

# The True Impact of School Diversity?

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This paper presents a summary of the findings from a series of investigations conducted by the author into the relationship between school organisation and school outcomes in England and Wales. It shows that increased diversification of secondary schooling in the UK is generally associated, by commentators and advocates, with two inter-related claims. First: increased diversification does not lead to increased segregation of students between schools. Second: the new school types driving diversification are more effective in producing higher levels of student attainment with equivalent student intakes than their predecessors. Neither claim can be shown to be true. Then the paper considers a relatively new type of school – the Academy – that adds an apparent complication. It shows that Academies do, in fact, fit the same overall pattern of ‘sleight-of-hand’ school improvement as grammar, faith-based, specialist, and Welsh-medium schools (among others). If all types of schools produce roughly the same level of student attainment once their intakes are taken into account, why then does the segregated nature of schooling matter? If the drive to increase standards through diversification has merely produced more segregated schools, apparently nothing has been gained but nothing lost. The paper ends by arguing that segregation matters, not for school outcomes as narrowly envisaged, but for schools as mini-societies in which students develop a sense of what is just and what is not.

## School diversity and segregation

In a major study of the composition of secondary schools in England and Wales from 1989 to 2001, I have demonstrated that increased diversity of school types is strongly associated with increased segregation of student intakes.<sup>1</sup> ‘Segregation’ here refers to the unevenness of student allocation to schools in terms of their background characteristics – most notably in terms of the official designation of ‘living in poverty’. It is a measure of the extent to which poor children are clustered in specific schools.<sup>2</sup> At the start of the study (1989), the school system in England and Wales was largely comprehensive in structure (with a minority of selective and faith-based schools), so that most state-funded schools were open to students of any ability or socio-economic background, and students tended to use their local designated school. This meant that the student body in most schools reflected the nature of local housing and its residents more than anything else. The historical long-term trend of both residential and school segregation was down.

By 1995 this long-term trend towards comprehensive school intakes had stalled, and from 1997 onwards it began to reverse. The growth in segregated school intakes coincided with considerably increased diversity of school types both temporally and spatially. As the proportion of 1989-type local comprehensives declined, segregation increased, and was highest in those areas with a low proportion of comprehensive schools.<sup>3</sup> Once the nature of local housing patterns had been taken into account, the least segregated areas were those with no selection by schools, little or no diversification of school types, where choice prevailed over the rigid allocation of school place via catchment areas, and finally where schools were constrained to admit a proportion of students across all of the ability bands represented in the area, a process known as ‘banding’.

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<sup>1</sup> Gorard S., Taylor, C. and Fitz, J. (2003), *Schools, Markets and Choice Policies*, Routledge Falmer, London.

<sup>2</sup> Gorard, S. and Taylor, C. (2002), ‘What is segregation? A comparison of measures in terms of strong and weak compositional invariance’, *Sociology*, 36, 4, pp. 875-895.

<sup>3</sup> Gorard, S. and Taylor, C. (2001), ‘Specialist schools in England: track record and future prospect’, *School Leadership and Management*, 21, 4, pp. 365-381.

It is recommended that readers pursue the references given throughout this paper in order to gain a more sophisticated picture of the problem. However, in summary, it is fair to say that, *ceteris paribus*, diversity of school types is clearly linked to increased segregation of school intakes. 'Diversity', in this context, refers to differences in funding such as fee-paying schools, differences in ethos such as faith-based schools, differences in autonomy such as independent schools, differences in intake such as selective schools, and differences in curriculum such as specialist colleges.<sup>4</sup> All of these differences are related to increased local segregation. Some conservative commentators, especially in the UK research community, objected to the findings of this analysis, presumably on ideological grounds, given that their substantive objections were flimsy and sometimes even dishonest.<sup>5</sup> For advocates of increased diversification of schools, it is important to maintain the fiction that introducing new types of schools does not drive up segregation because their advocacy is generally based on the claim that new types of schools produce superior academic outcomes without changing their intakes. How true is this?

## School diversity and improvement

In order to show that a school is differentially effective, we have to establish that exactly equivalent students would achieve lower test scores after education at another school. In order to show that a school has improved, we have to establish that there has been an improvement in test scores that cannot be explained by a change in the nature of the school intake. Otherwise, school effectiveness and school improvement (SESI) is 'sleight-of-hand'.

It is not possible to compare directly the progress of the same student in two schools. Trying, instead, to match the characteristics of students, curricula, qualifications, and schools leads to multiple difficulties of comparability,<sup>6</sup> which, in turn, leads to an asymmetry in the burden of proof. A commentator claiming to have evidence that one type of school is differentially effective has, therefore, to explain how they have overcome the problems of comparability and of matching equivalent students. A commentator denying evidence of differential effectiveness, on the other hand, need only point to any lack of *prime facie* evidence or to a contextual difference between types of schools that has been omitted from the analysis.

In any study of school effects, typically between 0 and 25% of the variation between school outcomes remains to be explained, and this residual includes a very important error component. This major finding of work in the school effectiveness genre has been quite consistent over time.<sup>7</sup> The larger the study, the more variables available for each student, the more reliable the measures are, and the better conducted the study, the stronger is this link between school intake and outcomes. Where sufficient background or prior attainment data is available, it is possible to explain apparent raw-score differences between types of schools simply in terms of differences in student intake.<sup>8</sup> Once their intake is taken into account, specialist, grammar, faith-based, and Welsh-medium schools appear no more effective than 'bog standard' comprehensives. In fact, it becomes quite difficult to establish any school effect at all.<sup>9</sup> But school effectiveness and school improvement (SESI) forms an entire field of research and policy endeavour based on the dual premise that some schools are differentially effective with equivalent students, and that it is possible to transfer good practice from the more successful schools to the less successful ones.

SESI advocates try to guard against being misled by not using raw-scores outcomes, and using value-added models instead. Such models are intended to take the prior attainment of each student into account, and so to produce scores that are 'a measure of the progress students make between different stages of education'.<sup>10</sup> Unfortunately, these models fail for a very simple but important reason – the value-added scores they produce are so similar to the raw-score figures that they are derived from.<sup>11</sup>

The UK Department for Education and Skills (DfES) value-added school 'performance' figures have a correlation of +0.84 with the raw-score outcomes they are intended to replace, which themselves have a

<sup>4</sup> Gorard, S. (2000), *Education and Social Justice*, University of Wales Press, Cardiff.

<sup>5</sup> Gorard, S. and Fitz, J. (2006), 'What counts as evidence in the school choice debate?', *British Educational Research Journal* 32, 6 pp. 797-816.

<sup>6</sup> Gorard, S. (2001), 'International comparisons of school effectiveness: a second component of the "crisis account"?', *Comparative Education*, 37, 3, pp. 279-296.

<sup>7</sup> Gorard, S. and Smith, E. (2004), 'What is "underachievement" at school?', *School Leadership and Management*, 24, 2, pp. 205-225.

<sup>8</sup> Gorard, S. (2000), "'Underachievement" is still an ugly word: reconsidering the relative effectiveness of schools in England and Wales', *Journal of Education Policy*, 15, 5, pp. 559-573.

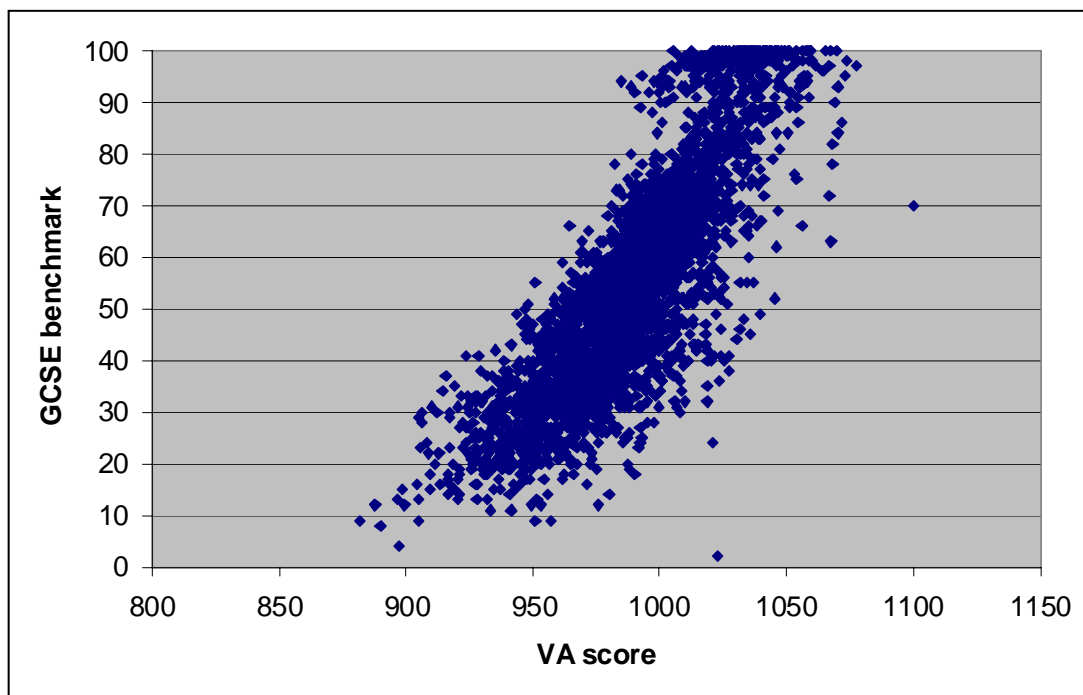
<sup>9</sup> Footnote 7 above.

<sup>10</sup> DfES (2005) Value-added Technical Information, [http://www.dfes.gov.uk/performanceables/schools\\_04/sec3b.shtml](http://www.dfes.gov.uk/performanceables/schools_04/sec3b.shtml) (accessed 25/2/05).

<sup>11</sup> Gorard, S. (2006a), 'Value-added is of little value', *Journal of Education Policy*, 21, 2, pp. 235-243.

+0.87 correlation with the prior attainment of students when they enter the school at age 11 – known as their Key Stage 2 (KS2) scores (Figure 1). This means that 71% of the variation in school value-added scores (VA) is explicable in terms of their raw-scores alone. There is a clear pattern of low attaining schools having low VA, and high attaining schools having high VA. Value-added scores are no *more* independent of raw-score levels of attainment than outcomes are independent of intakes. This means that all policies concerning schools, and judgements about the relative effectiveness of different schools and types of schools, will have been misled where they have been based on such a ‘value-added’ analysis. School improvers and school improvement researchers, relying on value-added analyses, will have been misled in their explanations and in making recommendations for practice. Once accepted, this reconsideration suggests that school improvement policies, at least in this narrow sense, are always likely to be ineffective. Therefore, all claims to differential effectiveness of one kind of school over another are suspect, and the risk of increased segregation through diversification is being taken for no reason at all.

Figure 1. The link between General Certificate of Secondary Education (GCSE) A\*-C benchmark and Key Stage 2 (KS2) to GCSE value-added, all secondary schools in England, 2004



**Note:** Figures provided by DfES. The General Certificate of Secondary Education (GCSE) is the common form of public examination for students at age 16. The figures exclude special schools, school with no GCSE entries, no GCSE ‘passes’ or no Key Stage 2 results, independent schools opting out of the value-added scheme, those whose results were suppressed by the DfES on grounds that individuals might be identifiable, and those with fewer than 30 cases in the cohort.

**Note:** The value-added scores are those published by the DfES, with a mean of around 988.

**Note:** The perceived ‘width’ of the scatter depends upon the scales used. The correlation coefficients quoted are a better guide.

## The Academies programme

One recent model of school diversification in England appears, at first sight, to break this link between increased segregation as a price to pay for less than convincing academic improvement. This is because these new schools were intended to be selected as those with the highest levels of disadvantage, so that a change in their intake towards less deprived families would inevitably lead to *less* local segregation, rather than more. In 2004, the BBC reported the considerable success of the Academies (originally City Academies) programme, where in troubled schools in deprived areas were rebadged, given extra funding, new management, and curricular freedom. The report stated: ‘The government has released GCSE figures from three of its new flagship Academies in England. All the schools, which were set up in deprived areas, showed remarkable improvements in results.’<sup>12</sup> The first three Academies were set up in

<sup>12</sup> BBC (2004), ‘Academies getting results at GCSE’, [http://news.bbc.co.uk/2/hi/uk\\_news/education/3602818.stm](http://news.bbc.co.uk/2/hi/uk_news/education/3602818.stm) (accessed 17/11/04).

2002, so that by 2004 it was only these three about which one could tentatively draw before-and-after comparisons. One of these was the Business Academy, Bexley, where the Prime Minister stated that he had ‘seen the future of education’. ‘In its first year, the Business Academy, Bexley achieved an increase in pupils attaining 5 or more A\*-C grades at GCSE from 7% in 2002 to 21% in 2003.’<sup>13</sup>

In fact, of course, Academies did not break the link between school composition and attainment.<sup>14</sup> Many Academies, including one of the first three, were nowhere near the most deprived schools in their areas. The others have all reduced the proportion of deprived children in the school since becoming Academies. For example, Table 1 shows the proportion of students in the Bexley Academy eligible for free school meals (FSM), which is an indication of family poverty. For the two years after conversion to an Academy (2002-03), this school took its lowest proportion of FSM students since records began in 1989. The proportion of FSM students was, and remains, higher than the national average, so this reduction could have been claimed as a success of the policy of turning schools around. However, this reduction in FSM had to be ignored because the school and the government wished to claim that a purported increase in examination success was achieved with no discernible change to the school intake.

**Table 1. Pattern of disadvantage over time in Bexley**

Business Academy	1997	1998	1999	2000	2001	2002	2003
Percentage Eligible for Free School Meal	53	49	52	50	49	46	42

But just how ‘remarkable’ were the improvements in GCSE scores acclaimed by the Prime Minister? Table 2 shows that, in recent years, the best year for GCSE results in the school that became an Academy in Bexley was 1998, long before the change to Academy status. When the DfES claimed success for the early Academies because the GCSE benchmark for the Business Academy rose to 21% in 2003, they neglected to mention that the predecessor school had a benchmark of 24% in 1998, a time when national benchmarks were lower on average anyway. The historical sequence of events here is quite wrong for a successful claim to a policy intervention.

**Table 2. GCSE results over time for the Business Academy**

Bexley	1997	1998	1999	2000	2001	2002	2003
GCSE Points Per Candidate	-	23	20	20	22	-	23
Percentage Obtaining 5+ A*-C GCSE	13	24	14	10	17	-	21
Percentage Obtaining No Qualification	10	6	7	9	11	-	5

**Note:** The DfES Standards Site does not provide results for 2002, the year of changeover.

In addition, the more recent GCSE ‘success’ remarked on by the government occurred when the school had a lower level of disadvantage. This makes the 1998 success more remarkable. Of course, the intervention is still at a very early stage, and perhaps we should not expect to see differences until an entire cohort has gone from entry at age 11 to GCSE. The point is that by 2004 success *was* already being claimed by some (see above), and that claim does not stand up to even superficial scrutiny. Because the strong link between school compositions and school outcomes remains, the apparent improvement of Academies is, just like other attempts at improvement through diversification, sleight-of-hand.

## The true impact of school composition?

Diversification of schools tends to lead to increased student segregation, which is a concern for some commentators. But if, as appears to be the case, the precise mix of students in any school makes no substantive difference to their levels of attainment<sup>15</sup> then increased diversification of schools appears somewhat pointless but also relatively harmless. Why does it matter who is educated with who? I have two tentative responses to that important policy question.

First, if there is no need to re-mix school intakes in order to improve attainment (because that has been shown to be ineffective) then we can feel free to use other criteria for deciding on the pattern of intakes

<sup>13</sup> Dfes (2004c), ‘Academies that are open’, <http://www.standards.dfes.gov.uk/academies/projects/openacademies/?version=1> (accessed 2/11/04).

<sup>14</sup> Gorard, S. (2005), ‘Academies as the “future of schooling”: is this an evidence-based policy?’, *Journal of Education Policy*, 20, 3, pp. 369-377.

<sup>15</sup> Gorard, S. (2006b), ‘Is there a school mix effect?’, *Educational Review*, 58, 1, pp. 87-94.

to schools. These criteria might include efficiency or convenience, but we could also try equity as a guiding principle. This was the approach that led to comprehensive schools in the first place, and to area-level ability banding in particular.

Second, it is important to bear in mind that the outcome measure in all of the foregoing is based on examination outcomes. Schools are, however, about much more than these. The school mix appears to matter most because it provides the context for creating students' awareness of equity.<sup>16</sup> Close to the heart of developing a model of citizenship among students is the need to encourage children to develop their own concepts of fairness.<sup>17</sup> It is likely that the fundamental influence on pupils in developing perceptions of what constitutes a fair and equitable society is their experience of school.<sup>18</sup> Inclusive schools are generally more tolerant<sup>19</sup> and exhibit that tolerance in racial, social, and religious terms; this is also associated with greater civic awareness.<sup>20</sup> In fact, the simple act of segregating students, whether by race, class, or ability, might be considered an affront.<sup>21</sup>

This matters because the level of ethnic and other segregation in schools can affect racial attitudes, subsequent social and economic outcomes, and patterns of residential segregation.<sup>22</sup> The experience of Northern Ireland shows that, if true, this can be a force for even greater *societal* segregation, where the segregation in schools feeds back into society<sup>23</sup> and where teachers in schools are, therefore, unwilling even to discuss issues of sectarianism with their (segregated) students.<sup>24</sup> In divided societies, citizenship education can actually generate *negative* results, including the ghettoisation of minority communities, perhaps culminating in greater social unrest, as it has in some central European countries.<sup>25</sup>

My own research shows that school students have a clear notion about what constitutes a fair and equitable national education system.<sup>26</sup> The system should be an egalitarian one which benefits all students equally. In general, most students in EU countries were of the opinion that a fair and equitable national education system would be one in which all students were treated in the same way, although there was also considerable support for the notion that the less able students should receive a disproportionate amount of the teacher's attention. However, the extent to which the students report that this was what they actually experienced in school varied across the EU. There are preliminary indications that the nature of their national school system is related to students' formation of views of justice.<sup>27</sup> Perhaps, therefore, we should be more concerned with the experience of schooling as something in its own right, and not always *for* something at a later date (qualification, participation, employment, etc.). Perhaps the school mix is the school effect, affecting not only pupils' views of school, and therefore of later educational opportunities, but also affecting their notions of social justice in the present. And perhaps it is this that is most at risk from some of the proposed changes to school organisation presented in the Schools White Paper for England before the UK parliament at time of writing.

<sup>16</sup> Halstead, J. and Taylor, M. (2000), 'Learning and teaching about values: a review of research research', *Cambridge Journal of Education*, 30, 2, pp. 169-202. Meuret, D. (2001), 'School Equity as a Matter of Justice', in: Hutmacher, W., Cochrane, N., Bottani, N. (eds), *In Pursuit of Equity in Education*, Kluwer Academic Publishers, Dordrecht.

<sup>17</sup> DfES (2002), *Citizenship: the National Curriculum for England*, <http://www.dfes.gov.uk/citizenship/> [Accessed August 2003].

<sup>18</sup> Howard, S. and Gill, J. (2000), 'The pebble in the pond: children's constructions of power, politics and democratic citizenship', *Cambridge Journal of Education*, 30, 3, pp. 357-378. Davies, I. and Evans, M. (2002), 'Encouraging active citizenship', *Educational Review*, 54, 1, pp. 69-78.

<sup>19</sup> Slee, R. (2001), 'Driven to the margins: disabled students, inclusive schooling and the politics of possibility', *Cambridge Journal of Education*, 31, 3, pp. 385-397.

<sup>20</sup> Schagen, I. (2002) 'Attitudes to citizenship in England: multilevel statistical analysis of the IEA civics data', *Research Papers in Education*, 17, 3, pp. 229-259.

<sup>21</sup> Massey, D. and Denton, N. (1998), *American Apartheid: Segregation and the making of the underclass*, Harvard University Press, Cambridge, MA.

<sup>22</sup> Clotfelter, C. (2001), 'Are whites still fleeing? Racial patterns and enrolment sifts in urban public schools', *Journal of Policy Analysis and Management*, 20, 2, pp. 199-221.

<sup>23</sup> Smith, A. (2003), 'Citizenship education in Northern Ireland: beyond national identity', *Cambridge Journal of Education*, 33, 1, pp. 15-31.

<sup>24</sup> Mansell, W. (2005), 'Don't mention the troubles', *Times Educational Supplement*, 18/2/05, p. 16.

<sup>25</sup> Print, M. and Coleman, D. (2003), 'Towards understanding of social capital and citizenship education', *Cambridge Journal of Education*, 33, 1, pp. 123-149.

<sup>26</sup> Gorard, S. and Smith, E. (2004), 'An international comparison of equity in education systems?', *Comparative Education*, 40, 1, pp. 16-28.

<sup>27</sup> Smith, E. and Gorard, S. (2006), 'Pupils' views of equity in education', *Compare*, 36, 1, pp. 41-56.

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