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## **Ethnicity, gender, deprivation and low educational attainment in England – political arithmetic, ideological stances and the deficient society**

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### **Abstract**

Attainment data on England's school pupils is more extensive in coverage, detail, quantity, accessibility and of higher quality than monitoring statistics routinely available in other European countries. These data facilitate investigation of low attainment in England's schools, and its relationship to ethnicity, gender and poverty. This paper reviews longitudinal sample studies and extends this with simpler presentations of England's national attainment statistics for education over five years up to 2014.

The analyses show recurrent low attainment within specific ethnic minority groups, with gender and most strongly with low income sections of society.

There is a strong case, from these data and from other's research, that these inequalities are rooted in social and economic factors *outside the school*, created and sustained by neo-liberal economic practices and elitist structures. It is argued that reducing the proportion of children growing up in poverty will have a bigger impact on raising average attainment levels than focussing on in-school factors.

### **Keywords:**

Educational attainment, ethnicity, gender, deprivation, inequality, education policy making

## Introduction

England has an assessment regime in which all state school children are tested at ages 5 (Early Years Foundation Stage Profile), 7 (Key Stage 1), 11 (Key Stage 2) and 16 (Key Stage 4); Key Stage 3 assessments at age 14 were discontinued in 2010. Results nationally can be compared year on year for evidence of system improvement and to identify so-called poorly performing schools. Full national data sets available over many years foreground and quantify a number of national educational policy challenges. One challenge is low attainment which is unequally located in specific groups; 'closing the gap' between affluent and poor pupils is a concern across Europe (Clifton and Cook, 2012; OECD, 2012; Oppedisano and Turati, 2011). A second challenge, revealed in the data, is recurrent low average attainment of specific ethnic minority groups (DCSF, 2009a; Gillborn, 2008, 2010). Gender is the third area of policy challenge with girls out-performing boys by a margin of 10% at every assessment point, though this advantage does not persist beyond school into wage levels.

This paper returns to a tradition of political arithmetic in which Stevens (2007, p. 150) points to a progression over time in the focus of academic research on educational inequalities, which has moved successively from 'the deficient child through the deficient family to the deficient school'; this could be extended to *the deficient society*, an extension which demands attention be given to policy decisions and political resistance to addressing inequalities. Nearly two decades ago, Giddens, architect and intellectual champion of *The Third Way*, insisted that this third way 'must reduce inequality', and, if it does not, 'is a betrayal of the social democratic ideals of collective provision for the poor and needy' (Giddens, 1999, p. 25). In 2015, policy in the UK is still about 'removing barriers', adjusting

in-school factors (better teaching and discipline, improved school leadership, differentiation, progress-chasing via regular pupil assessment) rather than interventions to lift people out of poverty. The evidence is strong that the causes of low attainment lie largely outside school and could be better tackled if the poverty argument were accepted and addressed (Ball, 2010; Gorard and See, 2013; Ladd, 2012; Levin, 2006; Parsons, 2013; Smyth and Wrigley, 2013). The Spirit Level (Wilkinson and Pickett, 2009), UNICEF report cards (2012) and OECD reports (2015a and b) show just how poorly placed the United Kingdom is to embrace redistributive policies.

### **Large datasets and the analysis of inequalities in England**

Strand has analysed national datasets and the Longitudinal Study of Young People (LSYP) to unpick and weight factors associated with low attainment. He sets out the challenges for researchers and politicians both in terms of grasping the statistics, theorising inequalities and devising viable policy proposals.

Strand's analysis of the educational progress of an entire national cohort between age 7 and 11 (in 2004) showed that 'Black Caribbean boys not entitled to free school meals, and particularly the more able pupils, made significantly less progress than their White British peers' (Strand, 2010, p. 289).

Strand's (2011) 'The limits of social class in explaining ethnic gaps' draws on LSYPE data covering an interview survey of over 15,000 young people who were aged 14 in 2004. Raw scores produce an ordering where Pakistani, Bangladeshi, Black Caribbean and Black African groups perform below the levels of White British. Introducing family background, parental attitudes and student risk and protective factors reduces the apparent inequality, but Black Caribbean students,

stood out as attaining at lower levels than might be expected (Strand, 2011, p. 215). It also contains the following summary across gender, ethnicity and social class:

‘The gender gap was just 0.8 points with boys scoring lower than girls ... the ethnic gap (the difference between White British and Black Caribbean students) was ... 3.3 points. ... the social class gap ... 9.6 points’<sup>1</sup> (p. 203).

Strand’s 2012 paper looks at a specific claim of institutional racism whereby Black Caribbean students are disproportionately allocated to the lower tiers of a course at age 14 and cannot then achieve the top GCSE grades. He concludes that ‘this under-representation in the higher tiers [which] is specific to one ethnic group and persists even after taking account of extensive additional explanatory variables, suggests a significant cause for concern’ (p. 88).

Elsewhere, Strand (2014a) reports that Black Caribbean and those designated Black Other perform worst at age 11 with a White British-Black Caribbean gap of 0.45 of a standard deviation, and across socio-economic status (SES) groups, it is 0.57 (p. 227). ‘Low SES White pupils were the lowest achieving group’ (p. 239). He finds that, at 16 (in 2006), ‘The only group of students to make significantly less progress than White British students was Black Caribbean boys with high prior attainment (at all levels of SES) and those of average prior attainment at medium and high SES’ (Strand, 2014b, p. 158-9).

Strand’s studies, and others using data from the Youth Cohort Studies (Connolly, 2006) and the National Pupil Database (Kingdon and Cassen, 2010) are important but dated. There is an urgent need to clarify, reconcile and update competing claims about ethnicity, deprivation and gender correlates with low

attainment, which this paper sets out to do.

## **Methodology applied to school national attainment data for England 2009 – 2014**

The rest of this paper is the author's update of the ethnicity-gender-deprivation debate in relation to school attainment in England. It pays particular attention to the way the three major demographic variables – gender, ethnicity and deprivation - combine with different weight to affect low attainment, examining whether they combine in different ways at different assessment points or ages in pupils' school careers. Deprivation may exert a stronger influence on some ethnic groups than others, or affect one gender more than another within these ethnic groups, and this may be more marked at one key stage than another.

It seeks, in particular, to achieve the following:

- to identify the trend, between 2009 and 2014 period, in attainment for different ethnic groups at different assessment points in the school career;
- to clarify the associations of poverty and gender within ethnic groups with educational attainment and the change or consistency of the association at key stage assessment points from age five to 16;
- to evaluate claims of institutional racism;
- to set the UK position on child poverty in an international context;
- to revisit the arguments about low attainment and if this is best addressed through a focus on school improvement/effectiveness or social and economic interventions which address family poverty.

This paper builds on the work of Strand and other authors. The analyses are a reworking and combining of data from England's Department of Education's impressive excel *Statistical First Releases* (SFRs) containing drop-down menus for access to previous years or sub-groups. The data are presented in forms which bring to the fore the recurring patterns of inequality in relation to groups at different points in their school careers. The tables presented cover the period 2009 to 2014 for full national cohorts at ages 5, 11 and 16. There are six steps in what follows:

1. An overview of the population under discussion showing the *sizes* of the ethnic minority sections of this population compared with those classified as White or White British and the different Free School Meal (FSM) rates.
2. An examination of the performance by ethnicity for the Early Years Foundation Stage Profile (FSP), Key Stage (KS) 2 and KS 4 over four years. (KS 1 and KS 3 data have also been examined but tell essentially the same story and are not presented).
3. An analysis of mean attainment scores for the same three assessment points for 2014 by ethnicity separated into FSM – non-FSM and within that divided by gender.
4. An extension of the poverty argument is extended through IDACI (the Income Deprivation Affecting Children Index) which allows attainment levels to be identified from the poorest to the most affluent.
5. An international context on welfare regimes and child poverty in different countries and the impact of welfare transfers on poverty/inequality levels.

6. A consideration of ideological/theoretical explanations of racism and inequality in English education.

## **Results**

### *1. Overview of the school population in England*

Table 1 shows the relative sizes of ethnic groups in the contemporary school population of England, as a basis for an understanding of the scale and locations of inequality. Black, Asian and Mixed groups are disaggregated into their main sub-groups as it is misleading to deal with them as homogenous entities. Groups could be broken down further and, within the Black African category, children from some countries of origin countries achieve greater success, most notably Nigerians and Ghanaians compared with Somalis. Demie (2014) points to language diversity as important, with Black African speakers of Yoruba and Igbo achieving significantly higher than those speaking Somali and Lingala, to pick examples amongst the more numerous groups (p. 8). This level of detail is not available outside the National Pupil Database and is not part of this study.

Nearly 80% of pupils in schools in England are White and over 90% in that group are White British. The largest single minority ethnic group is Pakistani, followed by Black Africans; the latter have more than doubled in number over the last ten years. No individual minority group constitutes more than 4% of the total school population but they are not evenly spread. Some local authorities have over 50% ethnic minority pupils in their schools.

| <b>Ethnicity</b>  | <b>Number in school population</b> | <b>% in school population</b> | <b>% of ethnic group entitled to FSM<sup>2</sup> 2014</b> |
|---|------------------------------------|-------------------------------|---|
| White<br>(inc Irish, Travellers and other White background) | 5,222,070                          | 76.9%                         | 14.2%   |
| Black Caribbean   | 89,350                             | 1.3%                          | 29.4%   |
| Black African   | 232,065                            | 3.4%                          | 34.4%   |
| Other Black background                                      | 44,710                             | 0.7%                          | 31.9%   |
| Mixed White/Asian   | 95,785                             | 1.4%                          | 28.8%   |
| Mixed White/Black African                                   | 40,245                             | 0.6%                          | 26.8%   |
| Mixed White/Black Caribbean                                 | 73,555                             | 1.1%                          | 17.7%   |
| Any Other Mixed Background                                  | 115,560                            | 1.7%                          | 22.0%   |
| Indian  | 180,995                            | 2.7%                          | 9.0%  |
| Pakistani   | 273,465                            | 4.0%                          | 24.7%   |
| Bangladeshi   | 110,735                            | 1.6%                          | 34.2%   |
| Any other Asian background                                  | 111,720                            | 1.6%                          | 15.1%   |
| Chinese   | 26,725                             | 0.4%                          | 7.7%  |
| Any other ethnic group                                      | 106,115                            | 1.6%                          | 29.7%   |
| <b>TOTAL</b>  | <b>6,791,030</b>                   |                               | <b>16.3%</b>  |

Source: DfE (2015c) SFR21/2014 Table 4a

**Table 1. Number and percentage of pupils by ethnicity for England showing rates of Free School Meals entitlement, January 2014**

FSM rates vary enormously (Table 1, right column). While most ethnic minority groups have higher *rates* of FSM, a greater *number* of FSM children over all are White (over 700,000). The House of Commons Education Committee (2014) pointed out how limited the use of free school meals is in analyses which require a full grasp of the relationship between *gradations* of poverty and attainment. Tables 6 and 7 apply IDACI deciles to attainment.

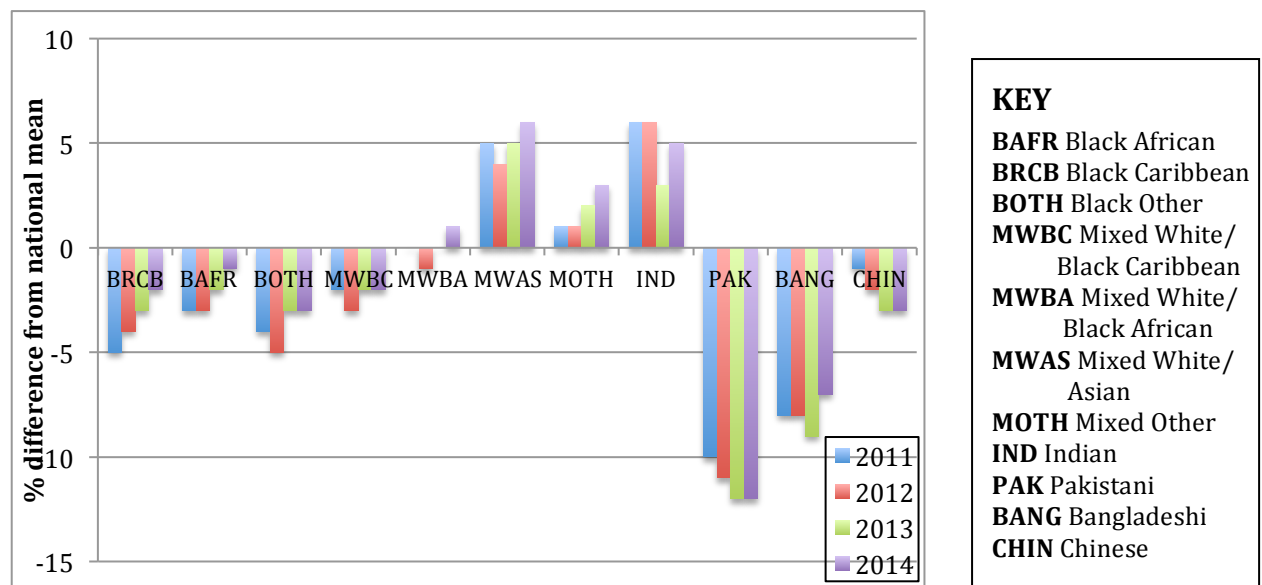
## *2. Attainment by ethnicity at three assessment points*

In the analyses of national data and charts presented below, the level of attainment of White pupils (being four fifths of all pupils) is not included in the graphs because their position is so close to the national mean it would barely



show. Separating White British from other White groups, which are under 4% of the White total, also makes minimal difference<sup>3</sup>.

Figures 1 to 3 below demonstrate that, over a four year period, the three Black groups perform consistently quite differently from the Mixed White/Black Caribbean and Mixed White and Black African groups of children. The key to ethnic group abbreviated names, presented to the right of Figure 1, applies to all three Figures. Where no bar is shown on a graph for an ethnic group for a particular year, it is because the group mean is so close to the national mean as to be indistinguishable (MWBA is the group to for which this most commonly occurs).



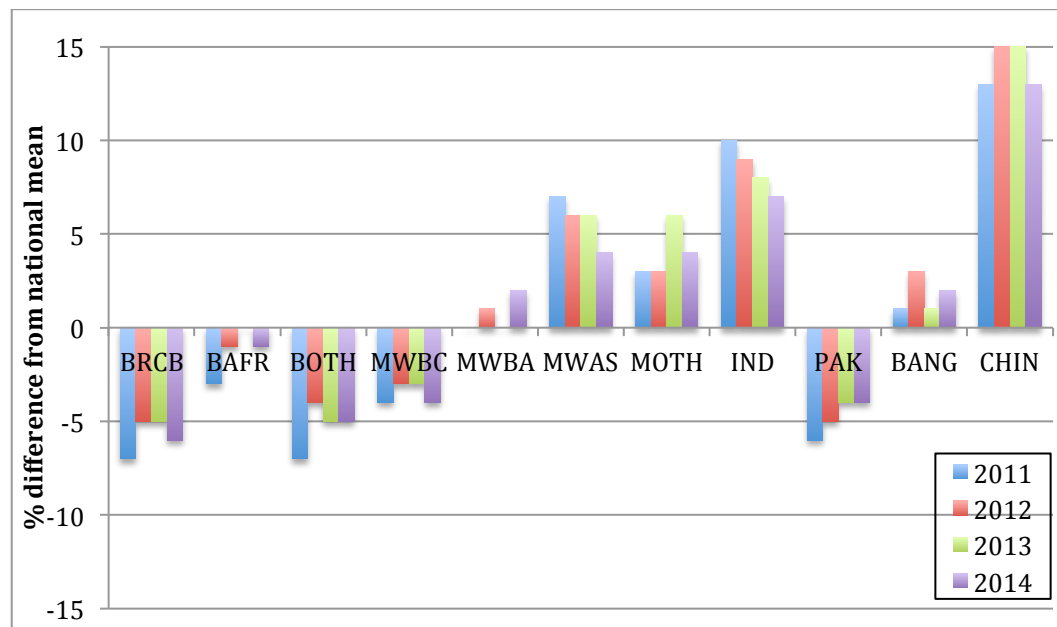
\* 6 or more points in each of the 7 scales of PSE (personal and social education) and CLL (Communication, Language and Literacy). Source: DfE 2013c Table 21; DfE 2014a Table 2a. Data for 2013 are not comparable.

**Figure 1. Ethnicity and Attainment at the Foundation Stage Profile (FSP) (age 5) – percentage difference from national mean achieving a good level of development 2009-14\***

Figure 1 shows that, at the Foundation Stage, Indian and Mixed White/Asian children perform better than any other group. The Mixed White/Black African and Mixed White/Black Caribbean groups are less than 5% below the national

mean for all five years. All three Black groups and Pakistani and Bangladeshi children are well below the national mean at this early stage in education, but attainment improves, year by year, for most of these groups in relation to the national mean.

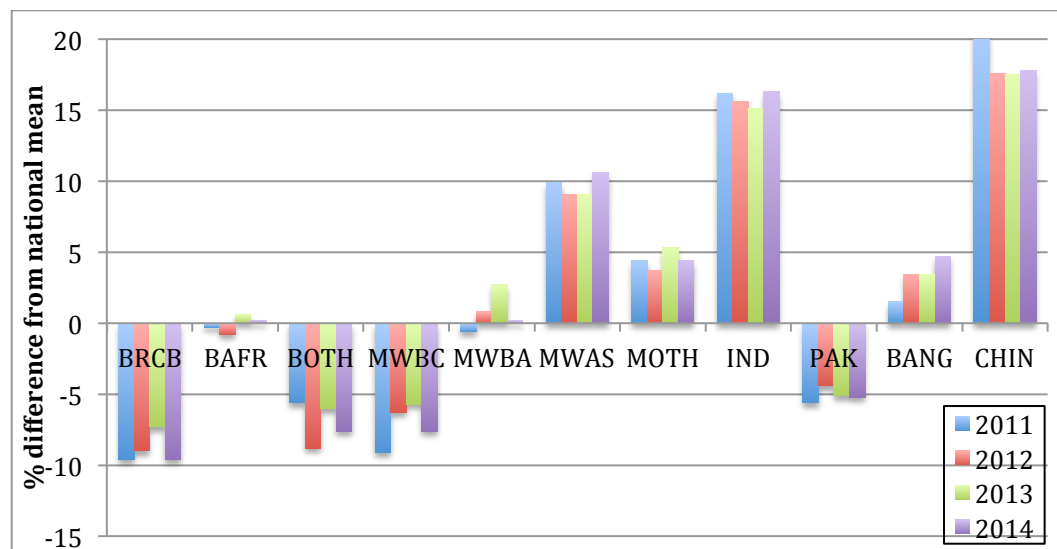
Figure 2, Key Stage 2 assessments, shows Indian and Chinese pupils well above average attainment levels. Attainment levels for Pakistani pupils improved over the four years 2011-14 but Black Caribbean, Black Other and Mixed Black/White Caribbean groups continued to have low average attainment scores. Black African pupils were close to or at the national mean level and Mixed White/Black African pupils were performing at or above the average. Bangladeshi pupils perform above the national average, an improvement when compared with their levels at the Foundation Stage. Chinese and Indian pupils clearly excel.



Source: DfE 2015a Table 2

**Figure 2. Ethnicity and Attainment at the KS2 (age 11) – percentage difference from national mean on achievement of Level 4 or above in English and mathematics 2011 – 2014**

In Figure 3, Chinese and Indian groups are consistently above the national mean attainment level; interestingly, if not in itself causally persuasive, they are the two groups with lowest proportions of children on FSM. The trend for Bangladeshi pupils has been upwards, and exceeds the national mean from 2011 onwards. The differences amongst the three Black groups and the two Mixed groups demonstrates the wisdom of disaggregating and the need to recognise their different levels of performance sustained over years. Black African and Mixed White/Black African pupils are now clearly differentiated from Black Caribbean, Black Other and Mixed White/Black Caribbean pupils in terms of attainment.



Source: DfE 2015c Table 9b

**Figure 3. Ethnicity and Attainment at KS4 Age 16 (5A\*-C inc Eng and Maths) – percentage difference from national mean 2011 – 2014**

The three figures demonstrate the consistency of outcomes across the period and how some ethnic groups, notably Bangladeshis, show improved results at Key Stage 4.

### 3. Mean attainment ethnicity, deprivation and gender

Tables 2 - 4 represent a further breakdown of these groups at three assessment points to ascertain whether, within categories of ethnicity and deprivation, the performance of boys differs from girls. National percentage data for these groups by gender and FSM displays a constancy over time though only 2014 figures are shown here; data from 2013 in Appendix 1 show a very similar picture for all three assessment points. Text accompanying the tables below summarises the highest attainers, lowest attainers and the 'gap'.

| 2014                            | FSM  |       | Non-FSM |       | ALL | Gap non-FSM/FSM | Gap non-FSM/FSM |
|---------------------------------|------|-------|---------|-------|-----|-----------------|-----------------|
|                                 | Boys | Girls | Boys    | Girls |     | Boys            | Girls           |
| White                           | 32   | 49    | 55      | 72    | 60  | 23              | 23              |
| Black Caribbean                 | 39   | 59    | 51      | 69    | 56  | 12              | 10              |
| Black African                   | 42   | 61    | 51      | 68    | 57  | 9               | 7               |
| Other Black background          | 38   | 59    | 50      | 66    | 55  | 12              | 7               |
| Mixed White and Black Caribbean | 38   | 55    | 53      | 72    | 56  | 15              | 17              |
| Mixed White and Black African   | 40   | 57    | 55      | 72    | 59  | 15              | 15              |
| Mixed White and Asian           | 37   | 56    | 58      | 77    | 64  | 21              | 21              |
| Other mixed background          | 38   | 59    | 56      | 73    | 61  | 18              | 14              |
| Indian                          | 40   | 55    | 56      | 72    | 63  | 16              | 17              |
| Pakistani                       | 32   | 46    | 39      | 55    | 46  | 7               | 9               |
| Bangladeshi                     | 38   | 53    | 45      | 60    | 51  | 7               | 7               |
| Other Asian background          | 39   | 54    | 48      | 66    | 56  | 9               | 12              |

Source: DfE (2015b) Table 2a. Overall national mean = 58

#### **Table 2. Early Learning Goals Foundation Stage Profile (age 5) showing percentage achieving 'at least the expected standard in all Early Learning Goals' (2014) and the FSM/non FSM Gap 2014**

Table 2 demonstrates regularities in the differences, represented also for the most part in Tables 3 and 4.

The *highest attaining* early childhood groups overall are Mixed White and Asian and Indian. White, all four Mixed groups and Indian children score highest amongst the non-FSM children.

The *groups which score lowest* are White FSM boys and girls and Pakistani FSM boys and girls but it is White boys and girls and Mixed White/Asian pupils who display the largest gaps (two right hand columns).

The *gap* between boys and girls at this early stage is large, over 15% for most ethnic groups, and for both FSM and non-FSM columns the gender gap is little different. The gender gap is smaller in the non-FSM columns than in the FSM columns in almost every case. The deprivation factor appears to affect FSM boys to a greater extent.

Table 3 presents the same figures for the end of KS 2 (age 11). The *highest attaining* average percentages in the ALL column are for pupils of Indian, Other Asian background, Bangladeshi, Mixed White and Asian and Other Mixed background groups achieving the Level 4 standard than White pupils. Non-FSM Black African almost equal, and Mixed White and Black African pupils exceed, the White average for 2014 which they did not do consistently in previous years (see Appendix Table A2). The higher achievement of FSM boys and girls in Black African, Bangladeshi, Indian and Mixed White and Black African groups is notable.

The *lower scores* in the non-FSM columns for Black Caribbean, Other Black background and Pakistani pupils is more marked for boys; though only slight, it is replicated in the 2013 figures (Table A2). White FSM boys are lowest in the Boy column and White FSM girls the lowest in the Girl column.

The *gap* between FSM and non-FSM pupils for White pupils is strikingly large, rivalled only by Mixed White and Asian. The gender gap is smaller in the non-FSM columns than in the FSM columns in almost every case; as for table 2, the

deprivation factor would appear to affect 11 year-old FSM boys to a greater extent.

| 2014                            | FSM  |       | Non-FSM |       | ALL | Gap non-FSM/FSM | Gap non-FSM/FSM |
|---------------------------------|------|-------|---------|-------|-----|-----------------|-----------------|
|                                 | Boys | Girls | Boys    | Girls |     | Boys            | Girls           |
| White                           | 56   | 66    | 79      | 85    | 79  | 23              | 19              |
| Black Caribbean                 | 61   | 71    | 73      | 80    | 73  | 12              | 9               |
| Black African                   | 69   | 75    | 78      | 84    | 78  | 9               | 9               |
| Other Black background          | 63   | 73    | 75      | 80    | 74  | 12              | 7               |
| Mixed White and Black Caribbean | 59   | 70    | 77      | 84    | 75  | 18              | 14              |
| Mixed White and Black African   | 67   | 74    | 82      | 86    | 81  | 15              | 12              |
| Mixed White and Asian           | 64   | 75    | 84      | 89    | 83  | 20              | 14              |
| Other mixed background          | 66   | 74    | 82      | 87    | 81  | 16              | 13              |
| Indian                          | 73   | 84    | 85      | 88    | 86  | 12              | 4               |
| Pakistani                       | 65   | 71    | 75      | 79    | 75  | 10              | 8               |
| Bangladeshi                     | 75   | 78    | 81      | 84    | 81  | 6               | 6               |
| Other Asian background          | 72   | 80    | 82      | 87    | 83  | 10              | 7               |

Source: Extracted from DfE (2015a), Table 9a. Overall national mean = 79

**Table 3. Percentage of pupils achieving Key Stage 2 (age 11) Level 4 reading, writing and mathematics by ethnicity, free school meal eligibility and gender 2014**

| 2014                            | FSM  |       | Non-FSM |       | ALL | Gap non-FSM/FSM | Gap non-FSM/FSM | Number  |
|---------------------------------|------|-------|---------|-------|-----|-----------------|-----------------|---------|
|                                 | Boys | Girls | Boys    | Girls |     | Boys            | Girls           |         |
| White                           | 24   | 33    | 55      | 65    | 56  | 31              | 33              | 446,232 |
| Black Caribbean                 | 31   | 43    | 42      | 58    | 47  | 11              | 15              | 7,606   |
| Black African                   | 41   | 51    | 56      | 67    | 57  | 16              | 15              | 16,274  |
| Other Black background          | 31   | 42    | 47      | 62    | 49  | 16              | 20              | 3,101   |
| Mixed White and Black Caribbean | 27   | 37    | 48      | 60    | 49  | 21              | 23              | 7,380   |
| Mixed White and Black African   | 35   | 48    | 57      | 65    | 57  | 23              | 17              | 2,355   |
| Mixed White and Asian           | 38   | 46    | 67      | 77    | 67  | 29              | 32              | 4,607   |
| Other mixed background          | 36   | 45    | 61      | 70    | 61  | 25              | 25              | 7,607   |
| Indian                          | 50   | 62    | 70      | 80    | 73  | 20              | 18              | 13,417  |
| Pakistani                       | 39   | 45    | 51      | 59    | 51  | 12              | 13              | 18,595  |
| Bangladeshi                     | 52   | 61    | 60      | 69    | 61  | 8               | 9               | 8,148   |
| Other Asian background          | 41   | 56    | 59      | 71    | 62  | 18              | 15              | 7,977   |

Source: DfE 2015b Table 5. Overall national mean = 56.6

**Table 4. Percentage of pupils achieving 5A\*-C GCSEs including mathematics and English at Key Stage 4 (age 16) by ethnicity, free school meal eligibility and gender 2014**

Table 4 presents GCSE results and the numbers in each ethnic category. There has been a remarkable consistency across five years of data examined and Appendix 1 Table A3 gives comparable data for 2013.

The *highest attainment levels* (ALL column) show most ethnic minorities above the attainment level of White pupils. Black African and Mixed White and Black African score increasingly well from 2012 onwards and, in the non-FSM column, both exceed the White score. Indian and Mixed White and

The *lowest attainment levels* in the FSM columns are for White boys and girls, with Mixed White and Black Caribbean, Black Caribbean and Other Black background also distinctly low.. Non-FSM Black Caribbean and Mixed White and Black Caribbean do relatively poorly, with Other Black backgrounds almost as far below the White means. For these groups, the boys appear to average a more depressed score, echoing two clear messages reported in Strand's (2014b) work that non-FSM Black Caribbean pupils (boys and girls) and, to a slightly lesser extent, Mixed White and Black Caribbean pupils, perform at KS4 well below the corresponding White group. Pakistani pupils are the most numerous and lowest attaining Asian group, standing out particularly in the non-FSM columns.

White FSM pupils score at a very low level, way below the levels of any other ethnic group. Though a smaller *proportion* of the total of White pupils, these FSM pupils would number in excess of 65,000, almost four times the total number of the largest ethnic minority group, Pakistani, and nearly ten times as large as the total of Mixed White and Black Caribbean pupils, which have the next lowest percentage of 5A\*-C grades at GCSE..

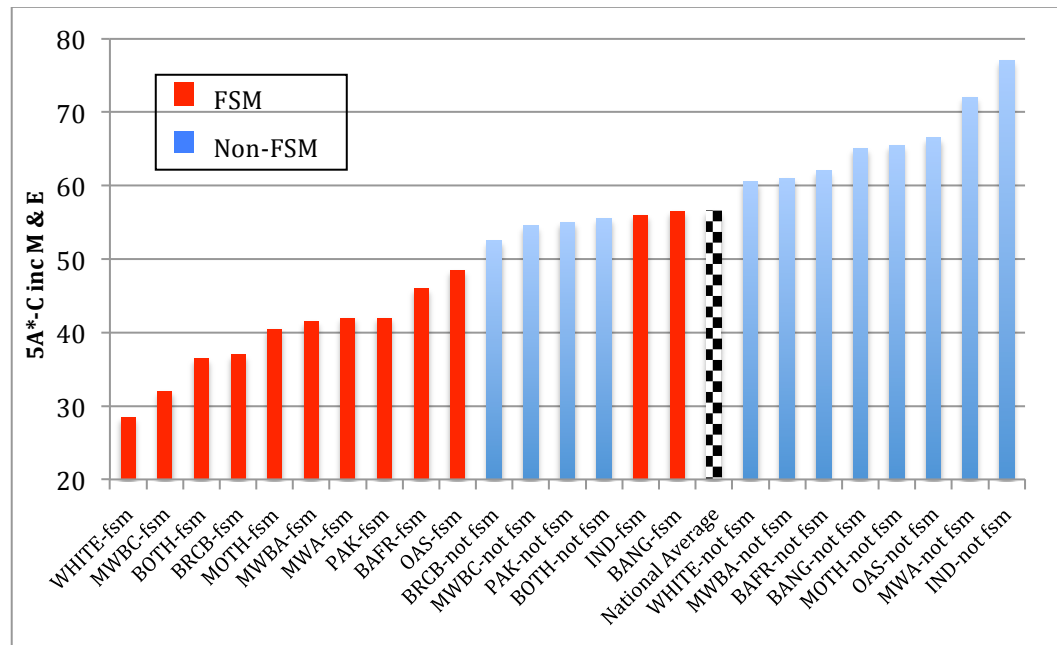
The *gap* between boys and girls remains constant, whether for FSM or non-FSM pupils. The size of the *gap* for FSM/non-FSM White boys and girls exceeds 30 percentage points (for this and earlier years), a gap far greater than for any other ethnic group; only Mixed White and Asian pupils come close, again, with remarkable consistency, but, for this group, attainment levels are much higher, particularly for girls.

These tables for the three assessment points indicate the need to particularise arguments about which groups need to be recognised as performing poorly and benefiting least from state education. To highlight just two overall conclusions: Black Caribbean, Other Black Background, Mixed White and Black Caribbean and Pakistani heritage pupils achieve lowest results through to age 16 while Black African, Mixed White and Black African and Bangladeshi pupils appear to achieve better and better as they get older, whether in the FSM or non-FSM columns; White FSM pupils do consistently poorly and at every age level from age 5 onwards, with both boys and girls, falling increasingly further behind. Poverty affects education outcomes more for some ethnic groups than others, and at KS2 the poverty impact is greater for boys than girls though fairly equal at KS 4 as shown by the 'Gap' columns in Tables 3 and 4. .

Figure 4 is a visual summary of the FSM dimension for 12 ethnic groups at KS 4 in 2014, paralleling to some extent Strand's 2011 example (Strand, 2014b, p. 135). White FSM pupils clearly have the lowest mean. By disaggregating the Mixed Heritage pupils, one sees that Mixed Black/White Caribbean, Black Other and Black Caribbean pupils amongst FSM pupils have very low mean attainment scores. More affluent Black Caribbean, Mixed White/Black Caribbean and Other

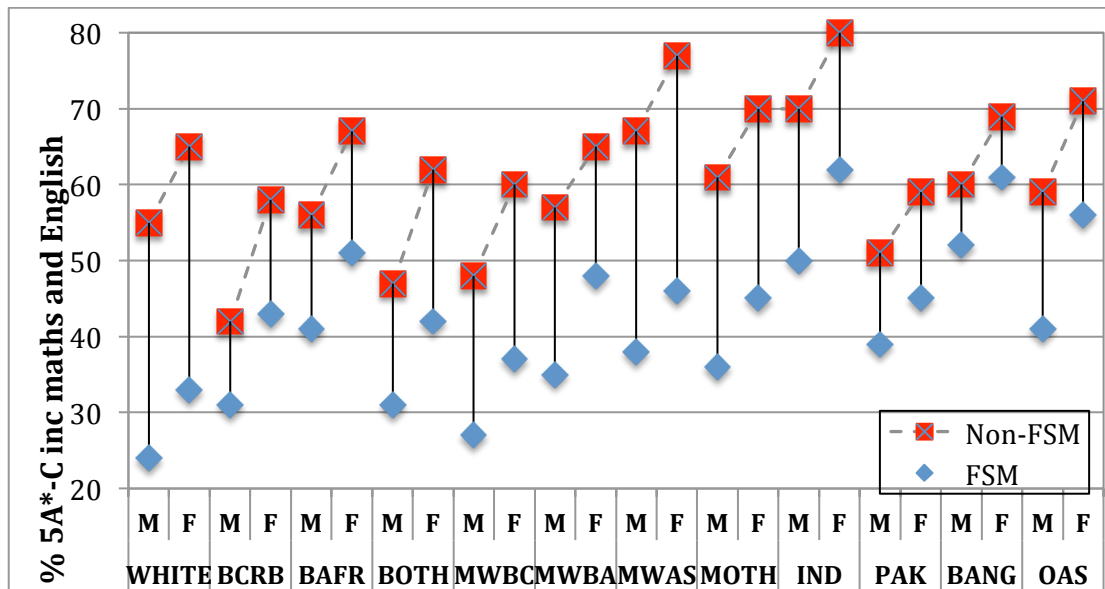


Black background pupils are not reaching attainment levels one might expect. These three groups, plus Pakistanis are the lowest of the non-FSM pupils. At the upper end, seven non-FSM ethnic groups exceed the average attainment level for White non-FSM pupils.



**Figure 4. Ethnicity and FSM status and Attainment at KS4 Age 16 (5A\*-C inc mathematics and English) 2014<sup>4</sup>**

Figure 5 shows pictorially, within gendered ethnic groups, the consistent difference between boys and girls and the comparative gaps between the FSM and non-FSM pupils. The vertical line is longer for both boys and girls of some ethnic groups (White and Mixed White/Asian) than others (Pakistani, Bangladeshi and Other Asian pupils) indicating a bigger gap between FSM and non-FSM. The gender gap is regular within all groups, as indicated by the upward gradient dashed line, but greater (a longer, steeper line) in Black Caribbean, Black Other and Mixed White/Black Caribbean.



**Figure 5. KS 4 GCSE attainment by FSM/non-FSM and gender within ethnic categories 2014**

There is no simple figure which sensibly *quantifies* the ‘ethnicity effect’: the percentage of Chinese and Indian children attaining the benchmark 5A\*-C grades at GCSE is some 18 percentage points above the national mean; pupils designated White have a mean score close to the national mean; smaller percentages of Black Caribbean, other Black background, Mixed White/Black Caribbean and Pakistani heritage pupils reach the national average. This is evident from Tables 3 and 4, from Figure 5 and Appendix 3, Tables A6 and A7. There is, therefore, a ‘benefit’ associated with some ethnic groups and ‘deficit’ for others; and they are the same groups over the last five to 10 years.

Taking ethnicity, gender and deprivation serially, one can calculate the ‘negative impact’ on groups in relation to these attributes. These are shown for Key Stage 2 and 4 for 2014 in Appendix 3. At KS 4, ethnicity is related to an ‘impact’ range from a mean ‘benefit’ of 17 per cent points or a mean ‘deficit’ of 10 per cent points and it is not sensible to average this out. Being a boy brings with it a mean ‘negative impact’ of about five percentage points. Being a pupil categorised as

eligible for free school meals brings a *further* 'deficit' of 20 percentage points. It is, as Connelly et al (2014), in an unhelpful, triumphalist tone, state, 'Socio-economic differences in educational attainment trump both race and gender' (p. 62).

Translated into odds, Table 5 gives a selection to show the comparative chances of achieving the national standard at age 16 against the chances of not achieving this. Thus, White pupils have an average chance of 56% compared with Indian pupils 73% chance of achieving this. Being a boy reduces the mean chance by around 5% per cent points. Being a boy and in the group eligible for Free School Meals reduces the odds to a 24% chance for White FSM pupils (3 to 1 against in horse racing terms, or 1 in 4). For a non-FSM Indian girl, the odds are 80:20, or an 80% chance or 4 to 1 on. This and other levels of inequality can be derived from Table 4.

Poverty reduces odds to around 30%, whether for FSM or for those from the poorest quintile (Appendix table of neighbourhoods. Gender is significant, but being a boy does not reduce the chances of attaining the national mean as much as being poor.

| <b>ETHNICITY</b>                | <b>Odds ALL</b> | <b>Odds when Boy</b> | <b>Odds when FSM Boy</b> |
|---------------------------------|-----------------|----------------------|--------------------------|
| White                           | 56:44           | 51:49                | 24:76                    |
| Indian                          | 73:27           | 68:32                | 50:50                    |
| Black Caribbean                 | 47:53           | 39:61                | 31:69                    |
| Other Black background          | 49:51           | 42:58                | 31:69                    |
| Mixed White and Black Caribbean | 49:51           | 43:57                | 27:73                    |
| Pakistani                       | 51:49           | 48:52                | 39:61                    |
| National (558,000 pupils)       | <b>57:43</b>    | <b>52:48</b>         | <b>29:71</b>             |

National average for 5A\*-C inc Maths and Eng 56.6

**Table 5. Odds of achieving the national mean attainment level at KS4 Age 16 (5A\*-C inc. Maths and Eng) 2014**

#### 4. Attainment and the Income Deprivation Affecting Children Index

The Income Deprivation Affecting Children Index (IDACI) is helpful in taking us beyond the FSM/non-FSM duality. The IDACI is a child poverty measure calculated for the 32,482 super output areas (SOAs) across England. The areas can be ranked in terms of deciles, 10% steps from the most to the least deprived. IDACI is a measure of the proportion of children under the age of 16 in an area living in low income households mainly defined by receipt of welfare benefits<sup>5</sup>. It is not a measure which attaches directly to a child or its family's income; the 'score' is for the SOA in which they live. It produces interesting results in terms of educational attainment.

|                                       | 2009 | 2010 | 2011 | 2012 | 2013 |
|---------------------------------------|------|------|------|------|------|
| <b>Reading</b> - % attainment gap     | 17   | 17   | 15   | 13   | 11   |
| <b>Writing</b> - % attainment gap     | 20   | 19   | 18   | 16   | 13   |
| <b>Mathematics</b> - % attainment gap | 13   | 13   | 12   | 10   | 9    |
| <b>Science</b> - % attainment gap     | 15   | 15   | 14   | 13   | 12   |

Source: DfE 2013a Table 1e (2014 figures not available)

#### **Table 6. Key Stage 1 (age 7) percentage points attainment gaps between pupils in least deprived and most deprived IDACI deciles achieving level 2 and above in each subject in National Curriculum assessments 2014**

Table 6 shows the differences between the least and most deprived deciles in all four curriculum areas at KS 1. The differences are big, although the 'gaps' reduced over the five year period, by one third in reading and writing.

Appendix 2 Tables A4 and A5 show mean attainment scores for each decile at KS 2 and 4. Table A5 shows a relentless climb by one to two percentage points for each step up the IDACI decile scale for almost every year. Efforts to reduce this gap have had some success reducing the percentage points gap by a third.

Similarly, Table A5 shows, for 16 year-olds, a rise of two, three or four percentage points rising up the IDACI decile scale. The gap between top and

bottom reduced by nearly a quarter over the years displayed. One can see greater improvements in the levels of attainment of the poorer deciles, as for Key Stage 2, but the improvements possibly attributable to schools' efforts are dwarfed by the enduring poverty-related difference. The case for there being a substantial and enduring link between attainment and straightforward 'income deprivation' is strong.

##### *5. An international context to poverty and attainment*

England's income redistribution is relatively ungenerous, leaving a big gap between rich and poor, as represented by the Gini coefficient<sup>6</sup>. Only Spain has a bigger Gini Coefficient gap after taxes and transfers have been taken into account. UNICEF (2012) reports on comparisons of child poverty in affluent countries shows the UK as having a higher proportion of children in poverty than most of the countries with which it would want to be compared. The Scandinavian countries and The Netherlands have enviably low levels and France and Germany do significantly better than the UK. Jerrim (2012) reports that, 'The association between family background and high achievement is found to be stronger in England than in most other developed countries' (p. 159).

Wilkinson and Pickett's (2009) diverse list of measures, where wellbeing is better where inequality is low, is persuasive (there is a chapter on educational performance). In more equal societies, child well-being measures are higher, mental illness rates lower, use of illegal drugs is lower, the teenage birth rate is lower and women's status is higher – to list but a few of the areas associated with greater equality. OECD (2015a and b) sets out the reasons why inequality is bad, morally and economically, and how the state needs to do more to address it

and has a section on 'Reducing inequality in educational outcomes' (p. 46).

## **Discussion**

This section summarises the quantitative evidence on low attainment by specific groups, the roles of ethnicity, gender and poverty and the effect which might be attributed to the school in countering inequalities. It finally considers a society's responsibility for the production and maintenance of poverty and the *deficient society*. It is appropriate to begin with the assertion that the race effect can be positive or negative, and that large variation must be acknowledged in theoretical and policy discussions. Ethnicity accounts for about one quarter of the gender (boy) FSM effect. Gender affects the mean score at KS 2 and KS 4 by around one third of a standard deviation, FSM by over one standard deviation and the gender/FSM effect is one and half standard deviations.

### *Poverty and low attainment*

White FSM pupils, both boys and girls, are the largest FSM group and the lowest attainers at age 5, 11 and 16 with unbroken regularity. A negative 'deprivation impact' of around 17 percentage points at KS 2 and 22 percentage points at KS 4 is calculated from the 2014 national data (see Appendix Tables A6 and A7). The number of White FSM KS 4 pupils was 63, 370. This is the largest group and they achieve the lowest mean scores

There have been calls for family poverty to be addressed and government reports press for this in relation to health, education and social mobility (Institute of Health Equity, 2013, p. 23; DCSF, 2009, p. 6; Social Mobility and Child Poverty Commission, 2013, p. 10). Poor communities suffer from a range of social ills in inner cities, coastal areas, ex-mining and other deindustrialised

areas and their engagement with education has been documented (Willis, 1977; Corrigan, 1979; Thomson, 2002; Parsons, 2012).

A much overlooked publication, *Parenting in Poor Environments* (Ghate and Hazel, 2002), gives detail and causal links on what makes support for children and young people in deprived circumstances necessary. The Joseph Rowntree Foundation (2015) similarly explicates the mechanics of poverty and the struggles it poses for relationships, parenting and lone parenthood. Cooper and Stewart (2013), in their earlier Joseph Rowntree publication, identified 'significant effects of household financial resources on wider outcomes for children, including cognitive, social-behavioural and health outcomes .... Money itself makes a difference to children's outcomes' (p. 70). Pickett and Vanderbloemen (2015) write relatively optimistically about the effect of the Pupil Premium, but reduce confidence about in-school prevention and intervention initiatives by the use of the cliff edge metaphor - erecting a fence, having an ambulance waiting at the bottom or even stopping people being motivated to rush to the cliff's edge.

'The educational parallel to the ambulance and the cliff analogy is that educationally focused policies and interventions cannot deal with the structural issues of poverty and inequality which are the root causes of educational inequality' (p. 23).

The Social Mobility and Child Poverty (SMCP) Commission (2013) 'holds Government's feet to the fire', focusing on 'what the UK governments .... are doing to tackle poverty and improve mobility' (p. 1). Amongst its suggestions are to 'unlock social progress' and to ensure that 'family incomes that are supported

by decent levels of pay and the right incentives to find employment and work enough hours' (p. 2). The Commission's record to date is not impressive.

The policy implications from these calculations, if there is authentic commitment to child protection writ large and social justice for children, is for adjustment to the distribution of wealth and income, partly through social transfers to bring the UK nearer to some of its European neighbours. This area is one where change can be effected in ways it cannot be with gender and ethnicity.

### *Gender*

Girls do better on average than boys at every stage in education, whatever ethnic or deprived sub-group they are in. A negative 'boy impact' of 0.34 at KS 2 and 0.39 of a standard deviation at KS 4 can be calculated.

Girls comprise slightly under half of the each of the age cohorts from Foundation Stage (5) to GCSE (16), but a slight majority at A Level (DfE, 2015d), where they continue to achieve better average results in average points scores, though not in the proportion achieving 3 A\*-A grades (p. 5) or in the Russell Group of Universities' 'facilitating subjects' (p. 11). There is still the marked difference in subject choice at A Level. Eighteen year-old women were also one third more likely to go to university in 2014 (UCAS, 2015). The debate about girls' experience of education has moved beyond concern over curriculum content and teaching styles to broader concerns of progress beyond formal education whether school or higher education. Skelton and Francis (2009) provide an excellent account of the phases of feminist agendas on girls' education. The focus has swung to boys' under-achievement (Wilson, 2014) with explicit attention to so-called working class boys. Yet amongst girls, the same degree of low attainment is shown relative to other girls. White FSM girls are the lowest



attaining girl group at 16 (Table 4 and Figure 5). Dillabrough et al. (2008) with a global and historical span write of girls' and women's identities and seek to 'reposition' the debate in this wider ecological and life-span context. The policy implications here are complex and multi-faceted.

The double negative impact of being both a boy and poor is around 20 percentage points at KS 2 and 30 percentage points at KS 4. There is considerable variety in the impact of poverty as indicated by FSM eligibility on different ethnic groups (see Appendix Table A6).

### *Ethnicity*

Analyses of national DfE data, and repeated 'snapshot' measures over time, in whole age-group populations, show trends and constancy in attainment levels for different groups and it is the disaggregating of the 'Black' and 'Mixed' ethnic categories which reveals specifically where sustained low average attainment is found. One cannot talk about Black or Asian pupils under-performing when we see that at every level, but increasingly towards the later stages in education, it is specifically Black Caribbean, other Black background and Mixed White and Black Caribbean pupils who perform poorly along with Pakistani pupils; arguably social and educational system inputs over decades have not worked sufficiently well (DCSF, 2007, 2008, 2009a). 'Passive racism' (Parsons, 2009) draws attention to ethnic inequalities that are recognised, year on year, yet the focus and resources devoted to correcting these inequalities are insufficient.

Action cannot be limited to the school alone, but one has to note the strong performance at Key Stage 4 of Black African, Mixed White and Black African and Bangladeshi students of both sexes whether of FSM or non-FSM status (see again

Table 4). Indian and Chinese (the latter not shown) pupils consistently achieve higher. These differences should prompt a sensitivity to the cultures of the different groups which Archer and Francis (2007) on Chinese pupils and Richardson and Wood (2004) on Pakistani pupils amply display. The label ‘institutional racism’ applies poorly to the situation where Black groups vary greatly in the benefits gained from education.

Critical Race Theory, imported from the USA, where it may well apply (Taylor, Gillborn and Ladson-Billings, 2009), has little useful to say in the English context. Notions of ‘conspiracy’ (Gillborn, 2008) or ‘white supremacy’ (Gillborn, 2005) do not contribute to explaining the long-standing low attainment of Black Caribbean, Other Black background, Mixed White/Black Caribbean or Pakistani pupils (or indeed Irish Travellers or Roma children) nor the high attainment of Black African, Mixed White/African, Bangladeshi or Indians. The picture is complex and solutions need to be tailored to national and local conditions. The lower than expected attainment levels of more affluent Black Caribbean and Mixed White/Black Caribbean pupils, both boys and girls is a particular case to study. Strand (2012; 2014b) draws attention to this and Rollock et al. (2015) have pursued this. Some ideological stances are psychologistic and lack a structural dimension. ‘Intersectionality’ is not pursued effectively in quantitative terms and Gillborn’s ‘conspiracy’ and ‘white supremacy’ do not intellectually connect with the UK’s increasingly neo-liberal politics, reduction in the size and limiting of the state’s role, reducing taxation, negative redistribution and *creating* poverty and inequality.

We lack a longitudinal approach which would follow children through from the Foundation Stage Profile to 16, analysing the attainment data by gender, ethnicity and deprivation to see at what points, and with which groups, attainment levels alter. A report which addresses this lack (Parsons and Thompson, forthcoming) analyses longitudinal cohorts and indicates, that some ethnic minorities eventually exceed and others approach the national mean attainment level at 16, improving at each assessment point as they progress through the school.

The complexity is increased where we note the significant change in how numbers in each ethnic group have changed over the most recent five years with notable increases of over 20% in Black African, Bangladeshi, Other Asian background, Mixed White and Asian and Mixed White and Black African pupils. White pupils declined by 30,000 (6%) in the same period. In addition, second generation of newly arrived minorities, many of whom would wish to be recognised as Black British, bring a different inheritance to the educational experience.

#### *The limited power of the school to increase equality*

One 'official' judgement is that schools *can* do the job: 'London's educational performance suggests that the problem of white working class underachievement in education can be tackled' (House of Commons Education Committee, 2014, para 99). This related to the London Challenge scheme and the laudable cooperation between schools it promoted. However, a more convincing explanation of London's improved attainment levels is the changed ethnic make up of London's school populations (DfE, 2012b)<sup>7</sup>

particularly the increases in higher achieving ethnic minorities in London over that period (Burgess, 2014).

There are various estimates from large datasets about the proportion of attainment that can be attributed to 'the school effect'. Goldstein, a renowned educational statistician, has said in a media interview that the school effect is about 10% (Goldstein, 2012). Drawing on the work of Peter Mortimore, Gorard (2010) reinforces the 10% point with great clarity writing, 'Of the 30 to 40% that can be explained, the vast majority of this (75 to 90% of it) is attributable to the prior and individual characteristics of the pupils' (p. 54). This parallels Ball's estimate of **between** 5 and 18 per cent (2010, p. 156). Thrupp claims similarly that, 'educational quality in low-SES [Socio-Economic Status] settings will not be able to be substantially improved without redistributive policies of various kinds' (1999, p. 183).

Berliner (2006), in his *Our impoverished view of educational research*, had similarly pointed out that 'small reductions in family poverty lead to increases in positive school behaviour and better academic performance .... Poverty places severe limits on what can be accomplished through school reform efforts' (p. 949).

Those arguing whether it is racism, sexism or poverty/inequality that underlies the tragedy and malevolence of low attainment are misguided. They divert attention from the evidence in correlational analyses, which consistently show the primacy of income poverty - not having resources to reliably and stably run a family life. The school improvement/effectiveness movement has attracted many leading researchers and considerable funding. The major limiting role of poverty

is largely acknowledged by these authors but in tokenistic form. Ainscow and colleagues, for example, argue that equitable developments in education will ultimately depend on government pro-equity policy frameworks, a statement then regrettably softened by the ultimately misleading sentence: 'In the meantime, it is also the case that much can be achieved by school change' (Ainscow et al, 2010, p. 2).

### *The deficient society*

Economic inequalities are sustained by national policies and income deprivation is a resolute correlate of low attainment. Epidemiological research shows powerful correlates between infection and mortality and poverty in the same way. Marmot (2016) laments the lack of political attention given to this link which is mirrored in the English education establishment.

An economically advanced nation does not lack the resources to tackle poverty with more direct interventions. Piketty (2014) internationally and Dorling (2014) on the UK make plain the macro-economic trends governments passively allow or covertly promote. Amongst Pickett and Vanderbloemen's (2015) conclusions in their *Mind the Gap* is the statement, 'The most important influence on ... how well a child develops in the early years, performs in school, in later education and in adulthood, is family background... Children do better if their parents have higher incomes [and] Inequalities in educational attainment and outcomes have a social gradient' (p.24).

The deficient society will not be corrected by the public availability of the detailed data presented here<sup>8</sup>. England's political decision-making would need to take seriously the individual damage to children resulting from poverty and

respond in some measure to the challenges set out in OECD reports showing that education and life chances are diminished and 'less inequality benefits us all' (OECD, 2015). The evidence that poverty is a major factor in low attainment and other social ills should make politicians heed Atkinson's entreaty that, 'It is imperative that the EU should prioritise measures to ensure the achievement of the Europe 2020 target for reducing poverty and social exclusion' (2015, p. 280) and indeed the UK's own eradication of child poverty target as expressed in the Social Mobility and Child Poverty Commission reports (2013). Marmot writes, 'What makes these health inequalities unjust is that evidence from round the world shows we know what to do to make them smaller. This new evidence is compelling. It has the potential to change radically the way we think about health, and indeed society' (2016, p. 2). This same ecological perspective applies to education and teacher-led, a London Challenge collaborative style, with 'some' extra money, cannot solve low attainment problems which are so strongly correlated with (caused by?) poverty.

Addressing educational inequalities requires also that educational professionals at all levels understand and believe the data on the poverty/inequality link and campaign for it to be seriously addressed for the benefit of those identified as most vulnerable to, and most obviously bearing the undeserved consequences of, their disadvantage. One might question whether the costs of collecting, organizing and publishing detailed annual population education attainment data and the burden on teachers and children to supply it. The data are used for accountability but could be used by front line professionals to point to the poverty, gender and ethnicity correlates of low attainment and other social justice goals. There are moral choices which require collective professional

confidence and a wider public to turn the spotlight away from schools as the 'saviours', expected to succeed against the odds, to influence realistic political commitment and action targeted at child poverty reduction in the UK. The 'deficient society' is not a natural occurrence but one in which the contracting state serves the interests of those with wealth, paying insufficient attention to inequalities (in educational and other outcomes) in relation to race, gender or poverty.

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## Appendix 1

**Table A1: percentage achieving at least the expected standard in all Early Learning Goals and the FSM/non FSM Gap 2013**

| 2013                        | FSM  |       | Non-FSM |       | ALL | Gap non-FSM/FSM | Gap non-FSM/FSM |
|-----------------------------|------|-------|---------|-------|-----|-----------------|-----------------|
|                             | Boys | Girls | Boys    | Girls |     | Boys            | Girls           |
| White                       | 24   | 40    | 46      | 64    | 51  | 22              | 24              |
| Black Caribbean             | 28   | 51    | 42      | 58    | 46  | 14              | 7               |
| Black African               | 33   | 48    | 42      | 60    | 47  | 9               | 12              |
| Other Black background      | 32   | 50    | 42      | 57    | 46  | 10              | 7               |
| Mixed White/Black Caribbean | 28   | 47    | 44      | 63    | 47  | 16              | 16              |
| Mixed White/Black African   | 26   | 50    | 45      | 62    | 49  | 19              | 12              |
| Mixed White/Asian           | 30   | 47    | 49      | 67    | 54  | 19              | 20              |
| Other mixed background      | 29   | 48    | 46      | 64    | 51  | 17              | 16              |
| Pakistani                   | 23   | 37    | 32      | 45    | 37  | 9               | 8               |
| Bangladeshi                 | 28   | 46    | 34      | 50    | 40  | 6               | 4               |
| Indian                      | 31   | 44    | 46      | 61    | 52  | 15              | 17              |
| Other Asian background      | 26   | 42    | 39      | 54    | 45  | 13              | 12              |

Source: extracted from DfE (2013b) Table 2a

**Table A2: Percentage achieving Key Stage 2 Level 4 reading, writing and mathematics by ethnicity, FSM eligibility and gender and the FSM/non FSM Gap**

| 2013                        | FSM  |       | Non-FSM |       | ALL | Gap non-FSM/FSM | Gap non-FSM/FSM |
|-----------------------------|------|-------|---------|-------|-----|-----------------|-----------------|
|                             | Boys | Girls | Boys    | Girls |     | Boys            | Girls           |
| White                       | 52   | 62    | 76      | 83    | 76  | 24              | 21              |
| Black Caribbean             | 57   | 67    | 68      | 79    | 70  | 11              | 12              |
| Black African               | 65   | 72    | 75      | 82    | 75  | 10              | 10              |
| Other Black background      | 61   | 66    | 69      | 80    | 70  | 8               | 14              |
| Mixed White/Black Caribbean | 58   | 68    | 73      | 80    | 72  | 15              | 12              |
| Mixed White/Black African   | 60   | 72    | 75      | 82    | 75  | 15              | 10              |
| Mixed White/Asian           | 60   | 69    | 82      | 87    | 81  | 22              | 18              |
| Other mixed background      | 65   | 70    | 79      | 85    | 79  | 14              | 15              |
| Pakistani                   | 63   | 68    | 70      | 76    | 71  | 7               | 8               |
| Bangladeshi                 | 71   | 73    | 76      | 81    | 76  | 5               | 8               |
| Indian                      | 69   | 74    | 82      | 86    | 83  | 13              | 12              |
| Other Asian background      | 64   | 69    | 77      | 84    | 78  | 13              | 15              |

Source: Extracted from DfE (2013) SFR51\_2013\_KS2\_National\_Tables-4.xls, Table 9a

**Table A3: National statistics showing the percentage achieving 5A\*-C GCSEs including English and mathematics**

| 2013                        | FSM  |       | Non-FSM |       | ALL | Gap non-FSM/FSM | Gap non-FSM/FSM |
|-----------------------------|------|-------|---------|-------|-----|-----------------|-----------------|
|                             | Boys | Girls | Boys    | Girls |     | Boys            | Girls           |
| White                       | 28   | 37    | 59      | 70    | 60  | 31              | 32              |
| Black Caribbean             | 37   | 48    | 50      | 63    | 53  | 14              | 16              |
| Black African               | 47   | 56    | 62      | 71    | 61  | 15              | 15              |
| Other Black background      | 38   | 49    | 55      | 64    | 55  | 17              | 16              |
| Mixed White/Black Caribbean | 35   | 40    | 55      | 66    | 55  | 20              | 26              |
| Mixed White/Black African   | 44   | 52    | 61      | 74    | 63  | 17              | 22              |
| Mixed White/Asian           | 39   | 58    | 71      | 77    | 70  | 32              | 20              |
| Other mixed background      | 44   | 52    | 65      | 74    | 66  | 21              | 23              |
| Indian                      | 57   | 67    | 72      | 83    | 76  | 15              | 16              |
| Pakistani                   | 43   | 51    | 54      | 64    | 56  | 11              | 13              |
| Bangladeshi                 | 56   | 63    | 62      | 72    | 64  | 7               | 9               |
| Other Asian background      | 48   | 57    | 61      | 73    | 64  | 13              | 16              |

Source: Extracted from DfE (2014) Table 5

## Appendix 2

**Table A4. Key Stage 2 (age 11) percentage achieving Level 4 or above in reading, writing and mathematics by IDACI decile 2009–2014**

| Deciles  | Number of eligible pupils |           |           |           |           |           |           |
|--|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 2011                      | 2009      | 2010      | 2011      | 2012      | 2013      | 2014      |
| 0 - 10 % most deprived                                   | 69,737                    | 62        | 65        | 58        | 67        | 69        | 73        |
| 10 - 20 %  | 61,063                    | 63        | 65        | 59        | 68        | 70        | 73        |
| 20 - 30 %  | 55,351                    | 66        | 67        | 61        | 70        | 71        | 75        |
| 30 - 40 %  | 51,841                    | 69        | 70        | 63        | 71        | 73        | 76        |
| 40 - 50 %  | 50,410                    | 72        | 73        | 66        | 74        | 75        | 78        |
| 50 - 60 %  | 48,924                    | 75        | 76        | 69        | 76        | 77        | 80        |
| 60 - 70 %  | 49,657                    | 77        | 78        | 72        | 78        | 79        | 82        |
| 70 - 80 %  | 49,325                    | 80        | 80        | 75        | 81        | 81        | 83        |
| 80 - 90 %  | 48,941                    | 82        | 82        | 77        | 82        | 83        | 86        |
| 90 - 100 % least deprived                                | 47,319                    | 85        | 86        | 80        | 85        | 86        | 88        |
| <b>Difference between least and most deprived decile</b> |                           | <b>24</b> | <b>21</b> | <b>22</b> | <b>18</b> | <b>17</b> | <b>15</b> |

Source: Extracted from DfE, 2012a, 2015a table A1. Changes in the English assessment are responsible for the drop in mean scores in 2011.

National mean attainment 2014 = 79

**Table A6. Key Stage 5 - Percentage 5+ A\*-C grades GCSEs including English and mathematics by IDACI decile 2009-2014**

| Deciles  | Number of eligible pupils |           |           |           |           |           |           |
|--|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 2011                      | 2009      | 2010      | 2011      | 2012      | 2013      | 2014      |
| 0 - 10 % most deprived                                   | 66,024                    | 33        | 39        | 44        | 46        | 48        | 44        |
| 10 - 20 %  | 61,107                    | 36        | 41        | 45        | 48        | 50        | 45        |
| 20 - 30 %  | 58,375                    | 40        | 45        | 49        | 51        | 53        | 49        |
| 30 - 40 %  | 55,984                    | 45        | 49        | 53        | 53        | 56        | 51        |
| 40 - 50 %  | 54,956                    | 50        | 54        | 57        | 58        | 60        | 55        |
| 50 - 60 %  | 53,812                    | 54        | 59        | 61        | 62        | 63        | 59        |
| 60 - 70 %  | 54,196                    | 59        | 62        | 65        | 65        | 67        | 63        |
| 70 - 80 %  | 54,020                    | 62        | 66        | 69        | 68        | 69        | 66        |
| 80 - 90 %  | 53,667                    | 66        | 69        | 72        | 72        | 73        | 70        |
| 90 - 100 % least deprived                                | 66,024                    | 72        | 75        | 77        | 76        | 77        | 75        |
| <b>Difference between least and most deprived decile</b> |                           | <b>39</b> | <b>36</b> | <b>34</b> | <b>30</b> | <b>29</b> | <b>31</b> |

Source: Extracted from DfE, 2014b, 2015b table A1. Changes in test criteria are responsible for the drop in mean scores in 2014.

National mean attainment 2014 - 56.6%

### Appendix 3: Negative impacts ~ gender, ethnicity and deprivation

**Table A6. Key Stage 2 (age 11) Achievements at level 4 or above in reading, writing and mathematics – negative impact of ‘boy’ and Free School Meal status**

|                             | Number         | ALL       | All Boys  | All FSM Boys | Boy negative impact on ALL | Additional FSM negative impact on Boy |
|-----------------------------|----------------|-----------|-----------|--------------|----------------------------|---------------------------------------|
| White                       | 424,564        | 79        | 76        | 56           | -3                         | -20                                   |
| Black Caribbean             | 7,915          | 73        | 69        | 61           | -4                         | -8                                    |
| Black African               | 18,660         | 78        | 75        | 69           | -3                         | -6                                    |
| Other Black background      | 3,906          | 74        | 71        | 63           | -3                         | -8                                    |
| Mixed White/Black Caribbean | 7,724          | 75        | 71        | 59           | -4                         | -12                                   |
| Mixed White/Black African   | 3,035          | 81        | 78        | 67           | -3                         | -11                                   |
| Mixed White/Asian           | 5,876          | 83        | 80        | 64           | -3                         | -16                                   |
| Other mixed background      | 9,397          | 81        | 79        | 66           | -2                         | -13                                   |
| Pakistani                   | 24,116         | 75        | 73        | 65           | -2                         | -8                                    |
| Bangladeshi                 | 10,058         | 81        | 79        | 75           | -2                         | -4                                    |
| Indian                      | 14,370         | 86        | 84        | 73           | -2                         | -11                                   |
| Other Asian background      | 8,573          | 83        | 81        | 72           | -2                         | -9                                    |
| Chinese                     | 1,974          | 88        | 85        | 80           | -3                         | -5                                    |
| Other ethnic group          | 8,678          | 73        | 70        | 66           | -3                         | -4                                    |
| <b>All pupils</b>           | <b>553,286</b> | <b>79</b> | <b>76</b> | <b>59</b>    | <b>-3</b>                  | <b>-17</b>                            |

Source: SFR50\_2014\_KS2\_National Tables ~ Table 10a.

National mean = 79

Ethnicity variation (ALL column) is from Black Caribbean 73 to Chinese 88/Indian 86, a range from 6 below mean to 9 above.

**Table A7: Key Stage 4 (age 16) percentages achieving 5A\*-C GCSEs including English and mathematics – negative impact of ‘boy’ and Free School Meal status**

|                             | Number         | ALL         | All Boys    | All FSM Boys | Boy negative impact on ALL | Additional FSM negative impact on Boy |
|-----------------------------|----------------|-------------|-------------|--------------|----------------------------|---------------------------------------|
| White                       | 446,232        | 56.2        | 51.2        | 24.3         | -5.0                       | -26.9                                 |
| Black Caribbean             | 7,606          | 47.0        | 39.4        | 30.9         | -7.6                       | -8.5                                  |
| Black African               | 16,274         | 56.8        | 51.5        | 40.8         | -5.3                       | -10.7                                 |
| Other Black background      | 3,101          | 49.0        | 41.9        | 30.7         | -7.1                       | -11.2                                 |
| Mixed White/Black Caribbean | 7,380          | 49.0        | 43.0        | 27.2         | -6.0                       | -15.8                                 |
| Mixed White/Black African   | 2,355          | 56.8        | 52.5        | 34.9         | -4.3                       | -17.6                                 |
| Mixed White/Asian           | 4,607          | 67.2        | 62.2        | 37.7         | -5.0                       | -24.5                                 |
| Other mixed background      | 7,607          | 60.6        | 56.3        | 36.4         | -4.3                       | -19.9                                 |
| Pakistani                   | 18,595         | 51.4        | 47.9        | 39.0         | -3.5                       | -8.9                                  |
| Bangladeshi                 | 8,148          | 61.3        | 56.7        | 51.5         | -4.6                       | -5.2                                  |
| Indian                      | 13,417         | 72.9        | 68.1        | 50.1         | -4.8                       | -18.0                                 |
| Other Asian background      | 7,977          | 62.2        | 56.3        | 41.4         | -5.9                       | -14.9                                 |
| Chinese                     | 2,156          | 74.4        | 69.6        | 60.5         | -4.8                       | -9.1                                  |
| Other ethnic group          | 7,504          | 56.8        | 53.5        | 48.0         | -3.3                       | -5.5                                  |
| <b>All pupils</b>           | <b>558,444</b> | <b>56.6</b> | <b>51.6</b> | <b>29.2</b>  | <b>-5.0</b>                | <b>-22.4</b>                          |

Source: SFR06\_2015\_KS4\_National\_ and\_LA~KS4 Tables 1 and 2a. National mean = 56.6

Ethnicity variation (ALL column) is from Black Caribbean 47 to Chinese 74/Indian 73 a range from 10 below mean to 17 above.

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<sup>1</sup> This summary is misleading because: gender splits the whole population (14,500) into two; but ethnicity compares the top and bottom groups - 9,406 White British with 558 Black Caribbean (omitting the ethnic groups between); social class compares the 1,378 in the top of eight social classes to the 1,019 in the bottom class (omitting 12,000 in between). It is not as simple as ethnicity being three times more powerful than gender in explaining the gap nor that social class is three times more powerful than ethnicity. However, there is a strong signal here about the range and relative strengths of different factors.

<sup>2</sup> The FSM percentage is calculated from DfE reports on KS2 and KS4 assessments for 2013. No published DfE statistics provided FSM status by ethnicity.

<sup>3</sup> The 'other' White groups are made up of Travellers of Irish Heritage, fairly constant at about 130 in any year group and Gypsy/Roma whose numbers shown in the GCSE results statistics have risen from 480 to 820 in the 2009 – 2013 period. Both groups score very low percentages of 5A\*-C. The Irish, constant at each year group at 1,900 (0.3%) score about eight percentage points higher at KS4. The largest group is the 'any other white background' which has increased from 2009 and at KS4 registers about five percentage points below the national average. Together constituting 3.9% of the national total, they make little difference to the overall White attainment percentages and are not presented separately; White British GCSE results are only 0.2% higher than the percentage level for All Whites.

<sup>4</sup> OAS (Any Other Asian Background) are included here but in no other graphs. They are as numerous as Bangladeshi and other groups included in most analyses. They are amongst the best FSM performers and third amongst non-FSM pupils. Other Asian background children are included in Appendix tables A7 and A8.

<sup>5</sup> The Income Deprivation Affecting Children Index (IDACI) is calculated from:

- Children in Income Support households
- Children in Job Seekers Allowance households
- Children in Working Families Tax Credit or Disabled Person's Tax Credit households whose income (excluding housing benefits) is below 60% of median before housing costs
- National Asylum Support Service (NASS) supported asylum seekers in receipt of subsistence only and accommodation support.

IDACI deciles are simply taking rankings in order of deprivation divided into 10 equal bands from the most to the least affluent. Each band contains between 47,000 and 70,000 children in a year group nationally.

<sup>6</sup> A Gini coefficient of zero indicates perfect equality, where all incomes are the same; a coefficient of one expresses maximal inequality where one person has all the income.

<sup>7</sup> In 2006, both the national and London percentage 5A\*-C grades including English and mathematics at 16 was 45%. In 2013, it was 61% nationally and 65% for London. In the same period, overall numbers of 16 year -olds had fallen and the ethnic minority percentages in London schools increased from 60% to 67% compared with a 21% to 25% increase nationally. The Asian proportion rose to be nearly as large as the Black proportion in London (it is by far the largest minority group nationally) and the Asian pupils as a group score very much higher (6.4%) than Asians nationally and 7.2% higher than London White children.

<sup>8</sup> Though a boon to researchers, one questions the costs of collecting, organizing and publishing detailed annual population education attainment data. There is a burden on teachers and children to supply them and the use to which they are put by subsequent informed policy action for improvement, social justice and accountability is not readily evident.