

Are Free Schools Socially Selective? A Quantitative Analysis

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ABSTRACT

Supporters and critics of free schools in England have had differing expectations about whether free schools would emerge in socially disadvantaged areas, and whether they would become socially selective. We investigate the outcomes, using information from the first three years since the introduction of the first new schools in 2011, drawn from the National Pupil Database. We find that, as policy proposers had expected, free schools have been situated in neighbourhoods that are somewhat above average in terms of the proportions entitled to free school meals, a well-known indicator of social disadvantage. Nevertheless, we also find that the free schools are socially selective within their neighbourhoods. These two effects balance out so that, overall, compared with the average for all England, there are no great differences between the social composition of secondary free schools and that of the national average. However, at primary school level there is some evidence that free schools are enrolling children with above average ability. Moreover, there are very substantive differences between the ethnic composition of free schools and other schools. Despite these differences, we find little evidence that the presence of free schools is having an effect on the social composition of intakes to other schools in their neighbourhoods or on segregation in the local authority as a whole. We suggest this may be because there are still too few free schools, with very small cohort sizes, recruiting from very dispersed areas.

Key Words: selection, admissions, segregation, school autonomy.

Acknowledgements: This project is funded by the Economic and Social Research Council, through the Centre for Learning and Life Chances in Knowledge Economies and Societies (LLAKES). Thanks are due to the Department of Education for providing the data used and to anonymous referees for comments that have greatly improved the paper.

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(6849 words excl tables)

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1. Introduction

“Free schools” are tax-payer funded schools opened and run by diverse, non-state, groups in civic society. In recent history they are exemplified by the development of “charter schools” in the United States since 1992 and of the “friskolor” in Sweden since 1988. The first free schools in England, fruits of the flagship education policy of the incoming coalition government of 2010, opened in September 2011. Several broad, related, issues have been raised by those studying their likely impact on English society and economy: the social selection of free schools and their potential to beneficially or detrimentally affect the extent of social cohesion, their likely performance according to academic and other criteria, the extent to which they are democratic and accountable institutions, and the impact on the working conditions of teachers (Walford, 2014; Higham, 2014; Hatcher, 2011). This paper studies the first of these, providing the first quantitative analysis of English free school intakes, covering the three years of admissions since they began. We examine whether free school access has been opened up differentially to children from disadvantaged socio-economic groups, or from particular religious communities, or with atypical levels of prior ability.

The extent and pattern of social selectivity of free schools matter because, if they do achieve the educational performance gains that are the main stated reason for their foundation, it will be important that these are at least shared equally across social groups. It will be better still if, as argued by government, they emerge most strongly and therefore deliver most improvements in areas of social disadvantage, thereby helping to address the problems of poverty and low social mobility (The Conservative Party, 2007, 2010).

Some writers have expressed concerns, however, that free schools could for a variety of reasons become to some degree socially exclusive, favouring middle-class aspirations over those of working-class families with fewer resources, and some have presented evidence that this is how it turned out with the early successful applications (Higham, 2014). If such concerns grow as the domain of free schools expands, not only will free schools be found to have low proportions of socially disadvantaged groups, their growth might concentrate the proportions of disadvantaged pupils attending other schools in the neighbourhood of free schools.

The free schools policy in England was not the product of a political consensus (as it had been in Sweden – Wiborg, forthcoming), and it encountered substantial opposition from teachers with two-

thirds opposing them in a 2012 survey (Cunningham and Lewis, 2012). Leaving aside claims and counterclaims about free schools that are clouded by the ensuing political conflict (see, for example, Young, 2014 and Garner, 2014), early independent evaluations of the outcomes of the free schools policy for social equality in educational access have been scarce. A significant problem for any such independent evaluation will have been the considerable variation in the nature of the free schools. Combined with the relatively small number of early start-ups, the variability is a recipe for a wide margin for error in any generalisations derived about free schools as a whole. Moreover, while some earlier analyses have tended to focus on the neighbourhoods in which free schools open (e.g. Cook, 2014), such analyses do not address the social composition of the schools themselves, which may differ from that of the neighbourhood.

By cumulating three years' worth of intakes, we are now in a position to obtain robust findings, while examining the picture after the new system has begun to bed down, in contrast with earlier reports that generalise from the small number of schools involved in the first batch. Using the National Pupil Database we examine all 88 primary and 63 secondary free schools, 151 in total, that had opened by September 2013 and for which data are available. We are able to examine both the free schools themselves and the neighbourhoods where they have opened.

2. Free schools and the composition of their pupils

Free schools are widely seen as a stage in a process of neo-liberal reform of the supply-side of education dating back to the 1980s, with an early fore-runner being City Technology Colleges, and a later one being the programme dating from 2002 of converting schools to become "Academies" (Walford, 2014; Higham, 2014). The process has included the development of local management of schools, greater specialisation between schools, acceptance of minority religious sponsorship, and some incremental rises in the scope for selection on the basis of aptitude (Exley and Ball, 2014).

One of the expressed intentions of the English free schools policy was to deliver 'social justice', where previously local authorities were deemed to have been failing to offer to the children of less-well-off households the chances for improvement available to those from richer households (The Conservative Party, 2007: 10, 36). The aim for the free schools policy was to expand choice for the less well-off. Indeed, free schools became a central pivot in the Conservative Party's programme for school reform. While the policy was that new schools should be demand-led from local communities, it was an expressed aspiration and expectation that civic initiative (from parents and other local groups) would lead to free schools emerging especially in areas where there are

disadvantaged groups experiencing low-quality local-authority-controlled schools, since it was there that the need for better education would be most apparent. This aspiration reflected a belief in civic engagement under the umbrella of the phrase “Big Society” (Higham, 2014). Moreover, since it was expected that these schools would raise educational performance, which in turn would deliver economic returns, the policy was also advanced as an integral part of its anti-poverty strategy.

Those arguing from a critical perspective, by contrast, have not had the same expectation that free schools would emerge more readily in disadvantaged than in well-off areas. One mechanism through which, it was feared, social inequality might be engendered was through founders of free schools aiming for catchment areas that excluded children from disadvantaged backgrounds (Hatcher, 2011). In addition, however, to the issue of the character of the catchment areas of free schools, also relevant is how the schools select children for entry. Selection is permitted by free schools within limits, on the basis of religious adherence. They may reserve half of places for those of the designated faith, which in existing schools leads to social and ability stratification (Allen and West, 2011). Indeed, faith communities have been seen throughout as a prime source for free school initiatives, and groups with non-Christian faiths, mainly from non-white communities, were expected to be disproportionately represented among the proposers. Yet no free school is permitted to select directly on grounds of ability. There are indirect routes that may have the same effect and it is suggested that the management of schools might exercise their independence in order to do so (West et al., 2006). Thus, schools might achieve selectivity by ability (even if unintentionally) by moulding their curriculum offer in ways that better suit the tastes of middle-class parents (for example, through the teaching of Latin and classical civilisation – Walford, 2014). They may also give preference to the children of staff and governors. Thus, if free schools want to be socially selective there are ways for them to do so, up to a point. Moreover, if free schools were to expand so much as to take a significant proportion of more socially advantaged pupils, one could expect to observe converse effects on the social composition of pupils at other schools in the neighbourhood.¹ In this critical perspective, these various mechanisms are seen as manifestations of an embedded structural link between quasi-markets, choice, competition and social differentiation.

Nevertheless, while examples are cited for these processes of differentiation, we do not know whether they are isolated cases or represent a broad tendency; when free schools vary as much as they do, there being a range of different types of founders and differing stated objectives, it is not hard to cite counter-examples that support the view that free schools emerge in socially

¹ Any such effects would be independent of possible long-run effects of the competition from free schools on performance of neighbouring schools.

disadvantaged areas. It is essential, therefore, to look beyond individual cases and examine the aggregate experience.

Studies of the experience of free schools' precursors in other countries, with respect to their effects on social equality, on the whole support the critical perspective. Thus in Sweden, the free schools have a greater proportion than municipal schools of pupils with higher-educated parents, and the schools have been concentrated in richer urban areas. The evidence suggests that free schools have contributed, along with other school system reforms, to rising social segregation (Wiborg, 2010; Allen, 2013; West, 2014). In the United States the charter schools are found to be associated with rising segregation (Garcia, 2008; Jacobs, 2013). Nevertheless, the experiences are diverse and do seem to have encompassed some incidences where charter schools have been beneficial for the empowerment of local communities (Whitty and Power, 2000). Country differences in selection processes and context preclude a wholesale transferral of these results to England.

Assessments of the evidence in England, however, have hitherto been based on early evaluations from the schools opened in the first or first and second years (Full Fact, 2012; National Audit Office, 2013). These evaluations are preliminary and so are hard to learn from. The early openers may be unusual and in any case the diversity of free schools demands a larger sample before one can have statistical confidence in generalisations to the school system as a whole, while also being potentially influenced by the political debate. Assessment of free schools' social equality objective has also been clouded by a concurrent issue, namely a shortage of primary school places in England due to an unanticipated high growth in population. Another proclaimed objective for free schools was that they could be opened where there was a shortage of places, presuming that parent groups or charitable organisations would be quicker to realise the need for a new school than local authorities.

Two, more systematic, studies of the proposal and acceptance process for free schools nevertheless deserve strong mention. Thus, Miller et al. (2014) report that a desire for social justice was manifested in the desire of some proposers in the first batch of new free schools to improve educational quality for those in a disadvantaged locality, but that the extent to which free schools could deliver social justice on a larger scale was limited by parents' opportunities for making choices; these choices were found to be limited in the early stages by the inefficient application process for starting a free school. Higham (2014) also explores the difficulties of the application process in his survey of 50 free school proposers. He finds that, while there was a distinct group of proposers whose aims could be described as serving social equality, the level of engagement with the objective of social inclusion was limited for the majority of proposers. Moreover, he found that the proposers who were most concerned with inclusion tended to be less well resourced and knowledgeable about

how to navigate the application process through to a successful completion. Higham (2014) therefore expects that, as they become more prevalent, the free schools will be found to have a stratifying effect on intakes.

Nevertheless, it seems entirely possible that the character and success rate of the early proposers may be somewhat different from the broader mass of free schools established after three or more years. It is important, therefore, to build on these early assessments, and to address several related questions surrounding the composition of the pupils who attend free schools and those in their neighbourhoods. Three social dimensions of a school's composition are relevant to this investigation: the pupils' social background, their prior levels of ability and their ethnicity. For each of these three dimensions we ask:

- RQ1: What is the social profile of the neighbourhoods in which free schools have been set up, compared with the rest of the country where, as yet, there are no free schools? We aim to answer the question as to whether, as the government intended, free schools have emerged more strongly in disadvantaged areas.
- RQ2: How does the profile of the pupils in free schools compare with those in their neighbourhoods? We aim to see whether selectivity may be inducing social inequality within the areas that free schools are set up.
- RQ3: What is the effect of the setting up of a free school on the social composition of pupils of other schools in the neighbourhood? We aim to investigate whether free schools are, yet, prevalent enough to be having a notable impact on other schools.

3. Data and Methods

To examine these questions we use data from the National Pupil Database (NPD) for England. This is a census dataset, so sample sizes are very large, and it contains information on pupil and school characteristics for all levels of state maintained school from nursery through to secondary. Our research is about the intakes of free schools and also about how the setting up of these new schools may influence the intakes of other schools in their locality. Hence we look at new intakes to schools in the three most recent years for which data are currently available: 2011/12, 2012/13 and 2013/14. Both primary school pupils and secondary school pupils are analysed (excluding special

schools). We consider reception year (Year R), the first year of primary school and Year 7 pupils, the first year at secondary school.²

For each school type we examine three indicators of the demographic profile. One is the proportion of a school's intake eligible for free school meals (FSM) (used as an indicator of a disadvantaged background – for discussion of the validity of this measure see Hobbs and Vignoles (2010)). Second, we examine an indicator of prior ability on entry to the school. In the case of secondary schools, this indicator is the mean Key Stage 2 (KS2) scores of the Year 7 intake; for primary schools, it is the mean score on the Foundation Stage Profile (FSP) of the Year intake. FSP is a standardised score from a teacher-assessed set of benchmarks recorded during the pupil's first year of primary school so is clearly an imperfect assessment of the child's attainment on entering the schooling system. KS2 is a nationally set and remotely marked test that is taken in English, maths and science at the end of primary school and so serves as a useful proxy for academic success at the point of entry to secondary school. Since the KS2 and FSP assessments change over our period of enquiry, we standardise all prior ability scores for each cohort-year. Our third indicator is a simple indicator of ethnicity, namely the proportion of the intake who are of white ethnic background.

For RQ1 we examine the demographic profile of the pupils in the neighbourhoods where free schools exist, relative to schools in the rest of England. Many different approaches to defining neighbourhoods and recruitment areas have been used in the past (see, for example, Harris and Johnston (2008) and Singleton et al. (2011)); we follow methods used in Allen and Burgess (2013) where a lower super-output-area (SOA) is assigned as a school's recruitment neighbourhood if a child who lives there has attended the free school in the past. SOAs are geographical areas with a mean population of about 1,500, nested between 2001 Census Output Areas and local authorities. Our approach allows us to construct measures of the demographic characteristics of years 7 and R pupils in these SOAs where free school have successfully recruited, regardless of whether or not the pupils themselves actually attend the free school in question.

Next, to investigate RQ2, we use the same approach to examine the demographic characteristics of the intake of each free school, and compare these with the neighbourhood profiles. This method follows the approach used in Allen et al. (2012) to show the extent to which neighbourhood pupils with particular characteristics appear to have been over- or under-recruited by the free school.

To consider RQ3, we use a longitudinal panel of data to discover whether the presence of a free school is yet affecting either the size or composition of the intakes of nearby schools. We look at

² In a small number of local authorities, year 7 is not the transfer year to secondary education; we ignore this for our analysis.

their impact on the three nearest schools and separately on those schools who recruit pupils from the same neighbourhoods as free schools, constructing this measure using SOAs as described above. We apply school-level regression models to analyse any impacts in six years of data from 2008/09, using school fixed-effect dummies to account for starting points in the size and composition of schools, time dummies to account for national trends in pupil populations and free school meals take-up, and controls for the local authority changes in deprivation and pupil population (grouping small local authorities to avoid confounding the localised impact of the free school itself; all Inner London and Outer London boroughs are grouped, as are other very small local authorities).

We also address RQ3 by considering the impact of the introduction of free schools on overall local authority segregation. We do this by constructing a local authority panel of data from 2008/09 onwards and modelling the index of dissimilarity (Duncan and Duncan, 1955) as a function of whether the local authority has a free school open in that year. Disentangling the impact of sorting from overall changes in FSM take-up, the population size and the number of schools needs to be done with care and we directly control for changes in these margins in the LA fixed effect regression (see Allen and Vignoles, 2007; Allen et al., forthcoming, for a discussion of issues such as small unit bias).

4. Findings

[TABLES 1, 2 AND 3 ABOUT HERE]

Only a small minority – about 2% -- of the schools in England are single-sex schools, and by the start of the 2013/14 academic year, as Table 1 shows, this proportion was roughly the same among free schools and other schools. The most notable aspect of the profiles of religious affiliation is the high proportions of free schools that are affiliated to non-Christian religions: 14 out of 88 (16%) for secondary schools and 10 from 63 (10%) for primary schools, compared to under 1% for other schools at either level. Put another way round, although only a tiny proportion of schools are free schools they account for a high proportion of certain types of religious denomination schools. Five out of 16 Muslim schools in England are free schools, and five out of the eight Sikh schools are free schools.³

Data on the nominal capacity and recent intakes of free schools is shown in Tables 2 and 3. The capacity figures reveal that the planned eventual size of free schools will reflect the large range of school sizes currently present in England, although the final planned size of secondary free schools is

³ The number of free schools where the religious character of the school was not identified in *Edubase* is also worth noting. It was over 10% of the total number for both primary and secondary schools. We use the websites of these schools to impute their religious character in Table 1.

about 30% lower than the current mean. However, data on pupil roll of intakes shows that free schools have initially admitted small cohorts, typically one or two form entry for year R and three or four form entry for year 7.

[TABLE 4 & 5 ABOUT HERE]

Tables 4 and 5 present cross-sections of NPD data from Year 7 and Year R, respectively. RQ1 is addressed by comparing statistics on the demographic characteristics of pupils in the neighbourhoods from which free schools recruit their pupils, compared to England as a whole. The rows separate the data by year of free school opening and year of pupil intake.

Table 4 shows that, relative to England as a whole, neighbourhoods from which free secondary schools recruit are more deprived – as indicated either by the proportion of pupils eligible for free school meals, or by the lower attainments at the end of primary school (captured by the standardised mean Key Stage Two score). The free school neighbourhoods also have a relatively small proportion of pupils of white ethnicity.

RQ2 can be addressed using the data on the free school intakes themselves. Taking all 63 free schools with Year 7 pupils in 2013/14 it can be observed that, on average, the proportion eligible for FSM was 19%. This was similar to the average for all other schools in England (17%). However, in the neighbourhoods from which free schools recruited their Year 7 intake the proportion eligible for free school meals was 23% in 2013/14.⁴ It would appear, then, that free schools have, to date, been established in relatively poor areas (RQ1) but recruit fewer poorer pupils in those areas than might have been expected if selection had been random (RQ2). The tables show a certain amount of fluctuation, but it is unwise to claim particular trends over time since there are very small numbers of free schools in 2011/12.

Differences between standardised mean KS2 scores (our indicator of the prior attainment of intakes) show less stark patterns with a mean of 0.05 in English secondary schools (this excludes special schools and so is greater than 0), of 0.00 in free schools and -0.02 in free school neighbourhoods. The first seven free secondary schools opened in 2011 appear to have intakes substantially more able than their neighbourhoods or England as a whole, but this has reversed with any advantage entirely disappearing in the 2013 cohort of new free schools.

⁴ We carried out statistical tests, which showed that pupils in free schools were neither more nor less likely to be in receipt of FSM ($p=0.17$), but that other pupils in free school neighbourhoods were significantly more likely to be receiving FSM ($p=0.00$). Such tests make the questionable assumption that the currently-existing free schools in the data are randomly drawn from, and therefore representative of, the population of free schools that might exist in future years.

Turning to ethnic composition, in England in 2013/14 some 77% of Year 7 pupils were categorised as being in the white ethnic group. But in the neighbourhoods from which free schools recruit their Year 7 pupils only 53% were of white ethnicity, while in free schools themselves just 54% were from the white ethnic group.

Table 5 shows that free school meals proportions follow the pattern seen in secondary schools, with free schools drawing from neighbourhoods slightly more deprived (21% FSM) than England as a whole (18%), but their own intakes being somewhat more advantaged (15%). Again, both free schools and their neighbourhoods are markedly less white in ethnic composition than England as a whole, with white ethnic proportions of just 36% and 46%, respectively. Their foundation stage profile scores (0.20) are markedly above both neighbourhood (-0.05) and national (0.01) averages and this is consistently the case across all cohorts of new free schools.⁵

[TABLES 6 & 7 ABOUT HERE]

While the data in Tables 6 and 7 suggest that free schools are more advantaged in intakes than other schools in the area, it gives no information on whether individual schools located close to a newly opened free school have yet seen any impact on either their pupil roll or the demographic composition of their intake – our RQ3. It is perfectly possible, for example, for a free school to open and attract the least deprived and most able intake in the area, yet not significantly damage any one other school, because the free school has recruited over a very wide area, because the free school intake is itself very small or because there is sufficient change in the size of the local population to absorb the opening of a new school. (Note that almost all pupils at free secondary schools were educated at state primary schools so there is no evidence they are recruiting pupils who would otherwise be educated privately.)

We address RQ3 through a series of school-level regressions on panel data covering 2008/09 to 2013/14 where the dependent variable measures a characteristic of the intake of the school. We first ask whether schools located close to a free school see a fall in their pupil roll that coincides with the opening of the school and then ask whether their free school meals proportion changes significantly at the time a local free school opens. Table 6 shows the results from 10 separate regressions, all secondary school-level panels with up to 6 years of observations per school. School fixed effects account for the starting points of school intakes so that we are able to identify any changes associated with recent school openings. Year dummies are included because both the pupil population and the free school meals take-up has changed over the past six years. Local authority

⁵ With the same caveat as for footnote 10, all these differences were statistically significant.

level size of pupil roll and FSM proportion control for more localised changes that are not due to the free school policy itself.

The first five columns report estimates that use a variety of approaches to measuring whether each secondary school in England is 'close' to a free school. The first column shows that the secondary school located geographically closest (as the crow flies, without regard for governance type) to a free school sees a fall in their pupil roll of about 8 pupils that coincides with the opening of the free school. The secondary schools second and third closest to a free school do not, on average, see a statistically significant change in the pupil roll. When these are excluded (column (2)), the estimated impact on the nearest school remains significant.

We next focus on exploring the impact on the nearest school in finer detail and show that the fall in Year 7 roll is not statistically significant for the first two years of free school openings but is estimated to be much larger (over 14 pupils) for the most recent 2013 cohort – see column (3). By interacting the nearest school variable with whether the free school is in an urban area we see (Column (4)) that rural secondary schools appear to be losing 44 pupils, on average, when a free school opens next door but that the damage is much less for urban secondary schools. This effect is most likely because parents are able to choose from relatively few schools in rural areas and so any impact of a free school opening is likely to fall overwhelmingly on a single neighbouring school. In an urban area, by contrast, free schools can recruit from across the city or town, particularly if there are good public transport options. Finally, in column (5) we use the definition of a recruitment-sharing neighbourhood introduced earlier to look at whether schools who have recruited from the same neighbourhood as free schools have also seen a fall in their size of their pupil intake. Our regressions suggest they lose about 6 pupils, on average. Of course, schools who recruit from the same neighbourhood do not necessarily compete directly for pupils if the market is very segmented by religion, social class groupings or ethnicity.

Columns (1) to (5) of Table 7 show exactly the same analysis for pupil rolls in primary schools. Interestingly we are not able to identify any statistically significant impact on pupil rolls at neighbouring primary schools using all the approaches described above. It is not clear why this should be so. It is true that free schools have opened in a period of rising pupil rolls across the country so that they can be absorbed into the system more easily, but we should be controlling for this overall growth in pupil numbers in both the year dummies and the local authority control variables. However, it is possible that free schools have been set up in areas of known demand for places which would explain why schools located close by do not typically see their roll fall.

[TABLE 6 & 7 ABOUT HERE]

We now turn to the impact on the social composition of neighbouring schools, using free school meal proportions as our measure of deprivation of intake and running the same set of regressions as described above. These estimates are shown in Columns (6) to (9) of Tables 6 and 7. We find no consistent impact on the average composition of intake at neighbouring schools, either for primary or secondary schools; indeed for secondary schools it is occasionally estimated to be associated with lower FSM. This missing effect on neighbouring schools is rather a surprise given the earlier conclusions from Tables 4 and 5 which showed that free schools have more advantaged intakes than the neighbourhoods from which they recruit. One potential explanation for the missing effect is either that free schools are not yet prevalent enough to draw any substantial conclusions about average impacts of the policy. Alternatively, it may be that free schools are recruiting from a wide area so that, whilst many schools may lose one or two pupils, no school is losing enough pupils to see a significant impact on the composition of their pupil intake. Indeed, this explanation is entirely consistent with the regressions of pupil roll that show only a small fraction of a free school's pupil intake (less than 10 out of an intake of around 100) has been taken from their nearest school or from any school with which they share recruitment neighbourhoods. So it is perhaps not surprising that these very small losses of pupils at individual schools have little impact on their social composition of intake. Also, free school meals indicators can only describe the sorting of the most deprived pupils and it may be that a slightly different pattern would emerge if we could identify the most socially advantaged families in our data.

Given that free schools are drawing an intake from a relatively wide area and that any measure of competitor schools does not adequately capture the complexity of how each school is recruiting, it is appropriate to use a second approach to answering RQ3. We explore whether there has been an increase in the free school meals segregation of pupil intakes across local authorities where free schools have opened. Tables 8 and 9 build up a set of local authority regressions with the Index of Dissimilarity as the dependent variable and an indicator for the opening of one or more free schools in the local authority as a key explanatory variable. They do this for Year 7 and Year R intakes, respectively. Local authority fixed effect dummies account for the underlying level of segregation in the area. Model 1 includes only these and year dummies which indicate that segregation has been falling, on average, in English primary and secondary schools between 2008/9 and 2013/4. Model 2 controls for changes in overall levels of deprivation and pupil numbers in the local authority. Model 3 shows whether the timing of the opening of one or more free schools in the local authority is associated with changes in segregation. There is no statistically significant association between free school meal segregation and the opening of free secondary schools. Table 9 reports that the opening of a free primary school is associated with a rise in local authority FSM segregation of 0.01 (on a

scale that runs from 0 to 1 and has a mean of 0.5 for primary school segregation). This is statistically significant at the 5% level but is only a very small rise.

5. Discussion

We began our investigation with the expectation of the English free school policy proposers that the new schools would emerge from civil society especially in disadvantaged areas, counterposed against the scepticism of the policy's critics who felt that the schools would favour middle-class catchment areas. Overall, the data show that in their first three years of operation free schools at both primary and secondary level have been started in neighbourhoods with somewhat greater disadvantage (higher FSM), lower proportions of white pupils (especially at primary level) and marginally lower levels of prior ability, compared with the average across England. In short, addressing RQ1 the data suggest that, as the government intended, while the differences are not huge, free schools had indeed opened up in areas of some disadvantage.

Yet, those critics who expected to find that free schools would be associated with social inequality will also find support from these findings. Addressing RQ2, we find that, compared to their neighbourhoods and to the composition of the nine schools nearest to each school, there is a substantive degree of social selection. At both primary and secondary levels, the proportions with FSM are lower in free schools than in their neighbourhoods. Quite what mechanism is at work, bringing about this result, is not evident from this finding, but the outcome is consistent with any or all of mechanisms suggested by critics.

With secondary schools, this local selectivity of pupils within neighbourhoods brings the overall proportion of FSM pupils into line with the national average, whilst primary free schools are a little more affluent. Taken together, one can say that the distribution of opportunities to attend free schools would not appear to be being concentrated among poorer households, but nor is it especially the preserve of better-off households.

With respect to prior ability, there is a marked difference between the findings at secondary and primary levels. At secondary levels, there appears to be little net selection on grounds of Key Stage 2 scores; whilst the first cohort of free schools admitted intakes with substantial academic advantages, this position has reversed in the 2013 cohort. At primary level there is consistent evidence that they have been taking pupils with higher Foundation Stage Profile scores than average within both the neighbourhood and England as a whole. However, we should acknowledge that FSP is by no means ideal as an indicator of ability prior to entry because it is teacher assessed during Year R.

On the question of ethnicity, it is clear that free schools have opened up in neighbourhoods with substantially more non-whites than average across England. Moreover, the analyses of RQ2 show that, in comparison with their neighbourhoods the primary free schools are taking a greater proportion than other schools of non-white pupils. This finding may be linked to the founding of several free schools affiliated to non-Christian faiths.

Weighing up the evidence on RQ3 we have found that, to date at least, despite their social selectivity free schools have had very little impact on the intakes of neighbouring schools. Despite the fact that the intakes into free schools have been shown to be different, we interpret our null finding as implying that the scale of free schools is yet too small to impinge on neighbourhoods in a major way or that free schools are recruiting from such wide geographical areas that their impact on any individual school is very muted. Early evidence covering 79 schools has found, for example, that the pupils of free schools travel a lot further to school, especially at primary level (National Audit Office, 2013). In the case of secondary schools we have also seen in Table 2 that the size of free schools is quite a lot lower than in other state schools. With primary schools, the founding of free schools has come at a time when, in most areas, demand for places is high; it may be that any free school impact is clouded by effects of the changing demographic profile of young children. As the number of free schools grows, with multiple free schools in some neighbourhoods, we would expect these impacts to become more noticeable.

The future growth of free schools depends on the political climate, and might receive a boost if a future government were to decide to open up free schools to profit-making education management companies, as is already the case in Sweden. Yet, even if the legal basis remains unchanged, as the new system beds down the character of free school founders may change. For example, education management organisations may expand their sphere of influence on free schools. It will therefore be important to monitor the social composition of free school pupils as new data emerge, if we are to evaluate how far they are achieving their stated aims of broadening opportunity.

As time progresses, and as successive free-school cohorts start to reach exam and test stages, studies of their impact on student progress will start to emerge. Given our finding that primary schools, in particular, are in practice socially selective in respect of prior ability, it will be particularly important in evaluations to look at the value-added scores of free and non-free schools, if one wants to obtain a good indication of their comparative performance.

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