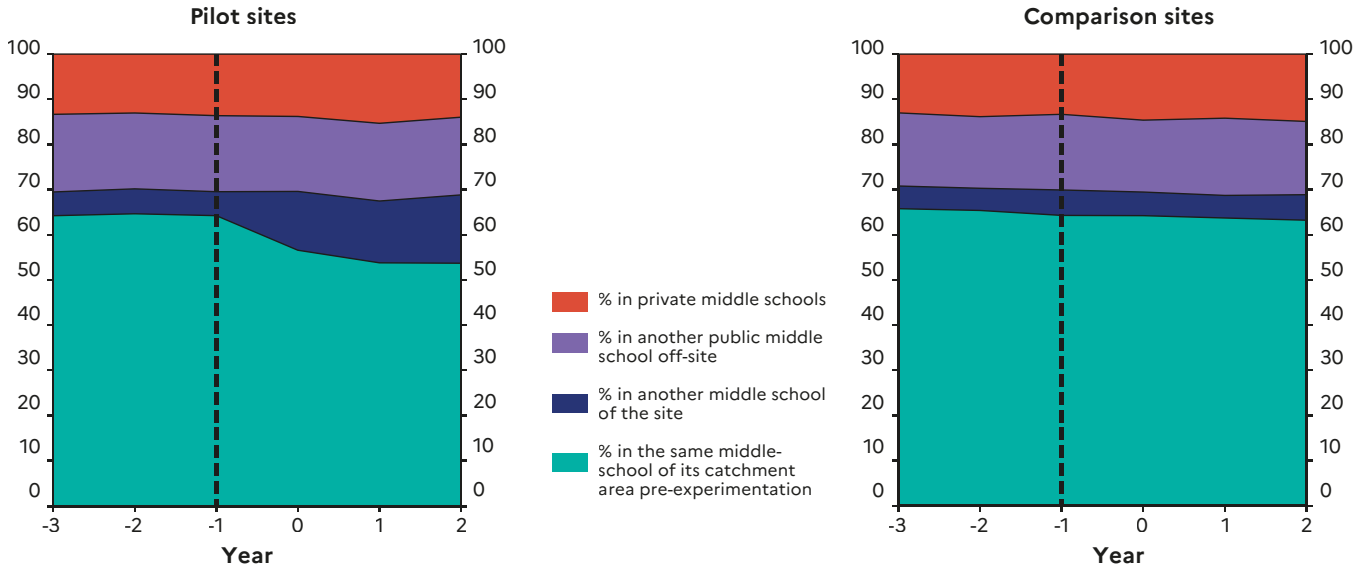
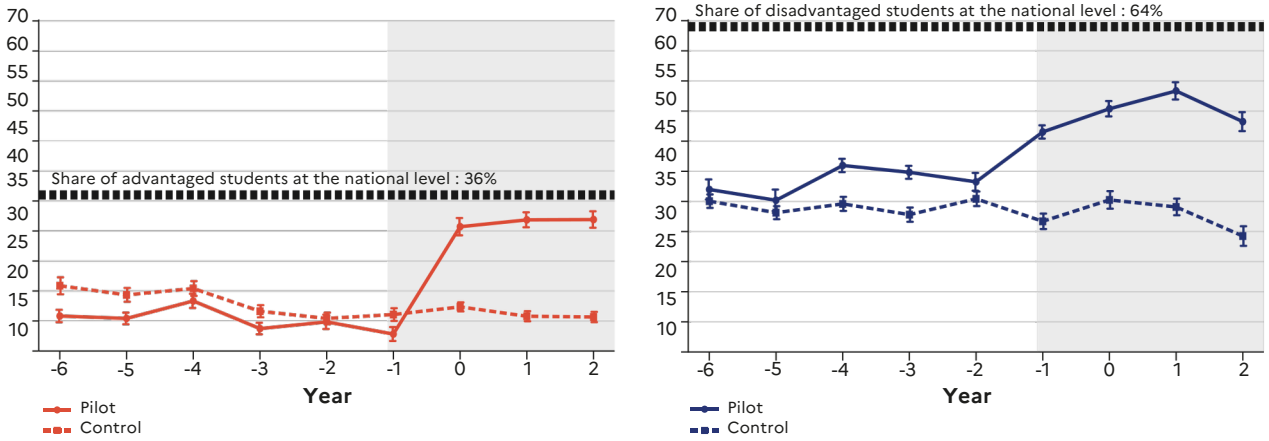


Figure 4. School attended by students residing in pilot and control sites

Key: The graphs indicate the share of students residing in the pilot sites (left) and control sites (right) who were enrolled in a public school within the site, in a public school located outside the site, or in a private school. Among the public schools within the site, a distinction is made between the school that was the catchment school before the implementation of the social diversity actions (turquoise) and the other schools within the site to which students may have been assigned as a result of these actions (bright blue), public schools outside the site (purple), and private schools (red).

Figure 5. Impact of the actions on social diversity at the school level (65 schools)



A. Exposure rate of students from disadvantaged backgrounds to students from advantaged

B. Exposure rate of students from advantaged backgrounds to students from disadvantaged backgrounds

Key : The exposure rates of students from one group to students from the other group are expressed in percentage points. The years are shown on the horizontal axis, with year 0 corresponding to the first year of implementation of the actions (i.e. 2016 for the first wave and 2017 for the second wave).

A strong heterogeneity in the potential for social diversity across sites

The modest increase in social diversity across all pilot sites is in fact explained by the fact that a large number of them (shown in white in Table 1) had only a limited potential for change—the differences in social composition between their middle schools were already relatively small before the actions were launched. Among the 44 sites (pilot and control), only 20 included at least 10 advantaged or disadvantaged students for whom the potential increase in exposure to students from the other group was greater than 15 percentage points[4].

In these 20 high-potential sites, which comprise 65 schools (33 pilot and 32 control), the effect of the actions on social diversity was much larger (see Figure 5): three years after the launch of the actions, the exposure rate of disadvantaged students to advantaged students was 32% in pilot schools compared with 15% in control schools, while the exposure rate of advantaged students to disadvantaged students was 49% in the former compared with 30% in the latter.

In sites that presented a high potential for change, the actions implemented therefore had substantial effects on the social composition of schools. In middle schools attended by disadvantaged students, the proportion of advantaged students moved closer to their share among all lower secondary school students in France (36%); similarly, the exposure rate of advantaged students to disadvantaged students moved closer to the national proportion of disadvantaged students (64%).

For the remainder of the impact study, the analysis is restricted to the 65 schools in these 20 sites where at least 10 advantaged or disadvantaged students had a potential increase in their exposure rate to students from the other group greater than 15 points. In our analyses, we consider only these students, which allows us to focus on those whose school environment was most strongly modified by the actions introduced from the start of the 2016 school year. To measure the impact of social diversity on students' academic outcomes and social relationships, it is indeed not relevant to include sites that initially had little room for improvement in diversity. The student surveys were therefore conducted only in the 65 schools of the 20 sites identified as the most relevant.

5. Effects on students

The second major issue of the evaluation was to determine whether the increase in social diversity in pilot middle schools had effects on the students themselves. These effects are measured using two types of indicators: "academic" indicators, which measure students' academic performance and their behavior within their school, on the one hand, and "non-academic" indicators, which assess their personal well-being, their social well-being, and their social attitudes, on the other hand. This information was collected at two different points in time: at the end of 6th grade and at the end of 8th grade. In order to obtain sufficient statistical precision, the results presented here were calculated by combining these two measurement periods.

Academic indicators: grades and behavior

Figure 6 presents the effects of the social diversity actions on students' academic performance and their behavior within the school. Regarding academic performance, the indicators used are students' grades in continuous assessment and their results on standardized tests in French

4 We use data from the years 2015 to 2015 to calculate the potential for change for each student residing in the catchment areas of the 112 public schools in our study. This potential for change is calculated as the difference between the student's actual exposure rate (advantaged or disadvantaged) to students from the other social group if they enroll in their catchment school (pre-reform exposure rate) and the exposure rate that would be obtained if students within the site were distributed so as to equalize the social composition of schools within the site (maximum exposure rate). A student is considered to have a high potential increase in their exposure rate to students from the other group when the difference between these two rates is greater than or equal to 15 percentage points.

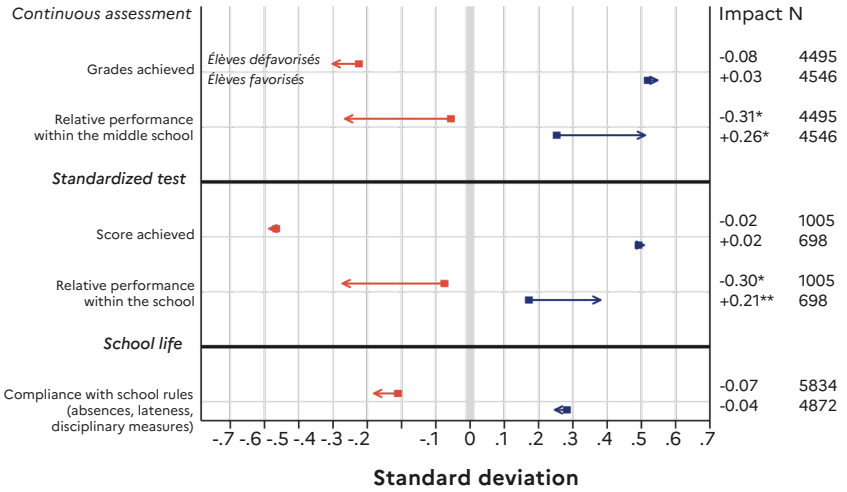


Figure 6. Impact of the actions on academic performance and behavior at school

Key : The graph shows the differences between students in pilot schools and students in control schools. The value 0 represents the average of students in the control group. The unit of measurement is the standard deviation of the variable of interest in the control group. The red squares (resp. blue squares) represent the mean of disadvantaged students (resp. advantaged students) in the control group. The length of the red arrow (resp. blue arrow) corresponds to the difference between disadvantaged students (resp. advantaged students) in the pilot group and those in the control group. The associated coefficient is shown on the right in the "Impact" column and the number of observations in the "N" column. ***, **, and * indicate conventional significance levels of 1%, 5%, and 10%, respectively.

and mathematics conducted by our research team. Continuous assessment grades are important because they are the variable taken into account by the school system. The results of standardized tests complement this measure by assessing students' skills independently of differences that may exist in the grading scales used by teachers. We study these two indicators both in absolute terms and in relative terms within the school attended. The absolute value is meaningful in itself, as it measures students' level of mastery of learning, while the relative value within the school provides information about their position compared with their peers, which may affect students' academic self-esteem.

Regarding academic outcomes in absolute terms, no significant impact of the measures taken to increase social diversity is observed on students' performance in continuous assessment or in the standardized tests conducted by our team. This is true for both groups of students, disadvantaged (shown in red) and advantaged (in blue), and suggests that learning in lower secondary school is relatively little affected by the social composition of the school or the class. In contrast, as expected, students' relative position compared with their classmates was significantly affected: on average, disadvantaged students have a lower relative position in pilot schools than in control schools, while advantaged students have a higher relative position. These variations are substantial—between 20% and 30% of a standard deviation—and may have modified students' perception of their own performance level, as will be seen below.

The indicators related to students' behavior are constructed from information collected by schools on absences, lateness, and sanctions. These range from notes in the school diary and detention hours to disciplinary councils and temporary or permanent exclusions. These data were aggregated into a synthetic index that takes a higher value the more the student's behavior complies with the school's rules of conduct. We do not observe any significant difference between students in pilot schools and those in control schools, regardless of their social background.

These results indicate that the increase in social diversity in pilot schools led to a change in students' relative position within their school without any significant change in learning outcomes, grades, or behavior in class and at school.

Non-academic indicators: personal well-being, social well-being, and social attitudes

The actions in favor of social diversity had an overall positive effect on non-academic indicators. Figure 7 presents the effects of these actions on three sets of indicators relating to students' personal well-being, social well-being, and social attitudes.

Regarding personal well-being, measures related to self-perception tend overall to improve with the increase in social diversity. Students' well-being is slightly higher in pilot schools, but this difference is not statistically significant. Academic self-esteem, however, is significantly higher in pilot schools for advantaged students, with a large effect size (27% of a standard deviation). This effect is likely explained by the improvement in the relative position of these students within their school (see above). Finally, students in pilot schools, compared with students in control schools and regardless of their social background, are more optimistic about the returns to effort, meaning that they have a stronger sense that they can influence their own success.

Regarding social well-being, the increase in social diversity in pilot schools led to an improvement in perceptions among disadvantaged students: they perceive the school climate as being of better quality (+18% of a standard deviation), feel safer in their school (+26% of a standard deviation), and report having better relationships with their friends (+30% of a standard deviation, although this coefficient is just above the threshold of statistical significance). For advantaged students, no significant negative effect is observed; on the contrary, there is a slight increase in the perceived quality of friendships (+7% of a standard deviation). This result is important because it indicates that the improvement in social relations for some students does not come at the expense of those of others.

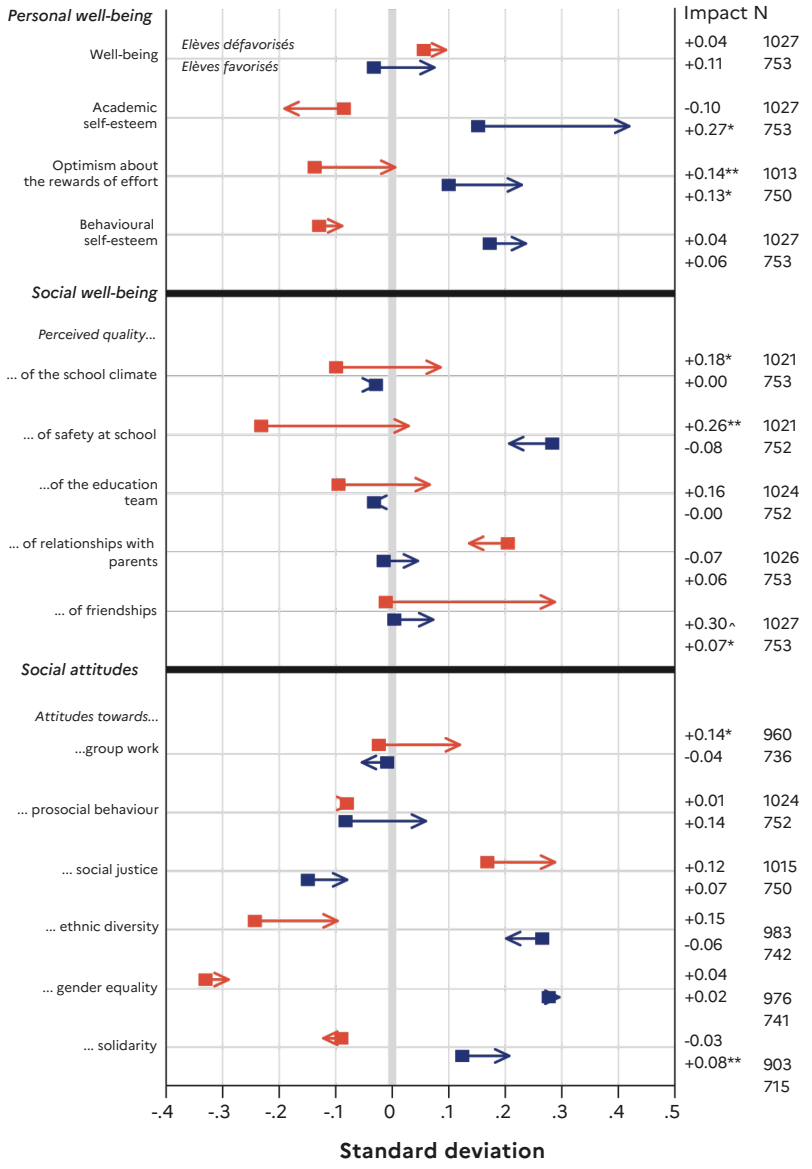


Figure 7. Impact of the actions on non-academic indicators

Key: The graph shows the differences between students in pilot schools and students in control schools. The value 0 represents the average of students in the control group. The unit of measurement is the standard deviation of the variable of interest in the control group. The red squares (resp. blue squares) represent the mean of disadvantaged students (resp. advantaged students) in the control group. The length of the red arrow (resp. blue arrow) corresponds to the difference between disadvantaged students (resp. advantaged students) in the pilot group and those in the control group. The corresponding coefficient is shown on the right in the "Impact" column and the number of observations in the "N" column. ***, **, and * denote conventional significance levels of 1%, 5%, and 10%, respectively. ^ indicates a significance level between 10% and 11%, very close to conventional thresholds.

Finally, regarding social attitudes, two positive effects are observed: for disadvantaged students, attitudes toward group work increased by 14% of a standard deviation, suggesting that these students are more inclined to cooperate. Among advantaged students, they are slightly more likely to endorse values of solidarity (+8% of a standard deviation). These moderate effects suggest the possibility that actions promoting school-level social diversity may have longer-term effects on social cohesion.

Overall, these results indicate that strengthening social diversity in pilot schools had positive effects on a number of non-academic dimensions. These positive effects are observed among advantaged students, who report higher academic self-esteem, greater optimism regarding the returns to effort, better perceived quality of friendships, and a more favorable attitude toward solidarity. They are even larger in magnitude for disadvantaged students with respect to their optimism, their perception of the school climate, their sense of safety at school, the perceived quality of their friendships, and their propensity to cooperate.

6. Comparisons with the international literature

There is an extensive literature in the economics of education on peer effects. These studies aim to rigorously identify the influence that classmates' (or schoolmates') characteristics—such as social background, gender, or migratory background—have on a given student. This literature takes care to isolate peer effects from those due to the student's own characteristics. It should be noted, however, that most of this work has focused on the impact of classmates on academic performance. The effects of peers on other dimensions of students' lives (well-being, school climate, etc.) have been much less frequently studied.

Three characteristics of peers have been the subject of research: gender, academic ability, and social background (which, depending on the studies, includes parents' income level, socio-professional category, or ethnic or migratory origin).

Regarding peers' gender, several studies show that a higher proportion of girls in the classroom has a positive effect on both girls' and boys' academic outcomes, by promoting a calmer and less exhausting classroom climate (Hoxby, 2000; Lavy and Schlosser, 2011). However, this result is not entirely consensual—Black et al. (2013), for example, find that a higher proportion of girls in high school classrooms has a positive long-term effect on girls but a negative effect on boys.

Regarding peers' academic level, research findings do not lead to clear-cut conclusions. Hoxby (2000), Hoxby and Weingarth (2005), and Imberman et al. (2012) find that attending schools with a higher proportion of high-performing students has a positive (but modest) effect on individual academic performance—some studies suggesting that this effect may be stronger for initially lower-performing students (Matthewes, 2021).

By contrast, Abdulkadiroglu et al. (2014) and Ellison and Swanson (2016) find no significant effect of peers' academic level on individual performance.

Finally, regarding peers' social background, most studies do not find significant effects on academic performance. The only study that finds such an effect is Black et al. (2013), which concludes, based on US data, that a higher proportion of students from affluent families has a positive effect on years of schooling. Other studies, by contrast, conclude that there is no negative effect of socially disadvantaged peers on the academic performance of socially advantaged students. Angrist and Lang (2004), for example, show that a program integrating students from disadvantaged neighborhoods in Boston into schools in more advantaged neighborhoods had no negative impact on students in receiving schools. Hanushek et al. (2009) also find that a higher proportion of classmates from ethnic minorities has no negative effect on the academic performance of advantaged students. These findings are consistent with those of Figlio and Özek (2019), who show that the arrival of Haitian students in Florida following the 2010 earthquake in Haiti did not negatively affect the academic outcomes of students in the schools that received them. Similarly, Figlio et al. (2021) find no negative impact of immigrant students on the academic performance of natives, using a very rich dataset from Florida. Diemer (2022) reaches the same conclusions using Swedish data.

Overall, the available studies tend to show that peer characteristics have no or very little effect on short-term academic performance. Studies on peer gender and academic level do not converge toward a clear consensus, but when effects are identified, they are generally very small in magnitude. Regarding peers' social or migratory background, the vast majority of existing studies do not find any significant impact on student performance, particularly for students from advantaged social backgrounds.

Our evaluation of the actions implemented in France to promote social diversity in lower secondary schools is consistent with this: changes in social composition in the schools concerned did not significantly affect students' results in continuous assessment or standardized tests, whether students were from advantaged or disadvantaged backgrounds.

By contrast, the study documents effects of a different nature, of a social kind, which had previously been little or not observed in the literature. While there are studies on peer influence on risky behaviors among older students (high school and university students), their results are less relevant when focusing on lower secondary school students. To our knowledge, the effects described in this report, particularly those relating to the impact of social diversity on students' well-being and peer relationships, have not been documented in other contexts. Yet several recent studies suggest that these non-academic dimensions of social diversity may have a decisive influence on longer-term individual trajectories. Two studies by Chetty et al. (2022a, 2022b), for example, show that having socially advantaged friends in adulthood is an important predictor of upward social mobility, and that the social composition of friendship networks in adulthood is partly determined by the school attended, as well as by the way interactions between different social groups are encouraged within it. These results highlight the importance of not reducing the analysis of social diversity to its effects on students' academic performance, and the need to broaden the focus to the subjective and social dimensions considered in our study.

Conclusions

In light of the results described in this report, promoting social diversity in lower secondary schools appears to be a relevant policy for fostering students' personal well-being and social integration, as it leads to positive effects on their self-perception and on the quality of their social relationships, as well as on certain social attitudes such as enjoyment of group work and solidarity. At the same time, this policy does not change academic performance or discipline in the short term, which suggests that it does not constitute a panacea for improving the performance of disadvantaged students, as the Ministry may have hoped when this initiative was launched, nor does it constitute a threat to the performance of advantaged students, as some segments of public opinion may have feared.

These results apply to actions that were implemented in 2016 and 2017 and that led to increases in exposure rates between groups of the order of 15 to 20 percentage points. More modest or more substantial changes could have effects different from those observed in the context studied here. In addition, it should be recalled that the study took place between 2017 and 2021, a period during which the health crisis disrupted the normal course of students' schooling, without it being possible to precisely assess how this disruption may have affected the results obtained. It should also be emphasized that the study evaluates the overall impact of the actions implemented but does not have sufficient statistical precision to draw clear conclusions on the comparative effects of the different levers that were used to strengthen social diversity in lower secondary schools, which implies that the results hold on average, with local effects that may differ.

Finally, it should be noted that the effects measured in this report, which are limited to the first three years of lower secondary schooling, do not exclude the possibility that social diversity may influence students' educational trajectories in the longer term, notably through their orientational choices.

These caveats being made, it is important to emphasize that the results of this study are largely consistent with the findings of research on social diversity policies in other countries, which tend to show that the social or migratory background of peers has little effect on individual student performance, particularly among socially advantaged students.

Beyond this academic dimension, the main contribution of the study is to highlight beneficial effects of social diversity on students' personal and social well-being, which appear likely to foster greater social cohesion.

Key takeaways

- The establishment of an independent scientific committee in charge of the impact evaluation of an education policy makes it possible to draw rigorous conclusions on the effects of this policy, in order to enlighten public decision-making.
- Several tools make it possible to increase social diversity between geographically close schools with contrasting social compositions: merging catchment areas, redrawing school zoning, closing or opening a school, or introducing an attractive educational offer.
- Strengthening social diversity in lower secondary schools did not lead to greater avoidance of the private sector among students assigned to the 56 pilot schools, compared with the 56 control middle schools.
- Strengthening social diversity in lower secondary schools did not significantly affect learning: the academic results of students in more socially diverse schools are comparable to those of students in control schools, both in continuous assessment and in standardized tests.
- Strengthening social diversity had positive effects on a number of non-academic dimensions: advantaged students report higher academic self-esteem, greater optimism, better quality of friendships, and a more favorable attitude toward solidarity. Disadvantaged students also report greater optimism, a better school climate, a greater sense of safety at school, better-quality friendships, and a greater propensity to cooperate.

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