





RESEARCH ARTICLE

The disproportionality of ethnic minority teachers in England: trends, patterns, and problems [version 2; peer review: 2 approved with reservations]

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Abstract

Abstract

Background: England has an ethnically diverse population; reflected in the teacher workforce, and the student body in schools. However, it is not clear that these figures are in proportion to each other. This paper examines the ethnic profile of students and their teachers and considers their geographical distribution.




Methods: This paper uses existing aggregated official publicly available datasets to describe the patterns and trends in the proportion of ethnic minority teachers compared to ethnic minority pupils in England 2015-2021. Data comes from the Department for Education (DfE), the University and Colleges Admissions Service (UCAS), the Organisation for Economic Co-operation and development (OECD/TALIS), and the Office for National Statistics (ONS).


Results: We found that there are proportionately more White British teachers than in the student intakes to schools. This disproportion (where there are more White British teachers among teachers than there are White British pupils among pupils) is worse for promoted school leaders like deputies and headteachers than it is for classroom teachers. In London, due to the exceptional number of ethnic minority students, the disproportion (or mismatch) is worse in London than anywhere else. Areas with the fewest ethnic minority pupils (and teachers), like the North East, have the most proportionate workforce (in this limited sense).

Conclusions: A student lacking any teachers of the same ethnic group might be treated differently at school, and there is some evidence that this might affect their attainment outcomes. The lack of ethnic diversity in some schools and areas, regardless of proportions, may impoverish the diversity of the whole school system. Several possible reasons for these patterns are noted in the paper, but it is clear that ethnic minority applicants to teacher training are less likely to be

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Any reports and responses or comments on the article can be found at the end of the article.

accepted, and less likely to obtain qualified teacher status or an eventual teaching post.

Keywords

Ethnic minority, role models, segregation, teacher training, teacher supply



This article is included in the [Education, Equity and Equality](#) collection.

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REVISED Amendments from Version 1

The opening sentence of the results section of the abstract has been clarified to:

"We found that there are proportionately more White British teachers than in the student intakes to schools."

An extra sentence has been added to the start of the background to foreshadow the important issues that the paper raises:

"The disproportionality of teacher and pupil ethnicity is a widespread concern, linked to equity, the experiences of ethnic minority students, and possibly to attainment outcomes."

The paragraph at the start of the section on Evidence of disproportionality has been amended and moved to the end of the prior section. It starts:

"There are two related concerns about the disproportionality of teacher and student ethnicity – the extent to which the overall teaching workforce represents the diversity of the student body in any education system, and the way in which the workforce is deployed...."

They are more likely to be referred to a gifted programme has been amended to :

"Ethnic minority students with similarly ethnic minority teachers are more likely to be referred to a gifted programme"

The methods section clarifies that cases with missing values are analysed, as is best practice.

We have explained why small numbers of some categories are not necessarily the cause of disproportion by saying:

"This suggests that disproportionality itself is largely an issue of small numbers of any ethnic minority in the population, teacher workforce or student body. Where there are smaller numbers of each minority, such as in the North East, proportionality is actually greater. Rather the issue is that small numbers of ethnic groups of students have a lower likelihood of encountering a teacher or school leader of similar ethnicity. We will investigate this aspect further in future work."

And a small number of typos have been corrected.

Any further responses from the reviewers can be found at the end of the article

Background

This is a paper about the deployment of ethnic minority teachers in England, what the patterns are in relation to the ethnicity of student intakes, why these patterns might occur, and why they might matter. The disproportionality of teacher and pupil ethnicity is a widespread concern, linked to equity, the experiences of ethnic minority students, and possibly to attainment outcomes. The paper starts with an overview of some of the prior literature on this topic, from the UK, US and elsewhere. It then describes the methods used in the secondary analyses that follow. The results include sections on applicants to teacher training, teachers, students, and teacher: student ratios nationally, regionally, locally, and by school type, and a brief section on how prepared teachers feel to teach in a multicultural classroom. The paper ends with a discussion of the possible implications, and suggestions for next steps. It is part of a larger project, and the simple descriptive data presented here is intended to illustrate the patterns that will be examined in more detail in future publications. The paper uses the

term "ethnic minority" to mean being a member of a group defined by race, colour, nationality, national origin or ethnicity, that is distinct from the majority White UK population in England (or the US).

England has an ethnically diverse population, but ethnic minorities tend to be clustered in particular areas to some extent. For example, they are far more common in London than in the North East. This perhaps explains why one study found that nearly half of schools in England had no recorded ethnic minority teachers (Tereshchenko *et al.*, 2020).

There are two related concerns about the disproportionality of teacher and student ethnicity – the extent to which the overall teaching workforce represents the diversity of the student body in any education system, and the way in which the workforce is deployed. Disproportionality can occur because there is a mismatch between the ethnic makeup of teacher and pupil numbers overall, or because particular ethnic groups of teachers or students are overly clustered in particular areas or schools. This paper considers both issues.

Existing evidence of disproportionality

In the US, as elsewhere, there is a clear pattern that areas or schools with more of any ethnic minority as students are more likely to have teachers of that same ethnic group (Spiegelman, 2020). Overall though, the system is not proportionate. For example, Blom *et al.* (2017) reported that while 4.4 percent of White adults in the US were teachers, only 1.5 percent of Hispanic adults were. Despite some increases, ethnic minority teachers have tended to be under-represented (Lindsay, 2017), in the classroom and in school leadership (US Department of Education, 2016). They are also more likely to leave teaching (Ingersoll *et al.*, 2019). It was estimated that a student will be taught by about 55 individuals during their schooling, but that a Black student in Detroit (for example) might expect to have only one Black teacher during their schooling (Dilworth & Coleman, 2014).

The situation in England appears to be similar. Over 85% of teachers are recorded as being White British, but only 66% of students are (Gov.UK, 2021a). So, teachers do not fully represent the student body in this respect. For senior staff, the situation is more extreme. Around 93% of headteachers and 90% of assistant headteachers are White British (Gov.UK, 2021b). Ethnic minority applicants to teacher training have grown, and may now be slightly over-represented, but they have a lower average acceptance rate, worse employment outcomes after training, and higher dropout from the profession (Allen *et al.*, 2016). They are more likely to be employed in a school in a heavily disadvantaged area, or with a high proportion of disadvantaged students (DfE, 2018). Worth *et al.* (2022) report that ethnic minority teachers are more likely to move schools, and less likely to be promoted to a leadership position.

Why disproportionality might matter

One clear instrumental reason why having too few ethnic minority teachers in the workforce might matter is that it could affect

educational processes and outcomes. This could be part of the explanation for some ethnic groups, such as those from Black Caribbean background, having lower than average national attainment results (Gorard, 2018).

As shown below, much of the worldwide evidence on this issue is from the US and concerns Black and Hispanic students, and almost all of the best evidence is based on patterns in existing large-scale datasets. There are also reports of in-depth studies, but no experimental studies (or equivalent) have been found that can provide more explicit causal evidence of the impact of disproportionality.

In summary, whenever teacher judgement is involved, there are consistent discrepancies in reported outcomes for ethnic minority students. These patterns are usually small, partly because the incidence of events like exclusions is low. Ethnic minority students with similarly ethnic minority teachers are somewhat less likely to be seen as disruptive or inattentive (Dee, 2005), face a referral for disciplinary reasons, or be excluded (Grissom *et al.*, 2009; Lindsay & Hart, 2017), or suspended from school (Wright, 2015). They are also somewhat less likely to be classified as requiring special education (Stiefel *et al.*, 2022), to have a pattern of chronic absence (Holt & Gershenson, 2015), or drop out of school (Gershenson *et al.*, 2017).

Ethnic minority students with similarly ethnic minority teachers are more likely to be referred to a gifted programme (Grissom & Redding, 2016; Grissom *et al.*, 2017), and appear to be happier, more motivated, and with better communication with teachers (Egalite & Kisida, 2016). Ethnic minority teachers with similarly ethnic minority students tend to have slightly higher expectations of them than White teachers do (Gershenson *et al.*, 2016). These patterns could be due to ethnic match or mismatch, but they could also be at least partly explained by the differential prior attainment and economic circumstances of each ethnic group in any context. Some of the studies above do not take such other factors into account, or it is not clear that they have done so.

In terms of attainment, a summary of the existing evidence is equally consistent, but again without experimental results, and again often without taking prior attainment or background into account. When there is a match between ethnic minority of teacher and pupil then the teacher assessment of student attainment is somewhat higher (Ehrenberg *et al.*, 1995; Ouazad, 2014). The “effect” sizes tend to be small. Where teacher judgement is not so involved, such as in standardised tests, the “effect” sizes are even smaller, such as less than 1% of one standard deviation in scores (Egalite *et al.*, 2015; Goldhaber *et al.*, 2015). A review of 14 studies by Driessen (2015) found no clear evidence that having a match between the ethnicity of teachers and students, or simply having more ethnic minority teachers, was linked to better standardised test results.

Another reason to be concerned about the deployment of ethnic minority teachers is so that schools represent the wider society to which the students will later pass. This is not just

an issue of proportionality but also about exposure of all students, even in schools and areas that are predominantly White, to a more diverse teacher workforce. All students can benefit from diversity of cultural experiences and understanding, and students typically report being somewhat more positive about ethnic minority teachers than White ones (Cherng & Halpin, 2016; Miller, 2008). As with reduced segregation of student intakes to schools (Gorard & Smith 2010; Gorard, 2018), reduced segregation of teaching staff promises to enhance understanding and tolerance for all stakeholders.

Methods

The paper now turns to the methods used in this new consideration of the patterns of teachers and teacher trainees in England, in terms of their ethnicity and that of the student body. The data for this paper comes from several sources, relating to the number of applicants to teacher training, the number of in-service teachers, and the number of students.

Figures for teachers come from the School Workforce Census in England, providing the numbers and characteristics of teachers and support staff from state-funded schools in England, from 2015 to 2021 (DfE, 2023a). This census data is at the national, regional, local authority (LA) levels, and by school phase. The ethnicity of teachers is divided into five main categories and sixteen sub-groups. Teachers who declined to provide their ethnicity are recorded as refused, while missing values are recorded as information not obtained yet. The “refused” and “not obtained yet” have been collapsed here into a category of “not known”. These are considered as part of the analysis, as is best practice. The main categories are: Asian or Asian British, Black or Black British, White, Any other Mixed background and any other ethnic group.

The ethnic sub-groups are: Bangladeshi, Black African, Black Caribbean, Chinese, Indian, Pakistani, White and Asian, White and Black African, White and Black Caribbean, White British, White Irish, any other Asian background, any other Black background, any other Mixed background, other White background and any other ethnic group. However, there is no record of ethnic sub-groups at the local authority level, so the major groupings are used for the local area analysis. Teachers’ occupational status and school phases (below) are also included in the dataset. Occupational status includes total teaching workforce, classroom teachers, deputy heads, and head teachers. Teachers can also be centrally employed.

Schools, pupils and their characteristics

The information on pupils’ ethnicity draws on aggregated school census data provided by DfE (2023b). The census data includes information about school and pupil numbers and their characteristics from 2015 to 2021, nationally, regionally, by local authority, and by school phase. The ethnic classification of pupils has 19 categories: Asian – any other Asian background, Asian – Bangladeshi, Asian – Chinese, Asian – Indian, Asian – Pakistani, Black - any other Black background, Black - Black African, Black - Black Caribbean, Mixed - any other Mixed background, Mixed - White and Asian, Mixed - White and Black African, Mixed - White and Black Caribbean, White - any

other White background, White - Gypsy/Roma, White – Irish, White - Traveller of Irish heritage, White - White British, Any other ethnic group, Unclassified. School phase is recorded as: State-funded nursery, State-funded primary, State-funded secondary, State-funded special school, non-maintained special school, pupil referral unit.

Other data sources (ONS, UCAS, and OECD/TALIS) are described in the Data Availability section at the end of the paper.

Data cleaning and analysis

The School Workforce Census and School Census data are used from 2015 to 2021 (DfE, 2023a; DfE, 2023b). Their classification of ethnicity is slightly different, with more categories in the pupil data than for the teachers. For the pupils there are records of a small number of pupils of Gypsy/Roma, and Traveller of Irish heritage. These categories do not appear for teachers, and so for the purposes of disproportionality, they cannot be analysed separately. It may be that there are no teachers reporting this ethnic origin, or that the data is otherwise not recorded. In the pupil dataset these cases are reclassified as being of any other White background.

The teacher data by regions separates Inner and Outer London. These were combined to form London figures, because this is how the data was recorded for pupils. There was some local authority reorganisation over the time period. The pupil data had 154 local authorities and the extra one was ignored to match the 153 in the teacher data. At local authority level, the teacher data on ethnicity is only recorded for the five main categories (Asian, Black, Mixed, White, Other). Therefore, the ethnicity data from the pupil dataset was collapsed into the same five groups.

The data on teachers and pupils are initially dealt with separately. The frequency/percentage of teachers of each ethnic group is computed nationally, by Economic Region, local authority, by phase of schooling, and finally by occupational status. The results are tabulated for the years 2015 to 2021 and then presented in the paper in the form of line graphs. Line graphs are used, despite the discrete nature of each year's data, in order to aid readability. The same is done with the pupil data (except that here there is no occupational status).

In the next step, the ratio of teachers to pupils ethnicity was computed for each category and for each year. A result of one suggests a balanced proportion of teachers and pupils of this ethnicity, for this context (national, regional or so on). The larger the teacher-pupil ratio is, the more over-represented the teachers would be than their counterpart pupils in any ethnic group.

Key patterns

The national picture for serving teachers

There are around 500,000 teachers (total headcount) in England, and this fluctuates slightly, but has grown from a total of 503,123 in 2015 to 512,008 in 2021. The proportion who are described as White British in ethnic origin has declined from 82% in 2015 to 77% in 2021. The proportion not known (for

any reason) has grown substantially from 6% to 9%, possibly accounting for much of the reduction in White British teachers. The proportion of all other groups has also increased over time (Figure 1). It is not clear what happened to create a “jump” in 2020. According to our analyses the picture for classroom teachers is similar (not presented here).

The number of mainstream primary phase teachers has increased slightly from 247,223 to 250,211 (85% White British to 82%), while secondary teachers have increased from 226,472 to 229,170 (78% to 72% White British). The minority of other teachers in state-funded institutions include Pupil Referral Units (PRUs) and special schools, and they have shown a greater proportionate increase in teacher numbers and a decrease in the proportion of White British.

At primary level, the greatest increase has been in the category of ethnicity unknown (including refused) from around 5% to nearly 8%. There has been an increase in Indian and Pakistani origin teachers, but most other categories have remained stable or even declined (Figure 2). The picture is very similar for secondary phase teachers (Figure 3). The smallest ethnic groups tend to have slightly more volatile patterns over time.

The national picture for pupils

The number of pupils in state-funded schools has grown considerably from 6,954,487 in 2015 to 8,418,013 in 2021. The growth is far larger than for the teacher workforce (above). The proportion of White British pupils is lower than the proportion of White British teachers overall, and this has declined from 69% to 64%. The proportion of all other ethnic groups has grown, especially for the larger groups, or stayed similar. The proportion of pupils of unrecorded ethnic background has also grown (Figure 4).

Most of the growth in pupil numbers has been of primary age (not including nurseries), from 3,656,083 to 4,655,513. White British pupils of primary age have declined as a proportion from 68% to 64%. Again, most other ethnic groups, but especially Indian origin, have tended to grow (Figure 5). The proportion not known has also grown.

Secondary pupil numbers have grown, but not as much as for the primary sector (yet), from 3,181,672 to 3,567,378. And White British pupils have decreased as a proportion from 71% to 64%. For teachers and pupils, in all phases of education, the decrease in White British is partly a substantive change, and is partly a result of better classification and records. The increase in refusal to state an ethnicity may also be minor factor, if the unknowns were disproportionately from one group or another. There has been a sudden rise in the proportion of other White pupils and also of Black African, at secondary age (Figure 6).

National comparisons by teacher type

The paper now moves to consider the ratio of teachers and pupils in each ethnic group. Unclassified and White Irish appear far more commonly as ethnicity responses among teachers

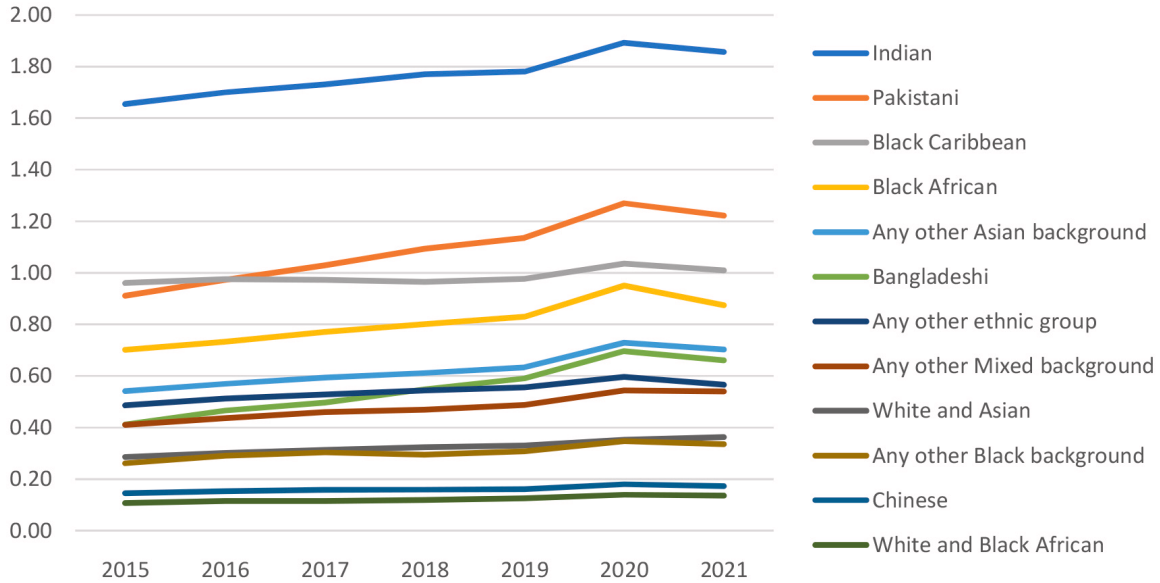


Figure 1. Trends in proportion of teacher workforce by ethnic minority group, 2015–2021. Note: to aid readability the graph does not include White British teachers (around 80% of the total) or not known (around 9% by 2021).

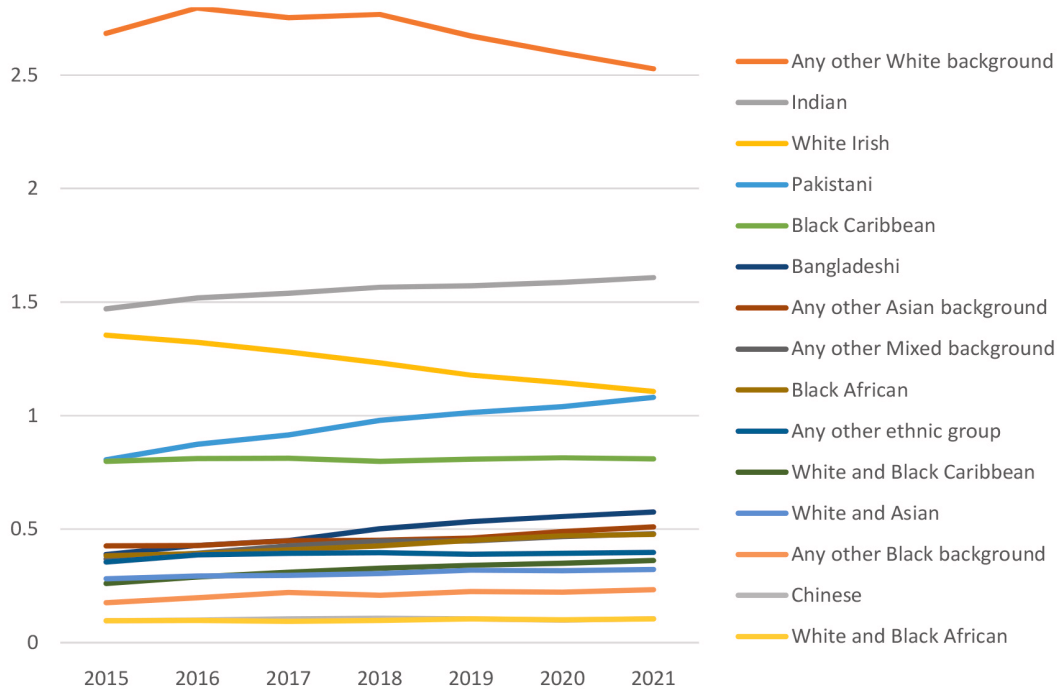


Figure 2. Trends in proportion of primary teacher workforce by ethnic minority group. Note: the keys for all graphs are in the same order as the lines appear, highest to lowest.

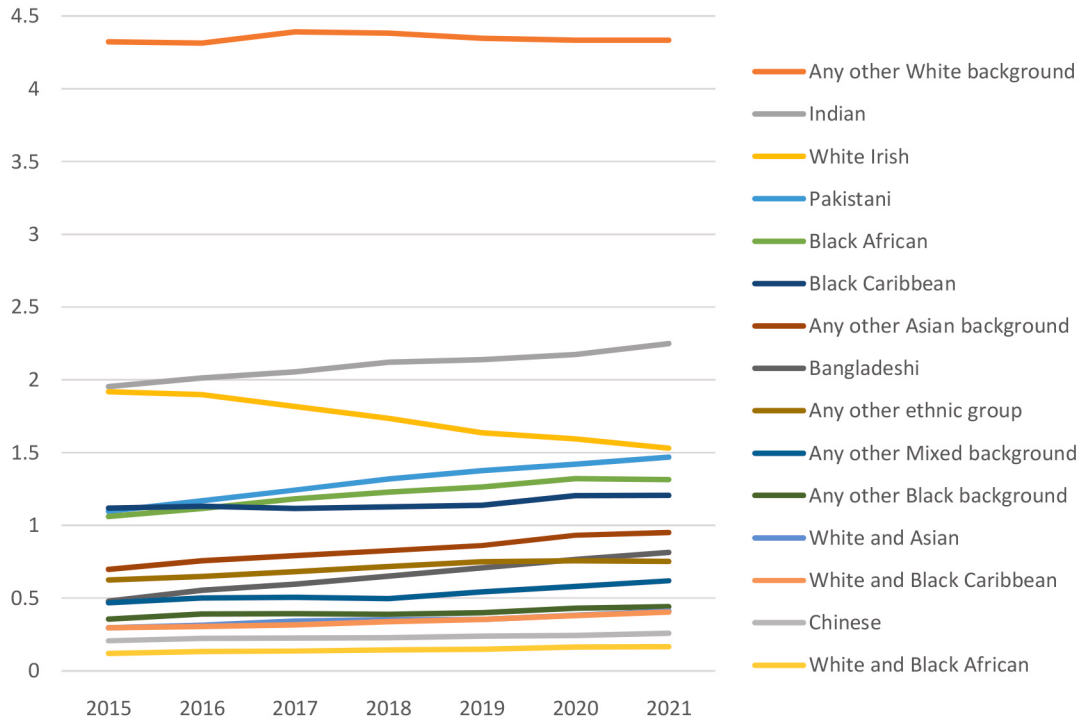


Figure 3. Trends in proportion of secondary teacher workforce by ethnic minority group.

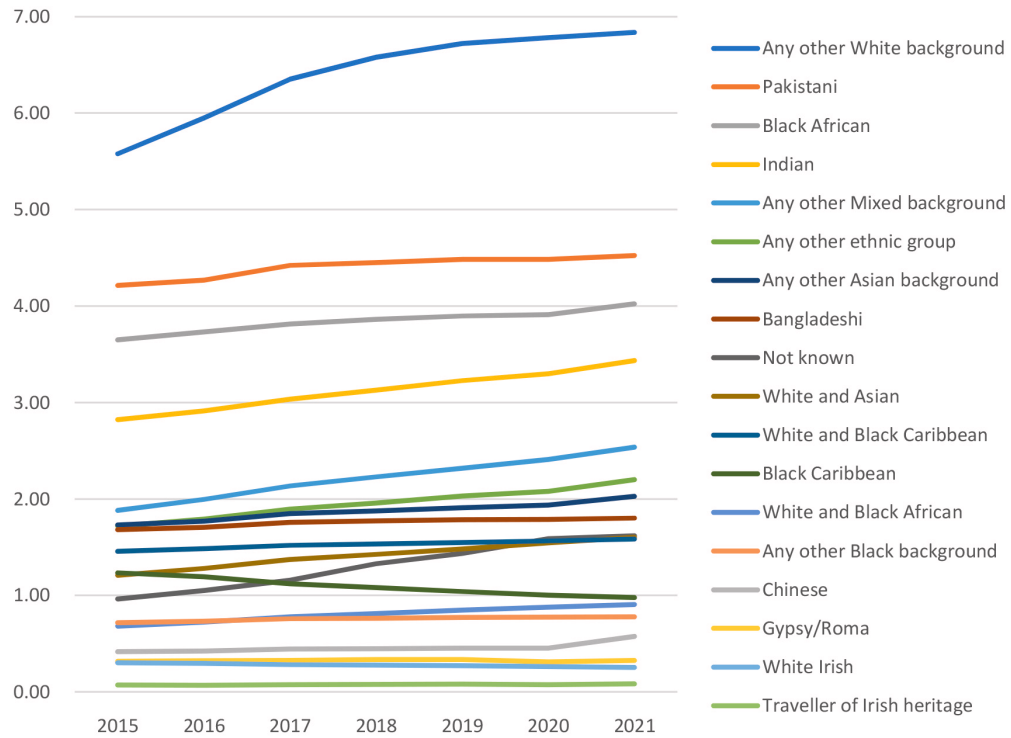


Figure 4. Trends in proportion of pupils by ethnic minority group, 2015–2021.

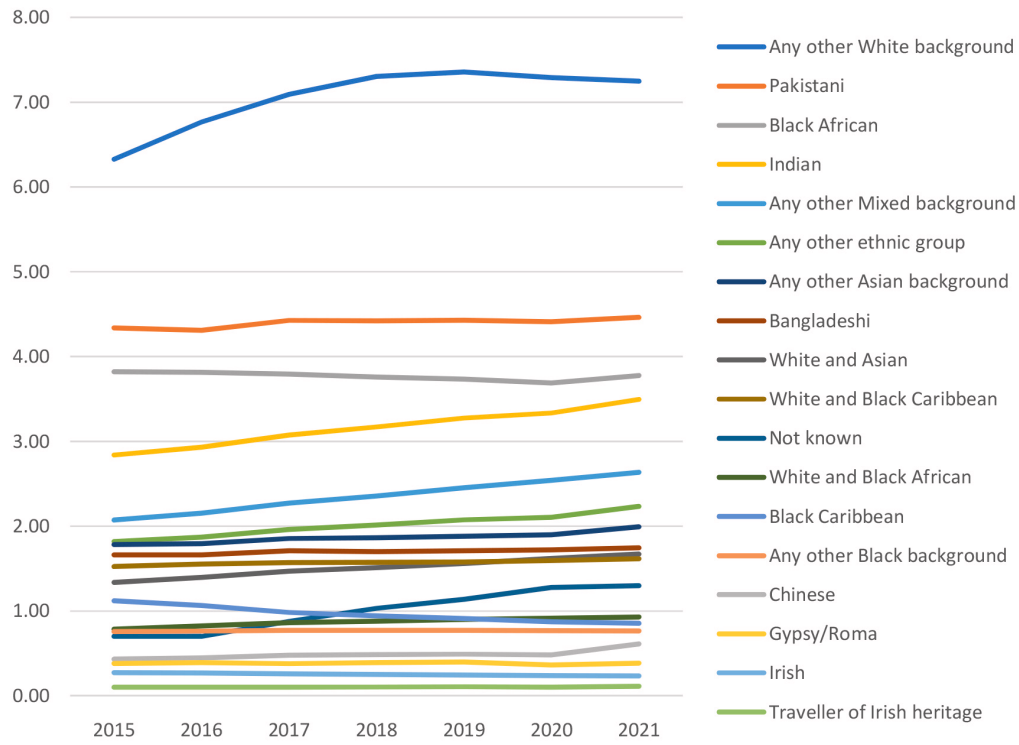


Figure 5. Trends in proportion of primary pupils by ethnic minority group.

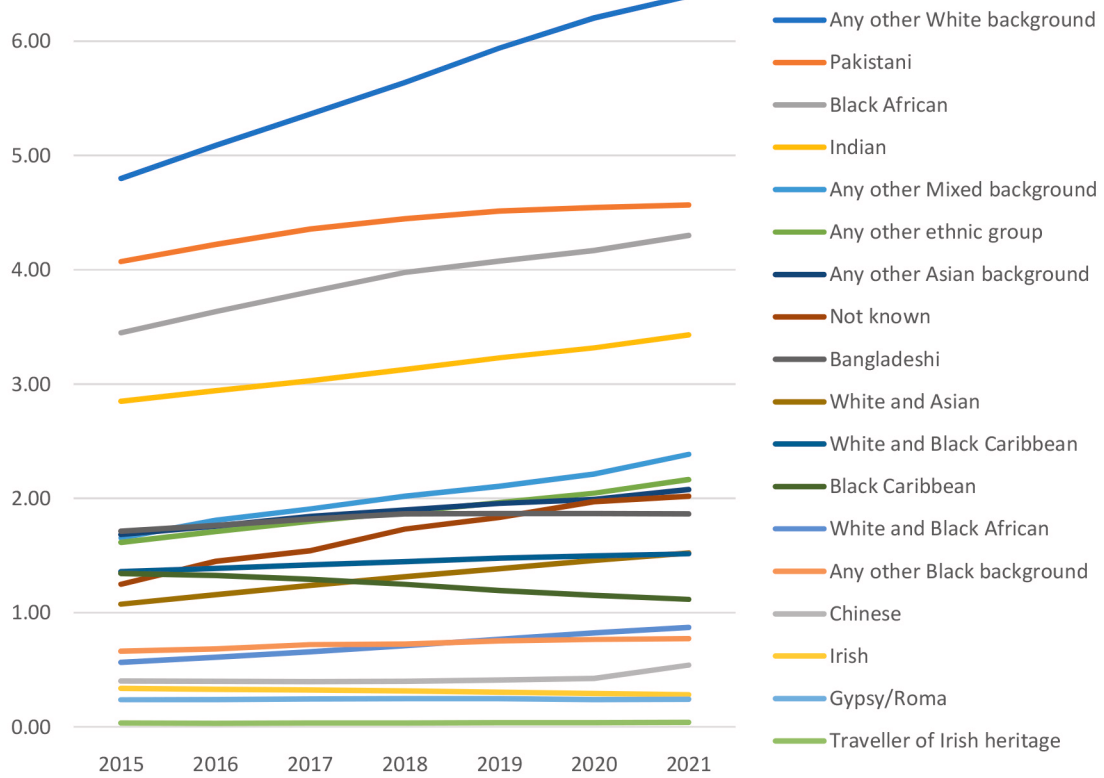


Figure 6. Trends in proportion of secondary pupils by ethnic minority group.

than pupils (both have a teacher to pupil ratio of over five). To make the following graphs easier to read, these two categories have been omitted. Although they are heavily over-represented among teachers, the number of White Irish is very small. The returns for the pupil level census are a legal requirement whereas the data on teachers is less formally required. So, it may be unsurprising that more teachers have unknown ethnicity.

At a national level, and considering all teachers, the disproportionality to pupils is clear (Figure 7). White British teachers are consistently over-represented compared to White British pupils. The figure has grown slightly in recent years (to over 1.2 times as many White British teachers as White British pupils). Black Caribbean teachers have historically been under-represented in the teaching workforce but are now at or just above parity with the number of Black Caribbean pupils. All other ethnic groups are heavily under-represented compared to pupils with the same ethnicity, including Black African, and the major groups of Asian teachers. Their trajectory over time is mixed, with the situation deteriorating in terms of Indian teachers, and improving slightly for Black African, Chinese and Pakistani origin figures.

The situation is similar for classroom teachers (Figure 8). White British teachers are over-represented in classrooms compared to White British pupils, and Black Caribbean teachers are now represented at or just above the proportion of Black Caribbean pupils. Again, all other groups, apart from White Irish and not known, are heavily under-represented. Indian,

Chinese, and other White background teachers are also declining as a proportion, which could be problematic. The other groups are remaining stable or growing slightly

The disproportionality is even more marked when considering teachers promoted to be deputy heads (Figure 9). White British deputies are more heavily over-represented in comparison to their pupils than classroom teachers are (over 1.3 times). And Black Caribbean teachers remain under-represented at this level of leadership, despite a recent increase in overall numbers. All other groups are, and remain, strongly under-represented.

The situation is similar but slightly worse again when looking at head teachers (Figure 10). Most ethnic minority pupils are unlikely not only to have a classroom teacher of similar ethnicity but are even less likely to see a role model of someone like themselves in a position of school leadership. The situation is most extreme, and perhaps therefore the most worrying, for Black African, Bangladeshi, and Chinese pupils.

Regional comparisons of teacher and pupil ethnicity

The main comparisons of teacher: pupil proportions by Economic Region consider only the proportions of White British teachers and pupils, in order aid comparison. We look in more detail at the ethnic composition of specific areas in the next section.

There is some regional variation in the disproportion of ethnic minority teachers and pupils by region. However, all but

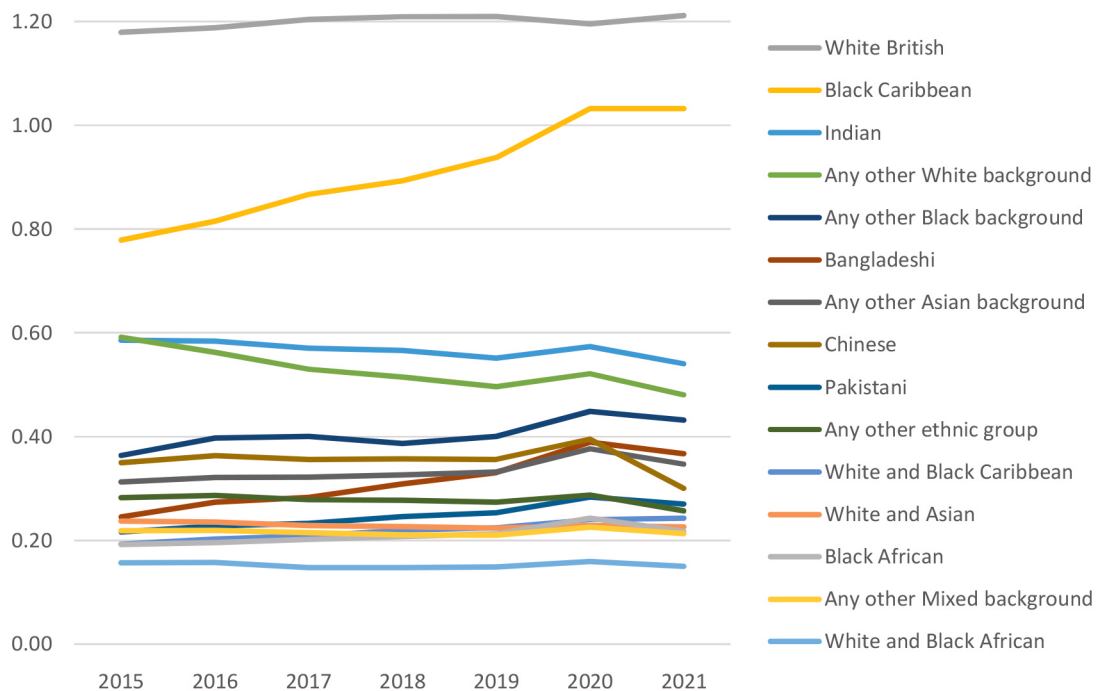


Figure 7. Trends in disproportionality of all teachers and pupils, by ethnic minority group, 2015–2021.

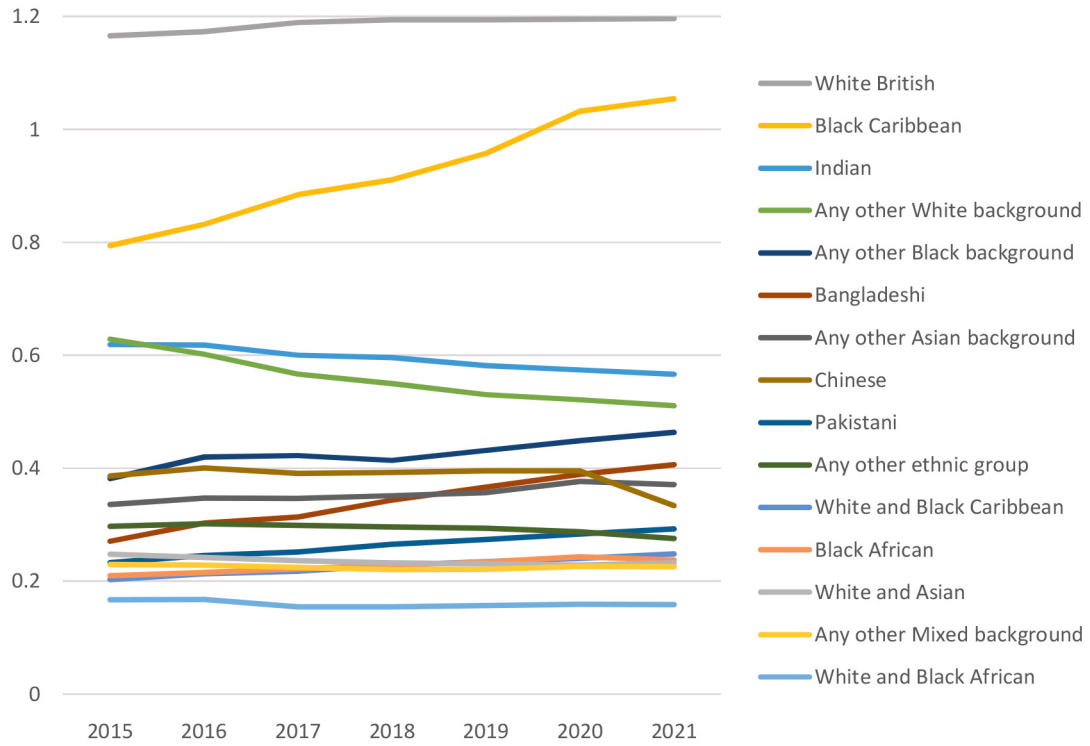


Figure 8. Trends in disproportionality of classroom teachers and pupils, by ethnic minority group.

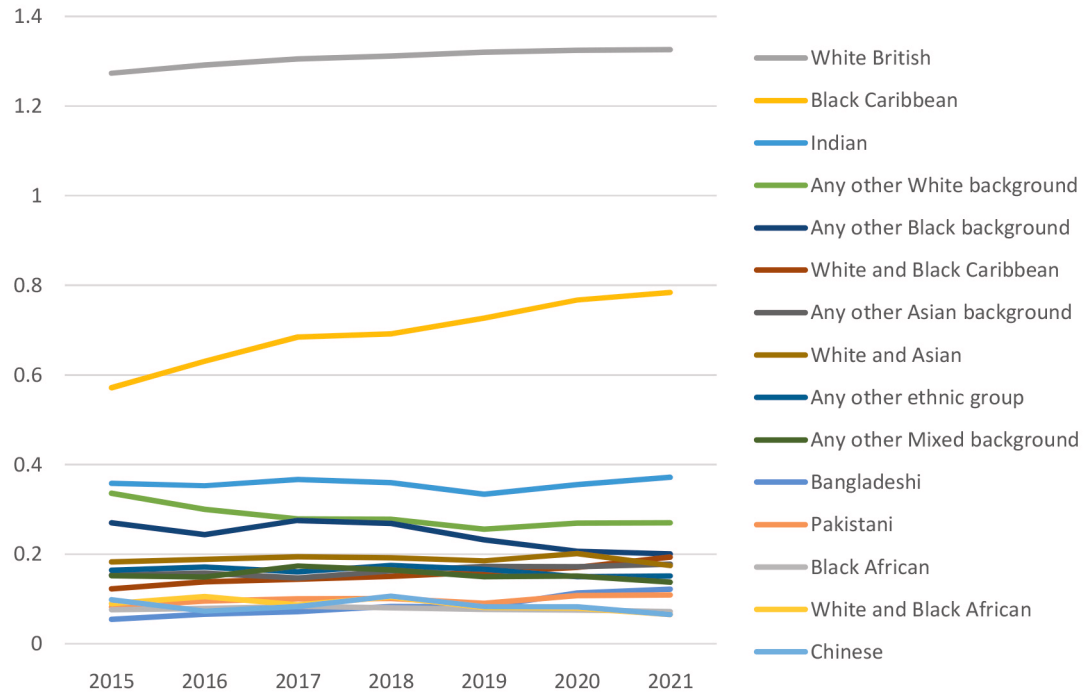


Figure 9. Trends in disproportionality of deputy-head teachers and pupils, by ethnic minority group.

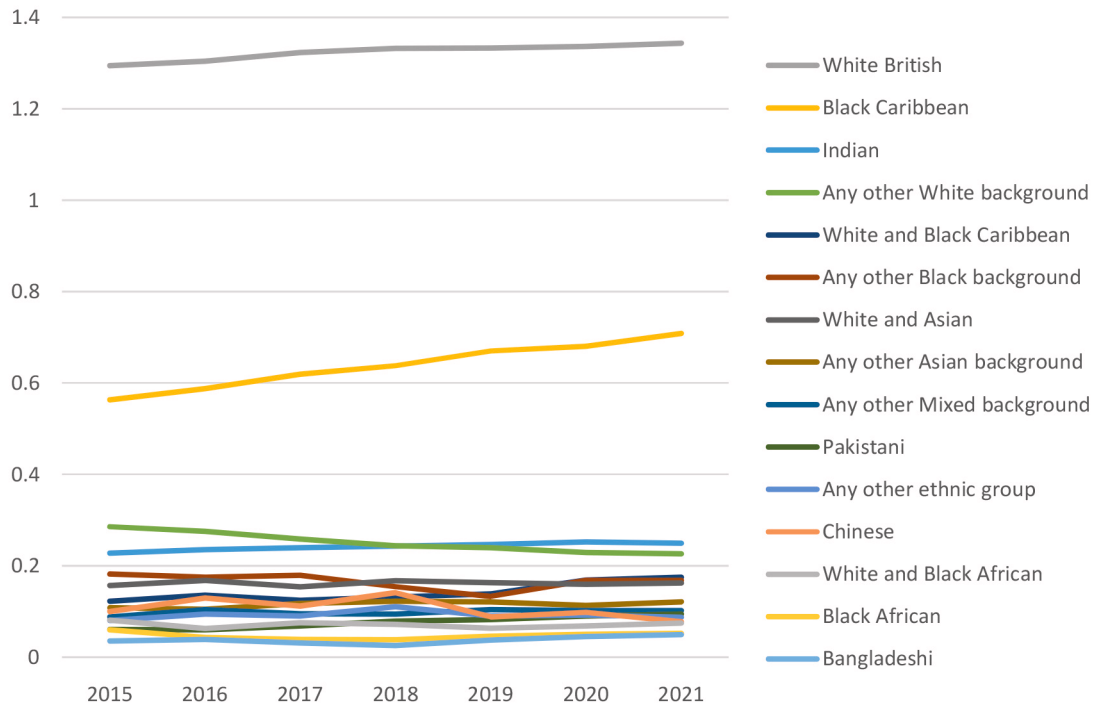


Figure 10. Trends in disproportionality of head teachers and pupils, by ethnic minority group.

one region have a ratio in the range 1 to around 1.2 (Figure 11). The NE of England, where the population is mostly White British (ONS), has proportionately about the same number of White teachers as their pupil numbers would suggest. Other areas have slightly more White teachers than their pupil numbers would suggest, especially the West Midlands where there is a relatively high proportion of ethnic minority pupils. The clearly different result is for London, which has the highest proportion of ethnic minority teachers and ethnic minority pupils in England, but still has more than twice as many White teachers as the pupil population would suggest. And this disproportion is growing.

We now look at the North East region in slightly more detail. It has among the least diverse teacher and pupil bodies in England, with 89% White British teachers and 86% White British pupils. The biggest ethnic minorities for pupils, other than mixed, are 1.5% Pakistani and 1.3% Black African origin. But there are only 0.27% Pakistani teachers and 0.1% Black African teachers (Figure 12). Most of these ethnic minority students will never encounter a teacher of similar ethnicity in the classroom.

Local authority comparisons of teacher and pupil ethnicity

There are currently over 150 local authorities in England, and the borders of some have changed in the past seven years. It is important to recall that the data is only for major ethnic groups. White here includes White British, but also other White categories. Figure 13 shows the range of White teacher to

pupil ratios, by authority area. Rural areas and places in the North tend to have the lowest ratios (many of them directly proportionate). Urban areas and authorities in London tend to have the highest ratios, as well as the most diverse student bodies. For this descriptive paper, we now present a selection of six “case” authorities with very high, low, or otherwise remarkable levels of disproportion, or with notable changes over time. In future publications we will report on in-depth case studies of areas and schools.

London is the region of England with the highest White teacher to pupil ratio, and it contains most of the local authorities with the highest ratios. The highest in England is the London Borough of Tower Hamlets (Figure 14). The situation for the major ethnic minority groups has not changed much over seven years. The proportion of White British teachers to pupils has declined a little from a figure of over 4, but the big change has been the increase in the number of teachers with unclassified ethnicity.

What is remarkable in Tower Hamlets’ schools is the proportion of Asian origin pupils (over 66% of the total, compared to only 13% White). There is also a high proportion of Asian origin teachers (over 26%, compared to 50% White) but not nearly as high as for pupils. This proportion has increased from 20% in 2015. Based on the major ethnic groups used in the data, there is no issue of overall diversity in Tower Hamlets – there is a range of White, Black, Asian and other ethnicity teachers. But while Asian and White pupils would have a reasonable expectation of being taught by someone of

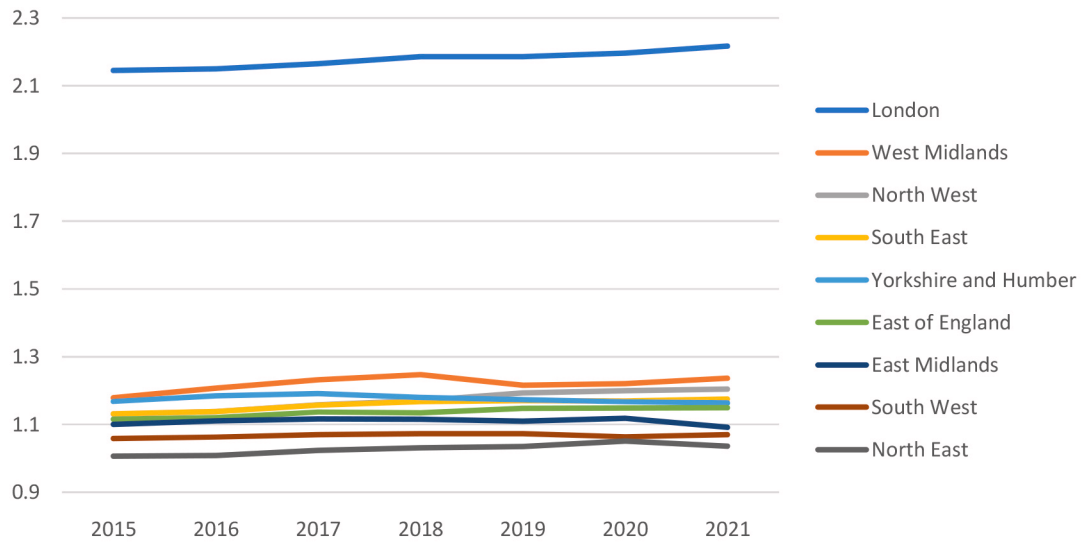


Figure 11. Trends in disproportionality of White British teachers to White British pupils, by region. Note: origin is not zero.

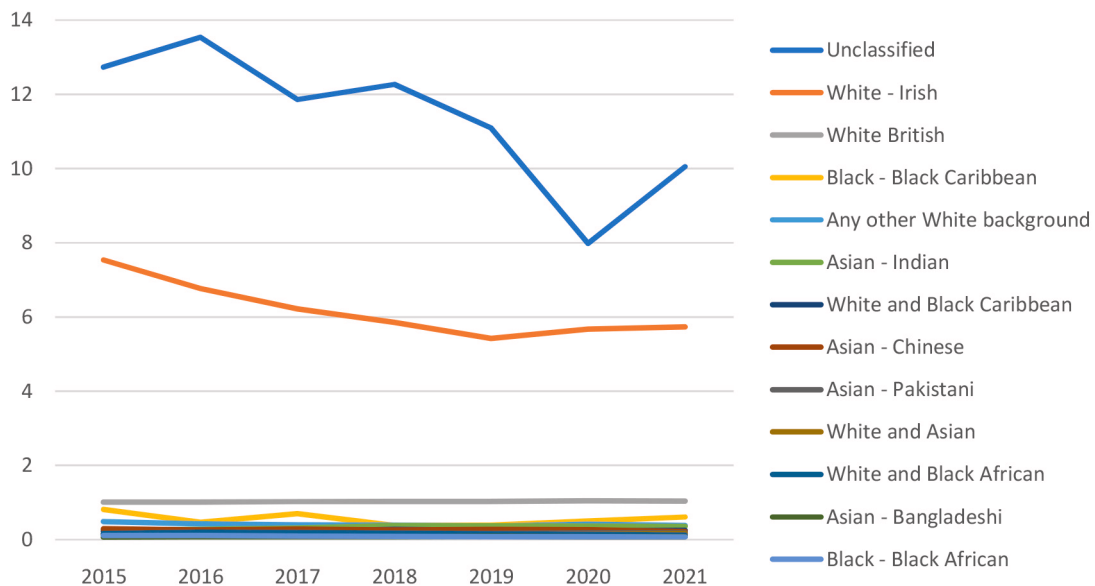


Figure 12. Ethnic disproportionality in the NE.

the same ethnicity, this may not be so true of the 9% Black pupils with the 6% Black teachers. Despite similar disproportions, this example authority raises an issue about balance. It may be more important for Tower Hamlets to have more Black teachers in the immediate future than more Asian ones.

Richmond is also in London but is very different to Tower Hamlets. Most teachers are White (76%) as are most pupils (68%), despite the percentage of both declining over seven years. As Figure 15 shows, they have remained approximately proportionate over time. The number of unclassified teachers has gone

down, and all other ethnic categories have increased slightly. Although the disproportions for ethnic minorities are of the same order of magnitude here as in Tower Hamlets, the situation for pupils could be very different. Only 2% of teachers are Black, for example, and so some of the small number of Black students (2.8%) might not reasonably expect to ever be taught by one of these teachers. Asian teachers are only 38% (0.38) of the figure that would be proportionate to the small number of Asian pupils. Richmond appears to have a better proportion of White British teachers than other areas of London, and similar proportions of ethnic minority teachers.

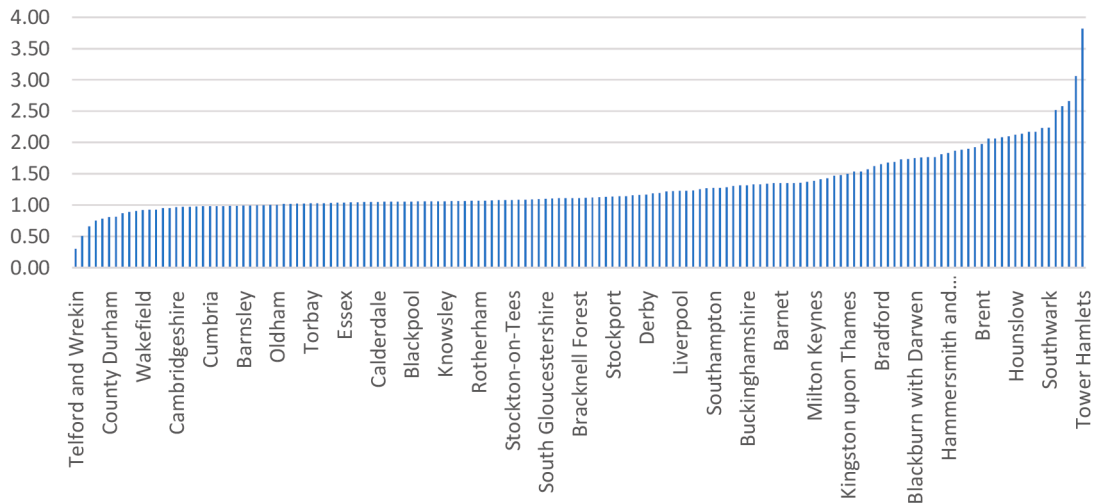


Figure 13. White teacher to pupil ratios, all local authorities, 2021.

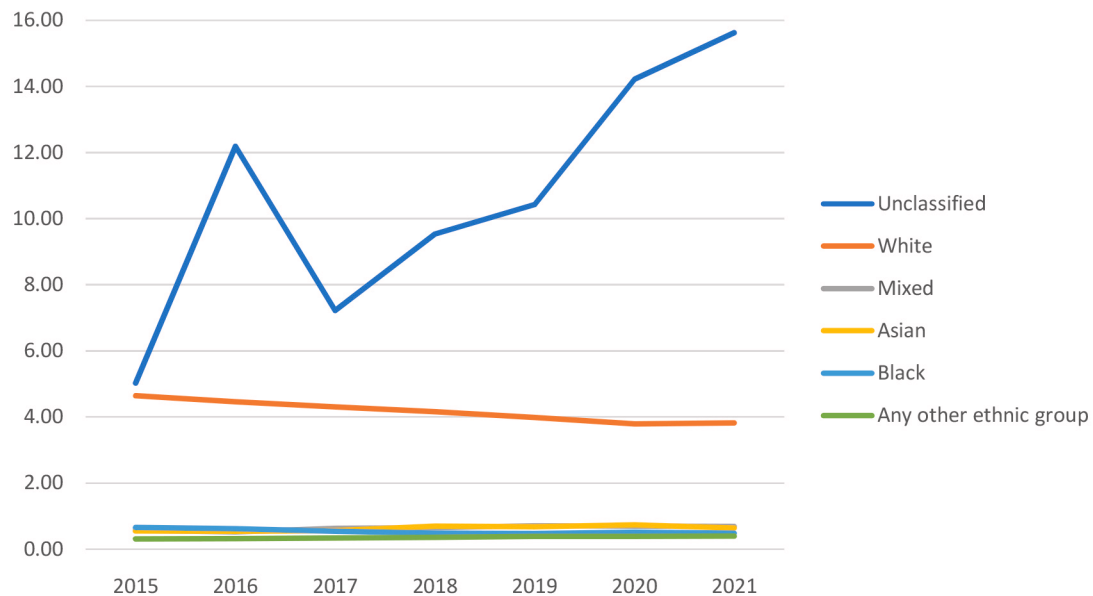


Figure 14. Teacher:pupil ratios for Tower Hamlets.

But there may still be an important issue of diversity to confront here.

Manchester is an urban authority in the North West, that shares characteristics with some authorities in London. The number of teachers with unknown ethnicity has increased sharply (Figure 16). Manchester has a relatively diverse student body, with 26% Asian and 17% Black, and these high figures have been in evidence for seven years. But these figures are not reflected in the teacher workforce (7% Asian, 2% Black). Ethnic minority teachers have increased only marginally over

seven years, unlike in Tower Hamlets, for example. It is not clear why.

Trafford in the North West is adjacent to Manchester and shares many of the same characteristics as an urban setting. Unlike Manchester, it retains a considerable element of selection (Grammar schools) at secondary level. Unclassified teachers have declined dramatically from 44% to 9% over seven years (not shown in Figure 17, as it would make other figures unreadable), while the number of unclassified pupils (1%) has remained roughly the same. Trafford has seen a

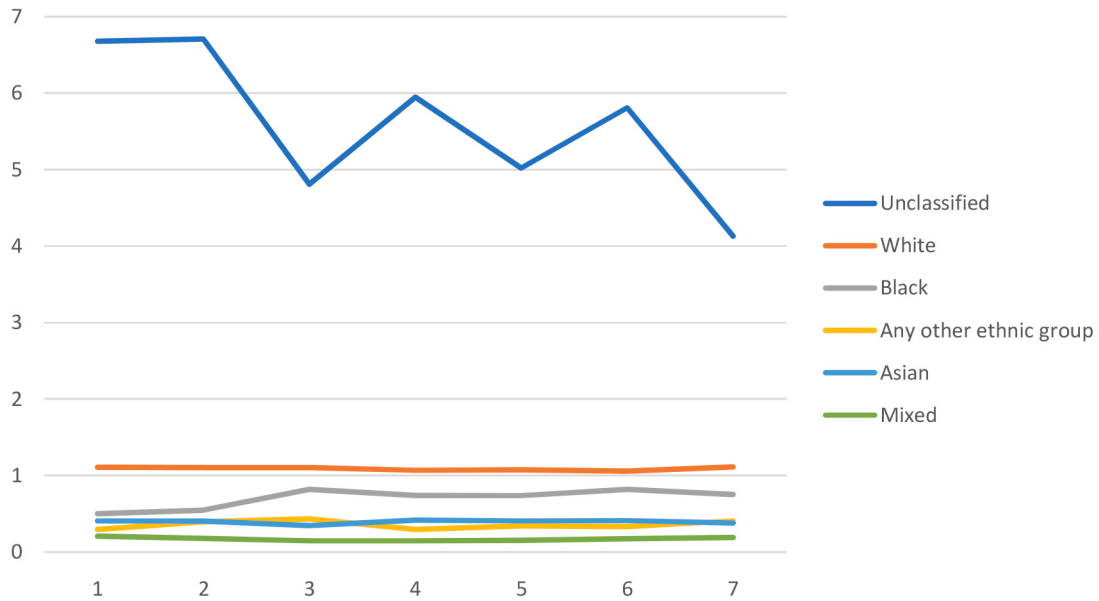


Figure 15. Teacher:pupil ratios for Richmond.

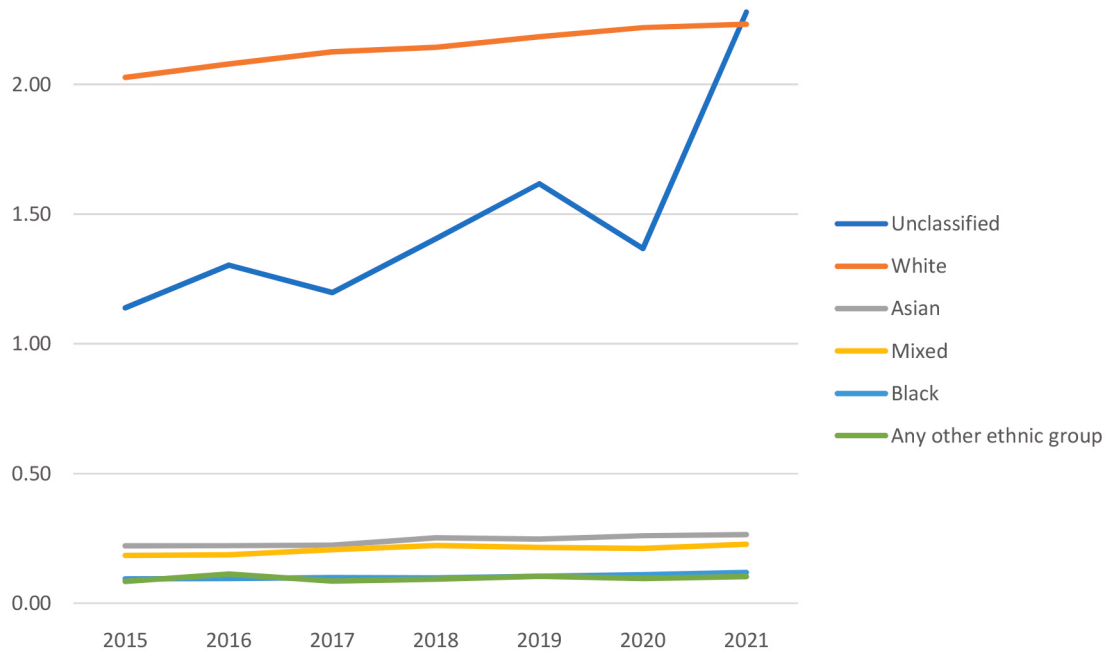


Figure 16. Teacher:pupil ratios for Manchester.

considerable rise in White teachers compared to the pupil body. Unlike most other authorities, the trajectory appears to be going the “wrong” way. There are 19% Asian pupils and 4% Black, substantially lower than in Manchester, but still much higher than the teacher workforce (3% Asian and less than 1% Black).

York is also a city authority, but much smaller and with a lower population density than London or Manchester. Here,

the proportion of teachers with unknown ethnicity has risen from 27% to 41% over seven years. As with Tower Hamlets, the proportion of White teachers has declined, but unlike Tower Hamlets the ratio to pupils was already well below 1 (Figure 18). This is due entirely to the increase in unknown values. The overwhelming majority of pupils in York are White (90%) with only 3% Asian and less than 1% Black. And even fewer teachers are from ethnic minorities, all less than 1% (0.06% Black, for example). This means that the

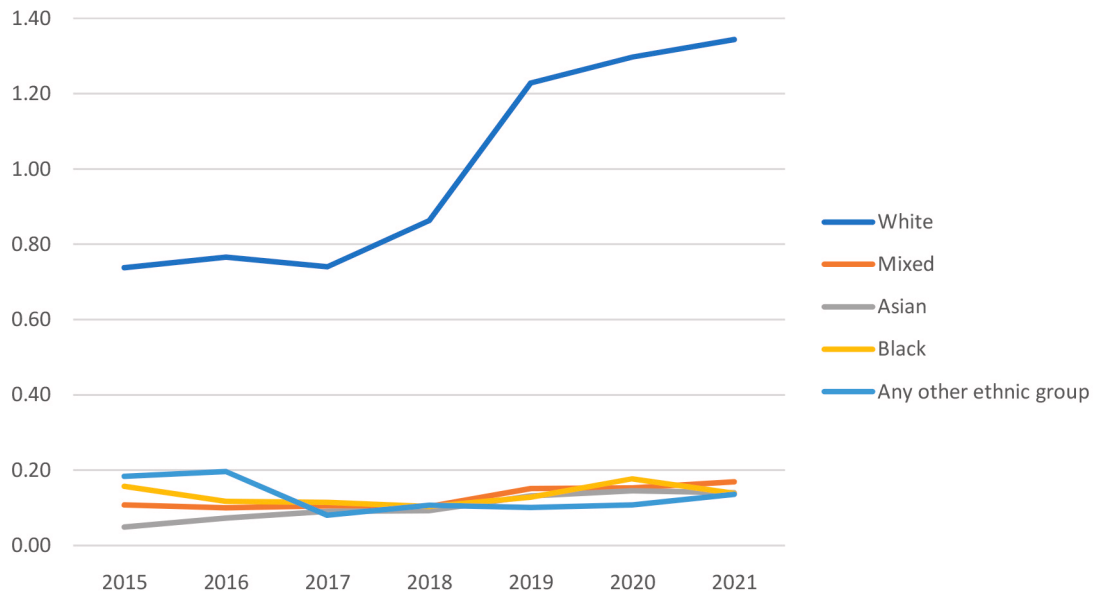


Figure 17. Teacher:pupil ratios for Trafford.

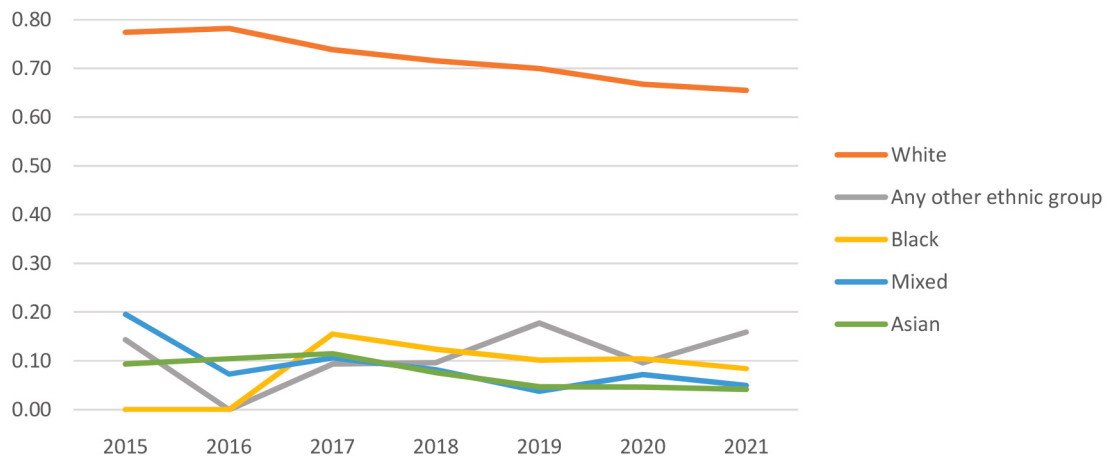


Figure 18. Teacher:pupil ratios for York.

few ethnic minority pupils are very unlikely ever to have a teacher of the same, or indeed, any ethnic minority.

The Isles of Scilly are remote island off the coast of Cornwall, with a low population and only a few schools. The number of teachers of unknown ethnicity has grown from 22% in 2015 to 52% in 2021. All other teachers are recorded as being White. This area is a clear contrast to Tower Hamlets – low population density and no ethnic variation in the tiny teacher workforce. The only ethnic minority pupils recorded as mixed (2.7%), and all others are White British (96%) or not known (Figure 19). The mixed ethnicity pupils have zero chance at present of being taught by an ethnic minority teacher.

These six authorities together show how issues of equity in the supply and distribution of teachers and pupils can arise in very different contexts.

Teacher trainees

In this section of the paper, we look at initial teacher supply (based on the UCAS dataset, see below), and whether this is part of the reason for the national and regional disproportionality seen so far.

White applicants to initial teacher training in England are far more likely to be accepted than any ethnic minority group (Figure 20). Despite improvements in acceptance over eight

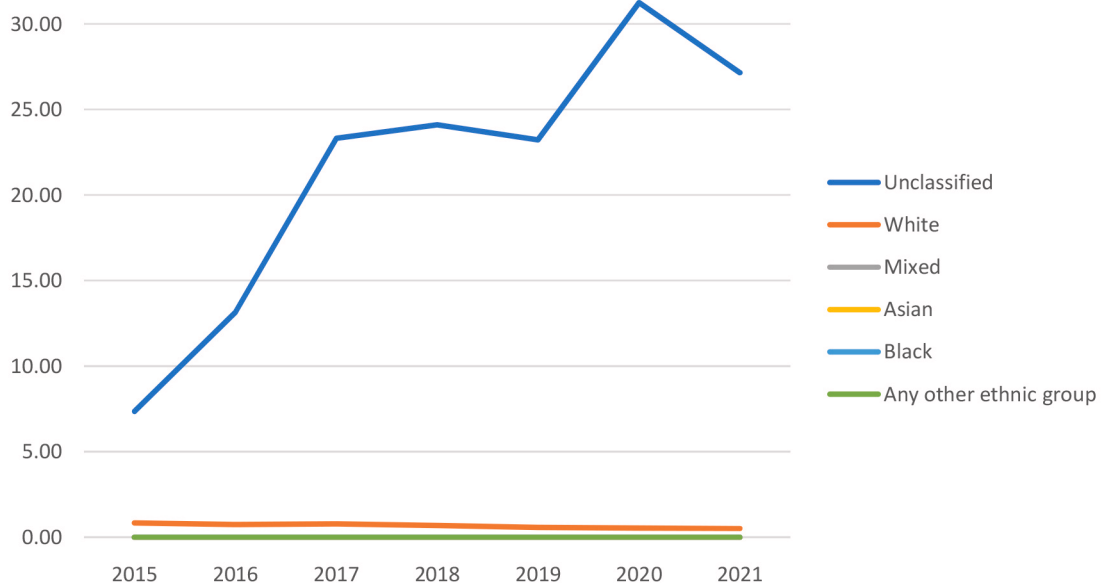


Figure 19. Teacher:pupil ratios for the Isles of Scilly.

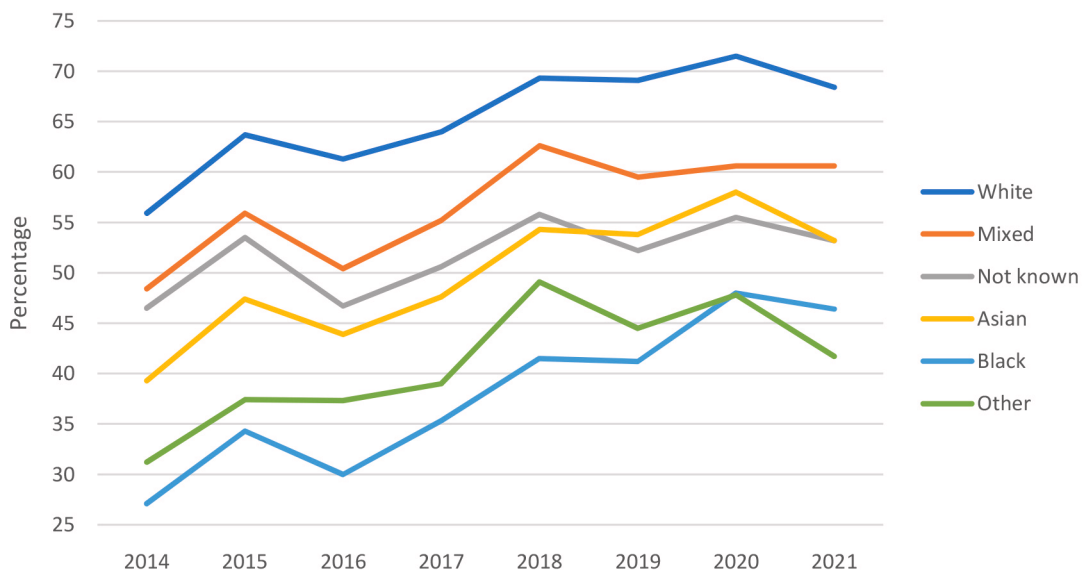


Figure 20. Acceptance rates to initial teacher training, 2014–2021. Note: origin is not zero.

years, applicants recorded as Black have the lowest acceptance rate – substantially below that for White applicants. This differential acceptance rate could be part of the reason for any disproportionality between the ethnicity of teachers and pupils.

In 2021, there were 1,776 providers of initial teacher training with a performance profile in England. Of these, 569 (32%) had no ethnic minority applicants at all between 2014 and 2021, while 870 (49%) had a small number (less than 100). The remaining 337 providers (19%) had a total of at least 100 ethnic

minority applicants over eight years. Of these, 31 (9%) did not accept any of their 100 or more ethnic minority applicants. As discussed in the introduction, it is hard to conclude anything definitively without consideration of applicants’ prior attainment and other characteristics, but there is a strong indication here of a problem in the initial supply of teachers.

The situation is made worse by the success rates of teacher trainees accepted onto courses in gaining qualified teacher status, and then a teaching post in a state-funded school in England (some may teach in other countries or in private

institutions). White teacher trainees have the highest success rate in obtaining QTS, and in being in a teaching post a year later (Figure 21). They also have the smallest gap (drop off) between getting QTS and getting a job. All ethnic minority groups have lower success rates for each outcome, and a much higher drop off from getting QTS to getting a teaching job. As noted elsewhere, there could be a number of reasons for these differences (which will be investigated in our future work), but coupled with lower acceptance rates onto initial teacher training (ITT) courses, these differential outcomes contribute in an important way to disproportionality in the school workforce.

Teaching in a multicultural context

In the final empirical section of the paper, we look at how well prepared teachers are in England to teach in a multicultural context (based on the OECD/TALIS dataset, see below).

Nearly 70% of teachers in England report having received formal initial or continuing training to teach in a multicultural (or multilingual) classroom (Figure 22). This is relatively high internationally based on the 46 countries for whom data is available via OECD/TALIS, and this may be partly due to the demand of the relatively diverse nature of classrooms in most of England. But presumably the ideal here would be 100%.

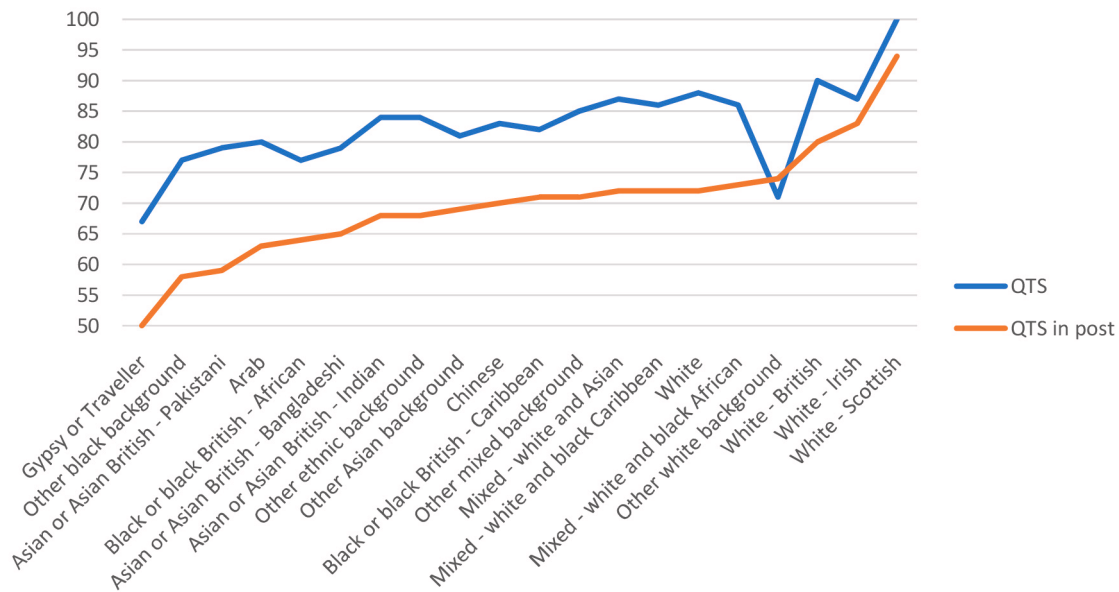


Figure 21. Success rates in initial teacher training and obtaining a teaching post, 2021. Note: origin is not zero.

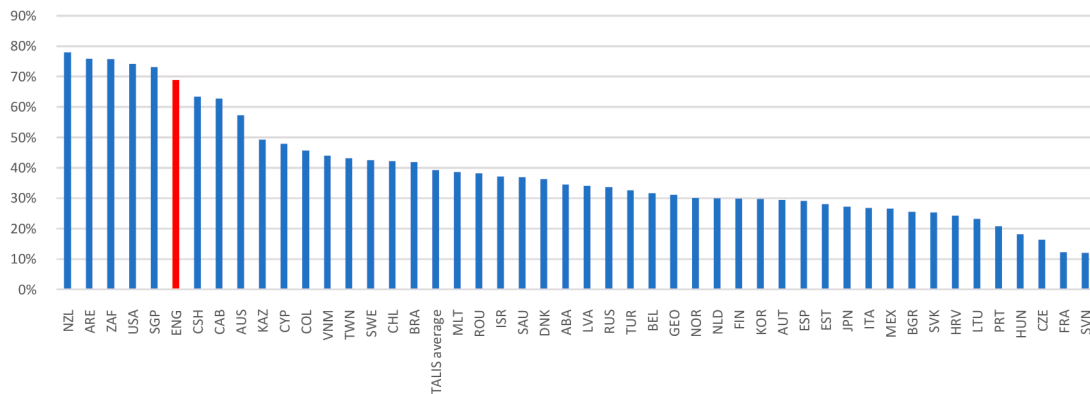


Figure 22. Percentage of teachers with formal training to teach in a multicultural setting.

In fact, over 80% of teachers in England report having taught in a multicultural classroom (Figure 23). There is a clear relationship between the countries that report multicultural classrooms and those where teachers have received relevant training. This does not mean that the training is sufficient, or that teachers in other countries are simply not recognising the multicultural nature of their students.

Only just over 40% of teachers in England say that they feel well-prepared to teach in a multicultural classroom (Figure 24). This is higher than in many other countries, but suggests that considerably more needs to be done.

Discussion

Summary

Historically in England, ethnic minority teachers have been under-represented in comparison to the ethnic make-up of the student body in schools. This is clear, and has meant that White British teachers have been (and still are) heavily over-represented. Recently, the proportion of Black Caribbean teachers has grown and is now proportionate to the number of Black Caribbean pupils in the system. All other ethnic groups have serious disproportions. As noted at the outset, this might influence the treatment and school outcomes of ethnic minority

pupils, and it might impoverish the diversity of the whole school system even for areas with few ethnic minority pupils.

The situation for promoted staff is even more disproportionate and worsens with seniority. London has the most ethnic minority teachers and the most diverse teaching workforce of any region of England. However, due to the exceptional number of ethnic minority students there, the disproportion is worse in London than anywhere else. Areas with the fewest ethnic minority pupils (and teachers), like the North East, have the most proportionate workforce (in this limited sense). This suggests that disproportionality itself is largely an issue of small numbers of any ethnic minority in the population, teacher workforce or student body. Where there are smaller numbers of each minority, such as in the North East, proportionality is actually greater. Rather the issue is that small numbers of ethnic groups of students have a lower likelihood of encountering a teacher or school leader of similar ethnicity. We will investigate this aspect further in future work.

Possible explanations

The “pipeline” leading to classroom teaching and beyond leaks heavily at many points. Some ethnic minority students have lower than average attainment, meaning that they are somewhat

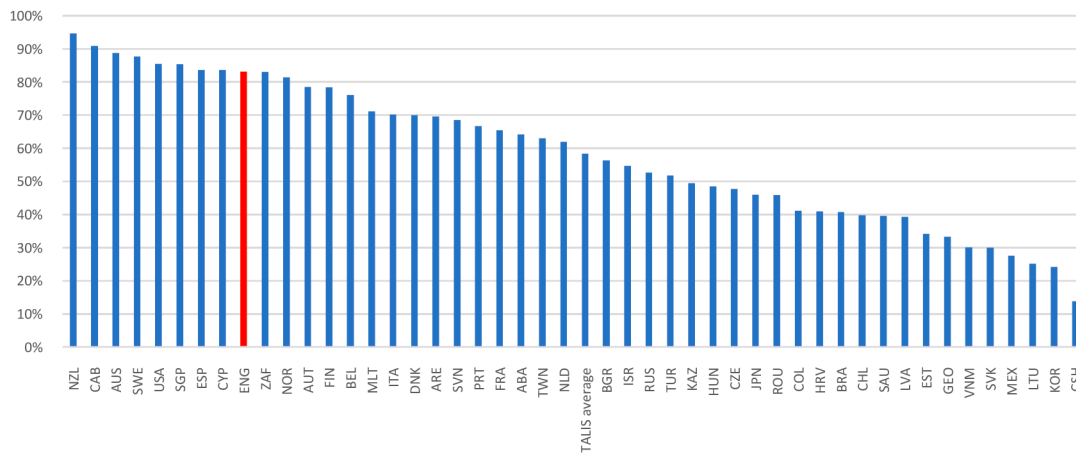


Figure 23. Percentage of teachers reporting having taught students from different cultures.

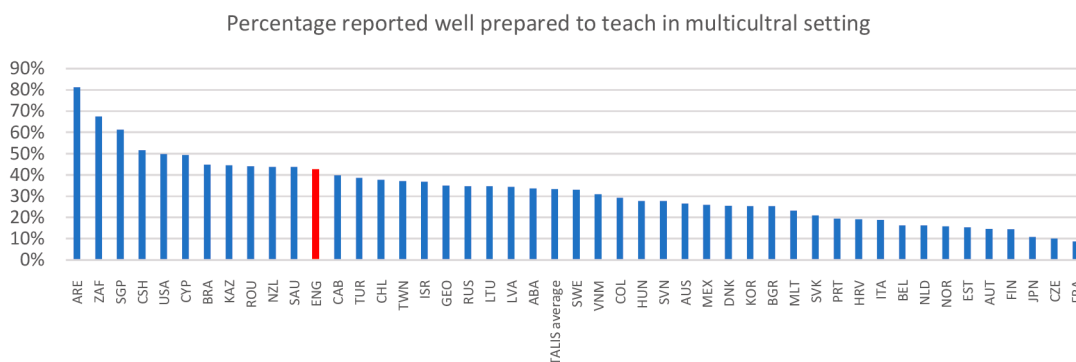


Figure 24. Percentage of teachers reporting being well-prepared to teach in multicultural settings.

less likely to choose academic subjects of the type that lead to university. They are somewhat less likely to continue to academic further education beyond the age of 16, and thence to university (Gorard, 2018). This makes a future as a teacher less likely, or even infeasible.

However, this cannot be the only reason because some ethnic groups such as Chinese and Indian students have higher than average school outcomes, and are over-represented in further and higher education. Yet they are still heavily under-represented in the teaching workforce. In fact, there is some evidence that many high-performing students are not generally interested in a career in teaching (Gorard *et al.*, 2021), and there may be family or cultural pressures steering such students away from teaching.

As this paper has shown, ethnic minority applicants to ITT are substantially less likely to be accepted, and even those accepted are less likely to gain QTS or an eventual post in a school. The pipeline continues to leak. After all of that, it is perhaps not surprising that ethnic minority teachers are under-represented, and that many ethnic minority pupils will rarely be taught by someone of a similar ethnicity.

This overall disproportionality may also be partly due to cohort changes and age differences. Teachers will be substantially older than their students, on average. For example, in the population census of usual residents in 2011, 81% reported being White British (English, Scottish, Irish or Welsh), but by 2021 this had dropped to 74%. Residents of Pakistani origin have risen from 2% to 2.7% of the resident population. Most other groups, other than Chinese, had also risen substantially. One would therefore expect teachers to be slightly less diverse than the students they teach. In future analyses we will factor these cohort changes in.

In addition, of course and at every stage in the pipeline, there are issues of potential bias. Unconscious, deliberate and structural bias against some or all ethnic minorities have all been reported in some small-scale in-depth studies (Callender, 2020; Miller, 2008; Wallace, 2020) and some larger ones (Haque & Elliott, 2016; Ozolins *et al.*, 2021).

This paper provides a descriptive account that sets the scene for a larger project that will look in detail at the possible reasons for ethnic disproportionality in the teacher workforce, including bias and other barriers, and its consequences for school processes and outcomes. It will use a variety of designs and methods, such as structured reviews, analyses of individual teacher and student data, a national survey, and in-depth case studies of schools.

What can be done in the meantime?

It is too early for this project to draw firm implications for policy or practice. Identifying the most effective solutions

is a key part of the project future programme of work, and this depends partly on understanding the determinants and barriers better.

However, it is clear that ethnic disproportionality is real, probably has many possible determinants, and creates damage for the education system in a number of ways. Addressing it is not currently a hot policy issue in England, unlike the “underachievement” of White working-class boys has been in recent years, for example. This needs to change.

Widening participation to higher education could help in time, as could the new Access and Participation Plans proposed by OfS for universities to help local primary schools reduce their disadvantage attainment gap, and any reduction in the clustering of ethnic minority students in particular schools or areas could also help (Gorard *et al.*, 2022). However, more immediately, any biases need to be identified and dealt with, starting perhaps with better and fuller initial and continuing preparation of teachers to work in diverse classrooms, and asking any inspection regime to look more closely at differential acceptance rates into initial teacher training.

Data availability

Underlying data

All of the datasets used in this paper are freely and publicly available at the following sites.

- The School Workforce Census and School Census data from 2015 to 2021 is available here from the website of the Department of Education: <https://explore-education-statistics.service.gov.uk/find-statistics/school-workforce-in-england>. (DfE, 2023a)
- The data on applicants to teacher training is available from the UCAS website: <https://www.ucas.com/data-and-analysis/ucas-teacher-training-releases/ucas-teacher-training-end-cycle-2021-data-resources>. The data shows the number of applicants and the number accepted by ethnicity for 2014–2021, and broken down by ITT provider.
- The figures on the ethnicity of the resident population of England are available from the Office of National Statistics website here: <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/ethnicity/bulletins/ethnicgroupenglandandwales/census2021#ethnic-groups-in-england-and-wales>
- The data on teaching in multi-cultural settings is available from TALIS 2018: <https://stats.oecd.org/Index.aspx?QueryId=97205>

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Open Peer Review

Current Peer Review Status: ? ?

Version 2

Reviewer Report 13 July 2023

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Thomas Perry

Department of Education Studies, University of Warwick, Coventry, England, UK

Thank you for this revised version of the paper. I can see that many peer review comments have been addressed. There remain, however, a small number of points made in my original review which have not been addressed or an explanation given of why this is not possible/desirable.

Below are the selected comments from my original review which I believe still require attention:

Analysis

- Section on National comparisons by teacher type – I wonder whether more attention was needed to whether ratios were changing due to shifts in teacher numbers, pupil numbers or both, as these have different policy implications. For example, I can see from Figure 7 that the proportion of Black Caribbean teacher-pupil ratio has increased, but need to go back to Fig1 to see that BC teacher proportion is broadly similar, fig4 to see that BC pupils are down and therefore the change in Fig7 is driven by pupil rather than teacher population change. So, this improvement is not due to more inclusive teacher recruitment it seems. I think comment on what is driving the changes in ratio that are mentioned in the text such as this example would be helpful.
- P14. Teacher trainees. We are told that 49% had a ‘small number’. What is this small number? Also, do we need to know proportions rather than absolute values? If there are large numbers of very small courses (e.g., n=10) then having 32% with no EM applicants is less surprising than if most courses are much larger. Similarly, the significance of 19% having over 100 EM applicants is unclear without knowing how many applicants.

Literature Review

- P3., top of column. Why are assistant headteachers referred to here, but the main analysis looks at head teachers and deputy headteachers? Is there data for deputy headteachers to include at this point? (Update: the source cited does indeed include figures for deputy heads, which would be the more appropriate figure to provide).

Typographical and presentation

- Figure 21 – I struggled to see which group was with which data point – which was particularly an issue for the ‘spike’ around (I think) other white background.
- P12. ‘38% (0.38) of the figure’ (is the second 0.38 needed?)
- Figure 12 is hard to read. Also, Fig 14 and 15 – where the unclassified category is reducing readability.
- Figure 12 – why is unclassified and white-Irish included in the figure when in previous figures categories were excluded to aid visibility?
- Figures – I think the placement could be better. I found myself having to jump up and down the paper as the narrative was often referring to figures that were multiple pages away.
- I thought the titles could be more self-explanatory for the figures. ‘trends in disproportionality of headteachers and pupils by ethnic minority group’ for example would be clearer as ‘ratio of headteacher to pupil proportion by ethnic minority group’.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Education research, quantitative methods, evidence-informed policy and practice.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Version 1

Reviewer Report 11 May 2023

<https://doi.org/10.21956/routledgeopenres.19076.r27046>

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Thomas Perry 

Department of Education Studies, University of Warwick, Coventry, England, UK

This article provides helpful and current descriptive data on the (dis)proportionality of school teachers and pupils in England. It discusses why this might matter and identifies intended future work in this area. It is a helpful contribution to the literature and I recommend only minor revisions. Below I provide feedback to support revising and finalising the article.

Analysis

Section on National comparisons by teacher type – I wonder whether more attention was needed to whether ratios were changing due to shifts in teacher numbers, pupil numbers or both, as these have different policy implications. For example, I can see from Figure 7 that the proportion of Black Caribbean teacher-pupil ratio has increased, but need to go back to Fig1 to see that BC teacher proportion is broadly similar, fig4 to see that BC pupils are down and therefore the change in Fig7 is driven by pupil rather than teacher population change. So, this improvement is not due to more inclusive teacher recruitment it seems. I think comment on what is driving the changes in ratio that are mentioned in the text such as this example would be helpful.

One of the points that is returned to on several occasions is that ethnic minority pupils are unlikely to ever have a teacher of the same ethnicity. I felt that the issue of representation and proportion were not always separated out and perhaps further comment is needed on this issue (e.g., in the discussion section). EM teachers would need to be highly over-represented where pupil EM proportions are low to give good odds of representation. The issue is most acute when it comes to headteachers. Representation is more achievable in larger staff teams (e.g., secondary teachers) – there can typically only be one headteacher. Is it proportionality or representation that is sought? It would be possible to achieve a proportionate number of EM head teachers across an area while the probability of EM pupils having an EM head teacher remaining very low. Numerically, if representation was the sole aim, then this would be best achieved by segregated EM pupil populations being served by EM head teachers (which I am not suggesting is at all desirable). When the EM pupil proportion is low – while it certainly doesn't help – the teacher-pupil EM ratio disproportionality isn't the main factor for lack of representation. On page 12, for example, it states 'Only 2% of teachers are Black, for example, and *so* some of the small number of Black number (2.8%) might not reasonably expect to ever be taught by one of these teachers' (emphasis added with asterisks). The low chance of representation in my understanding is driven more by the fact that only a few percent of the population are EMs than the teacher-pupil proportion disparity.

P14. Teacher trainees. We are told that 49% had a 'small number'. What is this small number? Also, do we need to know proportions rather than absolute values? If there are large numbers of very small courses (e.g., n=10) then having 32% with no EM applicants is less surprising than if most courses are much larger. Similarly, the significance of 19% having over 100 EM applicants is unclear without knowing how many applicants.

Literature review

P3., top of column. Why are assistant headteachers referred to here, but the main analysis looks at head teachers and deputy headteachers? Is there data for deputy headteachers to include at this point?

P3. There is relevant analysis in Parsons and Thompson (2017). As they discuss, the different patterns of attainment seen for different ethnic groups are more consistent with some explanations than others. As with the evidence you cite, it doesn't seem that disproportionality is a large factor for attainment. It might be worth commenting on this and the dangers of treating ethnic minorities as a group when it comes to describing and explaining differences in outcomes

(and this is another reason why the data in the present paper which provide a detailed breakdown are helpful).

Parsons, C., & Thompson, T. (2017). Ethnicity, disadvantage and other variables in the analysis of Birmingham longitudinal school attainment datasets. *Educational Review*, 69(5), 577-599.

Clarity

P1. 'more White British teachers than expected'. I am not sure how helpful 'expected' is here. It is used in a statistical sense and with the assumption that an equal proportion is expected. There isn't space to explain why this might be expected (or not) in the abstract. Perhaps it is better to just state the fact that there were a higher proportion of White British teachers than pupils?

P4. Methods, first para. The data come from 'three sources' but only two are detailed. This left me wondering at this point of reading the paper about what the third source was (ONS, UCAS, OECD TALIS are mentioned at the end).

P4 final para, 'teachers to pupils' – add 'by ethnicity'?

I thought the titles could be more self-explanatory for the figures. 'trends in disproportionality of headteachers and pupils by ethnic minority group' for example would be clearer as 'ratio of headteacher to pupil proportion by ethnic minority group'.

Typographical and presentation

P3.para1 'and section'

P3. Para beginning 'they are more'. Presumably 'they' refers to ethnic minority students? Odd to have a paragraph break but continue the list and the pronoun use.

Figures – I think the placement could be better. I found myself having to jump up and down the paper as the narrative was often referring to figures that were multiple pages away.

Figure 12 – why is unclassified and white-Irish included in the figure when in previous figures categories were excluded to aid visibility?

Figure 12 is hard to read. Also, Fig 14 and 15 – where the unclassified category is reducing readability.

P12. 'the small number of Black number'

P12. '38% (0.38) of the figure' (is the second 0.38 needed?)

P14 'low population a few schools'.

P14. 'at mixed' should be 'as mixed'

Figure 21 – I struggled to see which group was with which data point – which was particularly an

issue for the 'spike' around (I think) other white background.

References

1. Parsons C, Thompson T: Ethnicity, disadvantage and other variables in the analysis of Birmingham longitudinal school attainment datasets. *Educational Review*. 2017; **69** (5): 577-599
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Is the work clearly and accurately presented and does it engage with the current literature?

Yes

Is the study design appropriate and does the work have academic merit?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Yes

Are all the source data and materials underlying the results available?

Yes

If applicable, is the statistical analysis and its interpretation appropriate?

Partly

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Education research, quantitative methods, evidence-informed policy and practice.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 09 May 2023

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Tayyaba Tamim

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The focus of the paper is timely and relevant given the international focus on issues of diversity

related equity in educational contexts. The abstract clearly articulates the essence of the study. The study design is appropriate and has academic merit. The methods allow for replication.

I have the following suggestions to strengthen the article before it can be published

The Background

This section begins with the signposting of the material. I would suggest it begins by highlighting the significance of the issue and evidence for it in an international context, may be briefly covered to spark the interest of the readers. This could be followed with signposting in the last paragraph.

Evidence of existing disproportionality...

- In the section the first paragraph does not seem to fit in. May be it can be shifted earlier to the background section.
- Please revisit the connector and sentence formation "Overall though, the system is not proportionate. Blom *et al.* (2017) reported that while 4.4 percent of White adults in the US were teachers, only 1.5 percent of Hispanic adults were'

Why does Disproportionality Might Matter

Please revisit the following sentences

- 'As shown below, much of the worldwide evidence on this issue is from the US...' because the evidence given above is 'worldwide' as claimed earlier and actually from western contexts of which US is only one.
- 'There are also in-depth accounts...' I am not sure if also comes here. Also please add citation to this claim.
- 'In summary, whenever teacher judgement is involved, there are consistent discrepancies...' There is only one study cited to summarize. More literature needs to be added.
- 'They are more likely to be referred to a gifted programme...' Please define they.
- 'In terms of attainment, a summary of the evidence is equally consistent, but again without experimental results, and again often without taking prior attainment or background into account.' Not sure what this means and why what is said is important. Please explain

Methods

Please explain why the decision to use the category of undisclosed ethnicity was taken and how does it skew the data? Or what steps were taken to avoid it.

Key Patterns

- While the trends in the data have been clearly presented. The analysis is very thin and only presents the findings rather than explain it.
- Regarding the multicultural teaching in this section. Some indication needs to be given in the methods section that this was being explored. The need for this question actually needs to be built throughout the introductory paragraphs and explained why was this important.

- o Also please let the reader know if there is only one kind of teacher training for all teachers in UK or different. Also is there any ethnicity based difference in multicultural educational training.

Possible explanation

- o Please explain more 'However, due to the exceptional number of ethnic minority students there, the disproportion is worse in London than anywhere else...'
- o In the sentence 'This paper provides a descriptive account that sets the scene for a larger project that will look in detail at the possible reasons for ethnic disproportionality in the teacher workforce, including bias and other barriers, and its consequences for school processes and outcomes' I think while the description is given but the 'consequences for school processes and outcomes' is neither attempted nor given.

The significance of the issue needs to be highlighted more in terms of consequences in the literature and in the conclusion.

- o For now it is not clear because we do not know why ethnically diverse teachers for instance are not applying and why they do not pass and why they shift schools. Perhaps this could be indicated as beyond the scope of the study or as a future research area in the conclusion

Is the work clearly and accurately presented and does it engage with the current literature?

Partly

Is the study design appropriate and does the work have academic merit?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Partly

Are all the source data and materials underlying the results available?

Partly

If applicable, is the statistical analysis and its interpretation appropriate?

Yes

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Education and Social Justice

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.
