









# Factors related to the recruitment and retention of ethnic minority teachers: What are the barriers and facilitators?

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## Abstract

This paper reports on the findings of a comprehensive structured review of the factors that can help explain and perhaps improve the recruitment and retention of ethnic minority teachers in schools. This issue has been a policy concern in several countries. The review followed a conventional protocol, beginning with a search of key educational, psychological and sociological databases, followed by intensive screening and weighting the strength of evidence of each included report. Fifty-one studies relevant to the research question were finally included in the review. There is strong evidence that the ethnic match between school leaders and teachers is strongly linked to the hiring and retention of minority ethnic teachers. Although there is some evidence that the student ethnicity of the school may be an important factor in the retention of ethnic minority teachers, this chiefly applies to Black teachers in the studies found from the USA. The entry qualifications and assessment criteria for certification to teach were deemed potential barriers to ethnic minority prospective teachers entering teaching. There is no good evidence that alternative certification of teachers increased the probability of ethnic minority teachers being hired or retained, but there are certain supportive features of alternative pathways that could improve their chances.

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**KEYWORDS**

barriers, ethnic minority teacher recruitment, ethnic minority teacher retention, race/ethnicity match, systematic review

**Context and implications****Rationale for the study**

- In England, the ethnic minority student population has grown considerably over the last 10 years, but the ethnic minority teacher population has not. This disparity is a cause for concern.
- Another worrying trend is the low success rates among minority ethnic applicants to initial teacher training. They are less likely to be accepted into training, less likely gain certification, less successful in finding jobs in schools and less likely to stay at school.
- International research shows that students from ethnic minority backgrounds benefit from being taught by teachers of similar race/ethnicity. They perform better academically, less likely to be excluded or suspended from school, less likely to drop out and less likely to be classified as having learning difficulties. They are also more likely to be referred to a gifted programme.
- An ethnically diverse teaching workforce, therefore, helps to address the low attainment of some minority ethnic groups and creates a more inclusive and diverse school community that reflects that of the wider society.
- Understanding those factors needed to attract and retain ethnic minority teachers is, therefore, important in increasing the supply of ethnic minority teachers in schools.

**Why the findings matter**

- The findings suggest evidence of implicit bias in hiring practices (especially through training). Research, particularly in the United States, has consistently shown that ethnic minority teachers are somewhat more likely to be recruited by principals who share their race/ethnicity.
- The entrance qualification requirements and admissions criteria for teacher-training programmes have been identified as key barriers to entry into teaching for ethnic minority teachers, contributing to the under-representation of new ethnic minority teachers.
- For retention, the review found that ethnic minority teachers in schools where the principals share the same ethnicity are less likely to move schools, and more likely to report better perceived working conditions and lower likelihood of leaving teaching.
- There is also some evidence that induction support is an important factor in the retention of all teachers, including ethnic minority teachers.
- Challenging working environment also explains the high attrition of ethnic minority teachers.

These findings matter as they suggest that proactive actions can be taken to address the under-representation of ethnic minority teachers in schools by tackling implicit bias and increasing the number of ethnic minority school leaders.

## Implications

The findings have important implications for policy and practice.

- Schools can conscientiously examine and revise their hiring and recruitment practices.
- Teacher training providers can make the criteria for selection into teacher training more transparent.
- Tailored support could be provided to ethnic minority applicants to teaching as well as pre-service teachers in training to help them meet the criteria for admissions and qualifications.
- Improving the working conditions in schools can improve retention of all teachers, including ethnic minority teachers.
- Policies could focus on increasing the number of ethnic minority principals in schools (in England, especially outside London), and on improving the recruitment of ethnic minority students to university-based education programmes.
- Given that the ethnic mix of pupils can be a factor both in the attractiveness of a school and the retention of ethnic minority teachers, improving ethnic and socio-economic mixing of school intakes is encouraged.

## INTRODUCTION

The ethnicity of school students in the United Kingdom, across Europe, the United States, and several other regions is becoming increasingly diverse, in part due to greater migration and partly to the growth of the minority ethnic population within each country, reflecting a broader trend of global population diversity. However, there has not yet been a parallel increase in the ethnic diversity of the teaching workforce in these countries. This under-representation of ethnic minority teachers in schools is a policy concern.

In the USA, addressing the under-representation of ethnic minority teachers in schools has been a focus of various government policies and initiatives at the federal, state and local levels. These efforts generally tried to promote diversity among educators and create pathways for individuals from under-represented backgrounds to enter the teaching profession. In the UK, the Welsh Government (2021) has implemented a range of policies to address the under-representation of ethnic minority teachers. In England, progress in this area has been slow, and policy initiatives appear to be somewhat superficial (Tereshchenko et al., 2020).

There is also a lack of specific strategies to implement the various initiatives. So far, the Department for Education in England has only expressed a commitment to increase the diversity of the teaching workforce (Department for Education, 2018a), but no firm policies are in place to do so. We acknowledge that the government is developing a policy (Department for Education, 2024) aiming to recruit teachers from abroad, but this does not necessarily increase the number of ethnic minority teachers within England because of a number of conditions attached. Most of the countries eligible are White English-speaking countries. Getting a qualified teacher status (QTS) does not guarantee a teaching post or visa. These have to be applied for separately. Schools also have to pay sponsorship licences as sponsors to hire these teachers. There are currently a number of barriers to home-grown ethnic minority teachers entering teaching (Gorard, Chen et al., 2023; Gorard, Ventista et al., 2023). No firm policies have been in place to address these.

The issue of ethnic disproportionality in the teaching workforce has spawned a large body of research internationally over time, looking at the importance of the racial/

ethnic mix of the teaching workforce (e.g., Callender, 1995, 2020; Miller, 2020; Villegas & Irvine, 2010) and its impact on the learning and wider outcomes of ethnic minority students (e.g., Gorard, Tereshchenko et al., 2024; Grissom et al., 2020; Kurylo, 2021). Surprisingly, there has been less research into how to increase the number of ethnic minority teachers in schools.

The aim of this paper is to review and synthesise international evidence on those factors that can help in the recruitment and retention of ethnic minority teachers, or the barriers to doing this, so that appropriate policies and programmes can be recommended.

## Why the need for ethnic diversity in the teaching workforce?

International evidence suggests that exposure to teachers from a similar race/ethnicity can have a positive impact on the academic achievement of ethnic minority students (e.g., Egalite et al., 2015; Gershenson et al., 2022; Harbatkin, 2021). Ethnic minority pupils with teachers from similar ethnic backgrounds are less likely to be excluded (Grissom et al., 2009; Lindsay & Hart, 2017) and suspended from school (Wright, 2015) or to drop out (Gershenson et al., 2022). They are less likely to be classified as needing special education (Stiefel et al., 2022) and more likely to be referred to a gifted programme (Grissom et al., 2017; Grissom & Redding, 2015).

Another more general argument for diversifying the teaching workforce is that the racial and ethnic makeup of the teaching force should reflect that of the student population and the wider society to which students belong. Teachers from ethnic minority groups also serve as important role models for students from all ethnic groups (Demie, 2019; Villegas and Davis, 2008; Clewell and Villegas, 1998). This can help to tackle racial inequality and close the achievement gap between ethnic minorities and White British in England's schools (Demie & See, 2023).

## Evidence of the growing disproportionality in the student-teacher ethnic representation

In England around 72% of the working population is recorded as White British (Office for National Statistics, 2023), but 85% of teachers in state-funded schools are White British, while only around 66% of pupils are White British (Gov.UK, 2021). Government data from the Department for Education shows that this disparity between the proportion of ethnic minority pupils in schools and the proportion of ethnic minority teachers is growing. Between 2011 and 2021, the ethnic minority student population grew by 75%, while ethnic minority teachers increased by only 31%. In 2005, ethnic minority students made up 19% of the student population. This increased to 35% by 2021. The proportion of ethnic minority teachers, on the other hand, only increased from 10% to 15% over the same period.

There is, therefore, a growing mismatch between the ethnic diversity of the student and teacher population. There are now over 1.2 times as many White British teachers as White British pupils (Gorard, Chen et al., 2023; Gorard, Ventista et al., 2023). It is this increasing disproportionality of minority ethnic teachers and pupils that is a cause for concern for policy makers and school leaders.

Teachers from minority ethnic groups are also not evenly distributed across schools in England. Around 46% of schools in England have been reported not to have a single minority ethnic teacher (Tereshchenko et al., 2020). Our previous work, using data from the

Department for Education School Workforce Census and School and Pupil Characteristics, shows that although London has the biggest concentration of ethnic minority teachers (42% in Inner London, 36% in Outer London), it still has more than twice as many White teachers as the pupil population would suggest (Gorard, Chen et al., 2023; Gorard, Ventista et al., 2023). The north-east of England, on the other hand, has among the least diverse teacher and pupil population in England (89% White British teachers and 86% White British pupils). The biggest ethnic minority groups for pupils there are Pakistanis (1.5%) and those of Black African origin (1.3%). However, only 0.27% of teachers are Pakistani teachers and 0.1% are of Black African origin. This means that many of the ethnic minority pupils in the north-east will never encounter a teacher of similar ethnicity in the classroom, and they are even less likely to encounter an ethnic minority school leader. This matters because schools represent the wider society, and these students will at some point in their lives meet people of different ethnicity or racial groups to themselves. Exposure of all students, even in schools and areas that are predominantly White, to a more diverse teacher workforce benefits all (including White) students, providing them with an ethnically and linguistically rich experience, promoting social cohesion, racial understanding and tolerance (Cherng and Halpin, 2016; Gorard, Chen et al., 2023; Gorard, Ventista et al., 2023).

Similar patterns have been observed in the USA. In their analysis of the nationally representative Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS) from 1987/88 to 2015/16, Ingersoll et al. (2020) found a persistent gap between the percentage of students and teachers from under-represented racial/ethnic groups. Despite an increase in the number of teachers from under-represented racial-ethnic groups, the gap persists. This is largely because of the substantial increase in the number of under-represented racial-ethnic group students and a corresponding decrease in the number of White non-Hispanic students (15% decrease). Ethnic minority students made up about 51% of the student population in US public schools, but only about 20% of public school teachers were from an ethnic minority background.

These trends in teacher and pupil demographics have implications for the recruitment and retention of ethnic minority teachers. The overall disparity between the racial and cultural backgrounds of pupils and teachers is partly because ethnic minority teachers have less success in gaining employment in schools, and higher attrition rates (Gorard, Chen et al., 2023; Gorard, Ventista et al., 2023). In the last decade, the overall number of minority ethnic teacher trainees in England has almost doubled from 12% to 21%, but the employment outcomes after obtaining QTS are lower for graduates from minority ethnic groups, especially for Asian and Black ethnicities (Gov.UK, 2021). Other than in London, the retention rates of minority ethnic newly qualified teachers 6 months and 2 years after QTS were found to be lower than for White British teachers across different training routes (Allen et al., 2016; Department for Education, 2018b).

As far as we know, there have been no recent large-scale comprehensive reviews of evidence on the factors that potentially influence the recruitment and retention of minority ethnic teachers. This review contributes to addressing this gap.

## METHODS

This review is part of a larger study analysing the changing demographic trends in student and teacher population in England and the implications of the ethnic composition of the teaching staff for the experiences of ethnic minority students. The main research question for the review is:

- What factors influence the recruitment and retention of ethnic minority teachers?

## Search strategy

For this review, we combined a number of strategies, including searching electronic databases and websites, and reference chaining. Experts within the team also helped identify relevant literature. The electronic databases used in this review included:

- Proquest
- EBSCOhost (OpenDissertations, British Education Index, Education Abstracts, Educational Administration Abstracts, APA PsycArticles, APA PsycInfo, ERIC)
- Web of Science
- Google Scholar

Further studies were added using backward citations from our previous work, references in prior systematic reviews, and studies referenced in reports uncovered by our searches. All searches were limited to studies published or available in the English language. To help avoid publication bias, the search included any material whether published or unpublished. It was decided that research from the year 2000 and later would be more relevant to the research questions, given that factors impacting minority teacher recruitment and retention could have been very different in the prior century. However, initial searches were not limited by date, which is important given that 91 items were found to be missing a publication date, and these could have been missed in a date-restricted search. The missing date information was entered manually based on reviewing the full-text study reports, where available. The official publication date or copyright date was used, where given, or else the online posting date was used. Most of the studies with missing date information had been published or posted between the years 2020 and 2023, so their inclusion is relevant to the most recent evidence for the research question. Some important studies prior to 2000 are discussed in the background for the review.

To facilitate the search, search terms relevant to the research question were first tested on EBSCOhost and further refined and adapted to the idiosyncrasies of the databases. The final set are in [Table 1](#).

## Screening

A total of 6123 records were identified and exported to Endnote. An additional 30 items were added from other sources (including Google Scholar). As in any search involving multiple databases, a high volume of duplicated items was found. Using the deduplication function in EndNote, we removed 1719 duplicates. Removing duplicates and 1030 studies prior to 2000, a total of 3404 studies were retained (see [Figure 1](#), PRISMA flowchart). These were then screened for relevance on the basis of their titles and abstracts by three members of the team, which led to 709 items remaining for full text screening. To ensure consistency of screening among the team members, a set of inclusion and exclusion criteria was developed. Each member of the team independently screened 10 items first, before convening to discuss any pieces where there was ambiguity. There was a high level of agreement on include/exclude decisions among researchers. Where items were ambiguous, they were double-screened and a consensus was reached.

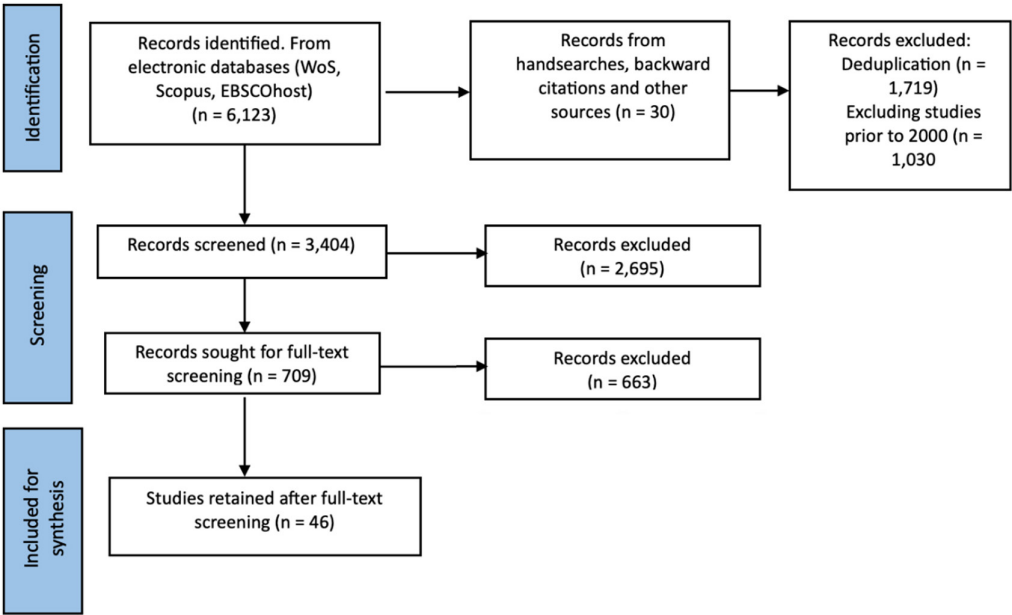
## Inclusion and exclusion criteria

Articles published prior to 2000 were routinely excluded, but earlier landmark pieces have been included in the discussion. Included studies needed to show relevance to the research



TABLE 1 Search terms used in the database search.

Date of search	Outlet	Database(s)	Search string	Resulting items
17 April 2023	Proquest (Durham Library)	Social Sciences Premium Collection	(teacher AND minority) AND (recruitment OR retention)	2264
17 April 2023	EBSCOhost (Durham Library)	OpenDissertations, British Education Index, Education Abstracts (H.W. Wilson), Educational Administration Abstracts, MLA International Bibliography, APA PsycArticles, APA PsycInfo, ERIC	teacher AND minority AND (recruitment OR retention)	1954 (EBSCO automatically reduced this to 1902 after removing duplicates)
18 April 2023	Web of Science (Durham library)	Web of Science Core Collection	((TI = (teacher OR educator OR facult OR AB = (minorit OR ethnic OR divers OR black OR colo\$rac OR afr OR rac)) AND AB = ((recruit OR retrain OR retain OR turnover OR prepar OR train OR supply OR work\$force OR certificat OR licen)))	1905



**FIGURE 1** Flowchart of records sought and retained at each stage. *Source:* Moher et al. (2009).

question based on analysing primary data. We excluded opinion pieces and studies based solely on computer simulations (see Table 2 for inclusion and exclusion criteria). We included studies about ethnic minority teachers or potential teachers, with outcomes related to teacher recruitment (i.e., obtaining a teaching position) or retention (i.e., maintaining a teacher in the workforce). For consistency and simplicity we focused on regular, state-funded schools where international research has suggested ethnic disproportionality has been an issue. Therefore, we have excluded special schools and independent schools, where there have been greater variations across countries.

Of the remaining 709 studies, 663 were excluded based on the criteria, and reading the full text. This left 46 for full extraction and quality judgement.

### Data extraction and evidence rating

Full texts of included studies were retrieved and read. We summarised key information relating to the research design, scale of study, level of attrition or response rate, the outcome of interest (e.g., recruitment or retention), the primary factor(s) relating to recruitment/retention, how outcomes were measured (e.g., self-report of intention to stay or actual record of a teacher leaving school/teaching), and any threats to validity. An example of the data extraction template in use can be seen in Appendix 1.

Each study was then assigned a trustworthiness rating (Gorard, 2024), from 0 (adds no useful evidence) to 4 (the most credible evidence for a causal claim) using a quality assessment tool based on the four main criteria in the Gorard ‘sieve’ (Table 3). Studies that were rated 0 were not included in the synthesis, but some of these are discussed in conjunction with the other stronger studies on the same theme. Studies with many different research designs were included but given different ratings depending on how trustworthy their evidence was. In this respect, our review differs from previous reviews in that it is methodologically inclusive. We ignored the reputation and impact factor of the journal and the reputation of the authors and the institutions where the paper originated. Each piece



TABLE 2 Inclusion and exclusion criteria.

Study elements	Include	Exclude
Date (applied in screening, not as a limiter in search)	Studies from 2000 onwards	Studies prior to 2000, but landmark studies before 2000 may be included in the introduction or discussion
Design and data collection	Any empirical design that can contribute evidence to the research question, though designs will not all be rated/weighted equally. Studies must be about factors that attract or retain ethnic minority teachers, or related to recruitment and retention of ethnic minority teachers	Opinion pieces, purely theoretical and non-empirical studies, without data-collection on human subjects. Also exclude computer simulations
Educational contexts	Studies that focus on teachers, teacher-trainees, and potential teachers in all year groups or grade levels of general or compulsory education, including pre-primary, primary, and secondary	Studies that focus on limited or specialised contexts, such as private, independent, or fee-paying schools, or those for pupils with disabilities or other differences. Higher education studies and those related to post-compulsory technical schools are also excluded. Special educational contexts are excluded
Population of interest	Ethnic/racial minority teachers, teacher trainees, and potential teachers	Non-ethnic/racial minority individuals and those with other differences or disadvantages, such as disabled individuals and those of low socio-economic status. Studies that focus on outcomes for students (who are not potential teachers) will be excluded
Topic/theme	Studies that focus on teacher supply, such as the preparation and employment of ethnic minority teachers	Studies that focus on discrimination, social justice, and political issues without a clear focus on teacher supply. Exclude studies focused on student achievement





was assessed solely on the strength of its evidence to enable the most robust and bias-free conclusions.

Table 3 is read left to right and from top to bottom, starting with the research design. The strongest studies relevant to the research question will be rated 4🔒. These would typically be randomised control trials (RCT) for a causal question, as here. Moving across the columns, if the RCT has a large sample in each arm then it stays at 4🔒. It will drop to 3🔒 if it is a smaller scale study. The decision about what is deemed a large-scale or small-scale study is based partly on what is expected of the size of the population for the group that is being studied (Gorard, 2024). One cannot say that 399 cases is automatically medium while 400 is large, for example. That would be absurd. A large sample would clearly be in hundreds, while a small number of cases in a cell might be less than 20.

Moving along to the right, if there is no or low attrition, then the rating remains at 3🔒. If there is high attrition, then it drops to 2🔒 or lower, and so on. The ratings can only move downwards. For example, if the groups are not randomised, then the scale starts with 3🔒 and remains at 3🔒 even if it has a very large sample and low attrition.

To ensure consistency of rating across studies, four members of the team independently reviewed a sample of 10 papers before meeting to discuss their ratings. There was very high agreement. During the synthesis stage the team leader reviewed some of these pieces if there were any doubts about the scoring based on the information extracted.

TABLE 3 Criteria for judging the strength of research evidence.


Design	Scale	Dropout	Data quality	Rating
Strong design for RQ	Large number of cases (per comparison group)	Minimal attrition, no evidence of impact on findings	Standardised, pre-specified, independent	4 
Good design for RQ	Medium number of cases (per comparison group)	Some attrition (or initial imbalance)	Pre-specified, not standardised or not independent	3 
Weak design for RQ	Small number of cases (per comparison group)	Moderate attrition (or initial imbalance)	Not pre-specified but valid in context	2 
Very weak design for RQ	Very small number of cases (per comparison group)	High attrition (or initial imbalance)	Issues of validity or appropriateness	1 
No consideration of design	A trivial scale of study, or <i>N</i> unclear	Attrition huge or not reported	Poor reliability, too many outcomes, weak measures	0

Source: Gorard (2021, 2024).

## Synthesis

After data extraction, studies were grouped according to the factors relating to the recruitment or retention of teachers. Several studies have considered a number of factors relevant to both recruitment and retention outcomes, so these were repeated in the summaries for both recruitment and retention (see data extraction template [Appendix 1](#), e.g., Bartanen & Grissom, 2019; Clewell and Villegas, 2001a, 2001b. From the data extraction table we identified common themes and coded these themes/factors (see columns labelled broad themes). For recruitment, the factors were principal-teacher race congruence, admissions criteria/entry qualifications requirements, school characteristics, teacher characteristics, alternative certification and financial incentives. Principal-teacher race congruence, school characteristics, teacher characteristics alternative certification and financial incentives are also relevant to the retention of ethnic minority teachers. Additionally, some studies considered school conditions, such as administrative support, as important for retention of ethnic minority teachers.

## RESULTS

In the final analysis, we included a total of 46 studies reporting 76 outcomes because a number of studies reported multiple outcomes ([Table 4](#)). Of these, there were 32 outcomes about the recruitment of ethnic minority teachers, and 44 about their retention. As can be seen, none were of the highest standard that might be expected for a causal claim, but there were a number of good  studies.

### Factors influencing recruitment (entry into teaching) of ethnic minorities

Studies reporting recruitment outcomes can be broadly classified under six factors (see [Table 5](#)).

#### Principal-teacher race congruence and implicit bias

The evidence from our review suggests that the race of the school leader or principal is an important factor in determining the likelihood of hiring ethnic minority teachers. On average, ethnic minority teachers are more likely to be recruited by principals of similar race/ethnicity to themselves. This may suggest an element of implicit bias. For this reason, we included studies about implicit bias in this theme as well.

Most of the studies support the impact of congruence. For example, using a time-series analysis of an administrative dataset for Texas (2000–17), Bailes and Guthery (2022) found

**TABLE 4** Studies reporting recruitment and retention of ethnic minority teachers (46 studies reporting 76 outcomes).





	Recruitment ( <i>n</i> = 32)	Retention ( <i>n</i> = 44)
4 	—	—
3 	8	6
2 	9	13
1 	15	25

TABLE 5 Factors influencing recruitment (entry into teaching) of ethnic minority teachers ( $n = 32$  outcomes).

Factors	3 🏠 quality	2 🏠	1 🏠
Principal-teacher race congruence or implicit bias	Bailes and Guthery (2022), Bartanen and Grissom (2019), Goff et al. (2018), and Shand and Batts (2023)	Bailes and Guthery (2020) and D'Amico et al. (2017)	Ronfeldt et al. (2016), Steiner et al. (2022), and Sun and Miller (2020)
Entry qualifications and admissions criteria	Gitomer et al. (1999) and Van Overschelde and López (2018)	Motamedi et al. (2021), Redding and Baker (2019), and Shah et al. (2018)	Irisarry and Donaldson (2012) and Williams et al. (2019)
Alternative certification	Redding (2022)	Clewell and Villegas (2001b), Perkins and Arvidson (2017), Shen (1998), and Worth et al. (2022)	Clewell and Villegas (2001a), Lau et al. (2007), Powell (2012), Sakash and Chou (2007), and Steiner et al. (2022)
School characteristics		Elfers et al. (2022)	Ronfeldt et al. (2016)
Teacher personal characteristics and motivation			Gordon (2000), Lau et al. (2007), and Van Overschelde and Garza (2020)
Financial reasons	Van Overschelde and Wiggins (2020)		Steiner et al. (2022)

that having a non-White principal is linked to increased chances of hiring ethnic minority teachers. The effect is larger for Black but not Hispanic principals, perhaps because of the large proportion of Hispanic principals in Texas schools. The sample included 59,157 observations of principals and 662,997 teacher observations. This study was rated 3🔒 because of the large longitudinal population data linking individual teachers with principals, which gives strength to its evidence.

In another time-series analysis, using administrative panel data for Missouri from 1999 to 2016 and for Tennessee from 2007 to 2017, Bartanen and Grissom (2019) found that having a Black principal as opposed to a White principal increased the proportion of Black teachers in schools. Controlling for school-fixed effects and school-specific and district-by-year effects, the study showed that Black principals were more likely to hire Black teachers. The authors suggest that this may be because Black principals were more likely to prioritise diversity in their hiring decisions and create a supportive work environment for teachers of colour. Switching from a White principal to a Black principal increased the probability that a newly hired teacher was Black (and vice versa). We also rated this study as 3🔒 for the strength of evidence.

Goff et al.'s (2018) study also showed that minority teachers were most likely to be hired by minority principals. The congruence effect is notable for minority teachers at the hiring stage, again suggesting an implicit bias. This study linked a vacancy-application database with administrative staffing records in Wisconsin for 2014–15 to predict which teachers were likely to be offered a job at a school in Wisconsin. 3🔒.

While implicit bias has been suggested, the correlational design of the above studies is not best able to show a causal effect. To test this, Shand and Batts (2023) conducted a quasi-experimental study comparing the number of Black teachers in school districts in North Carolina (NC) that implemented inclusive (EDI) training with other school districts that did not, using a difference-in-difference approach. They also looked at data in New York City (NYC), which implemented an anti-bias training policy by comparing schools in the city with a high proportion of under-represented groups and schools in the bottom quintile of under-represented groups. Using interrupted time-series analysis, the study showed that the share of Black teachers in the treatment schools increased in the year after the training was introduced compared to schools that did not receive the training. In fact, in New York State, there was a sharp drop in the proportion of minority teachers in comparison schools after the treatment period. The sample included 10,000 staff in NC across 126 schools and 145,000 in NYC. The findings suggest that simply recruiting additional Black teachers and teachers of colour without addressing institutionalised racism is unlikely to be effective in the long term. 3🔒.

Other, perhaps weaker, studies also suggest a racial bias in the principals' hiring process. D'Amico et al. (2017), for example, examined racial/ethnic differences in teacher job applications and job offers using human resource data from one large urban/suburban school district in the USA. They found that Black applicants were less likely to receive a job offer than their White counterparts, all else being equal. However, Black candidates were more likely to be offered jobs by Black principals than by White principals in high minority/low SES (social economic status) schools than in White and higher SES schools even though Black candidates tended to have more advanced qualifications and more teaching experience overall than White candidates. Although applications were through the central district, it was the principals who screened the applicants for interviews and made the job offers. 2🔒.

Ronfeldt et al. (2016) surveyed four cohorts of 1000 prospective teachers from all teacher education programmes in one district in the USA, across 2 years. The survey asked prospective teachers about their preferences for teaching disadvantaged students. The results showed that although Hispanic and African American teachers had a stronger preference for teaching low achieving and high poverty students and in underserved schools, they were not necessarily more likely to be hired in underserved schools. The authors proposed

that this could reflect school administrators' hiring practice (i.e., administrators' preferences for certain types of teachers over teachers' own preferences), suggesting that a school administrator's hiring practice may be a barrier to teachers of colour being hired in some underserved schools. This study was rated 1🔒 because of poor response rates (50% for pre-survey and 61% for post-survey).

There is also research evidence that ethnic minority teachers were disadvantaged in terms of promotion opportunities. Bailes and Guthery (2020), for example, analysed the Texas Education Agency's data of four cohorts of assistant principals from 2001 to 2017 ( $n=4689$ ). They found that Black assistant principals were 18% less likely to be promoted across all time periods relative to White candidates, after controlling for factors such as education, gender, experience, area of residence and school-level characteristics. Black assistant principals also waited an extra 6 years relative to Whites to be promoted to principal, if they were ever promoted. The finding suggests implicit bias. 2🔒.

The studies above show some evidence for the impact of personal biases in teacher hiring and development. There was one weaker study suggesting no impact of racial congruence. Sun and Miller (2020) found that although school districts with more principals of colour also have more teachers of colour, there was no evidence that principals of colour impacted the recruitment of teachers of colour. The study was based on an analysis of administrative data on 116,412 full-time teachers from 2500 schools in the USA. This study was rated 1🔒 because it was very poorly reported, and it was not clear how the regression analyses were conducted.

## Entry qualifications and admissions criteria

There is strong evidence that the teaching entry qualification requirements and criteria for admission to teacher-training programmes may be a barrier to ethnic minority teachers, as they tend to have lower academic qualifications compared to the White majority. In the USA, prospective teachers of colour tend to do worse on admissions tests than their White peers (Carver-Thomas, 2018; Darling-Hammond et al., 1996; Gershenson et al., 2022).

The strongest studies (rated 3🔒) in our review confirm these findings. Simulating an experiment, Van Overschelde and López (2018), performed an analysis to predict what would have happened if prospective teachers' GPA (Grade Point Average) requirements were raised by comparing students who were admitted prior to a policy change and after it, to see how likely it was they would be admitted or denied. The authors found that Black students were 2.5 times more likely to be denied admission than students of other ethnic groups, and males were 1.4 times more likely to be denied than female students. The sample included 1314 undergraduate preservice students enrolled 2 years prior to 2010–11 in a teacher education programme at an institution in Texas serving Latinx students.

Studies that compared the Praxis test scores of ethnic minority teachers and White teachers found that ethnic minority teachers, on average, tended to perform worse than their White counterparts. The Praxis test is a teacher licensure test taken by prospective teachers in the USA. Gitomer et al. (1999) used the linked SAT (Scholastic Assessment Test) and ACT (American College Testing) college admissions test data from 1977 to 95 from more than 300,000 prospective teachers who took the Praxis tests 1994–97. The results showed that White candidates were most likely to pass the Praxis test while African Americans were least likely. When the passing standards were raised, the differences in passing rates by ethnicity grew even larger. The net effect was a drop in the proportion of African Americans in the teaching force by about half. 3🔒.

Shah et al. (2018) found that the lack of content knowledge among some ethnic minority groups was a disadvantage, accounting for their low performance in the Praxis Assessment. Black prospective teachers, for example, were least likely to pass the knowledge test (31%),




followed by Hispanics (57%), compared to White test-takers. Black and Hispanic candidates were also less likely to take the Praxis Chemistry assessment and less likely to pass compared to other examinees. This may explain the under-representation of these groups in the teaching workforce. The study analysed data of all who took the Praxis Chemistry Subject Assessment in the years 2006–15 ( $n = 15,564$ ) using a difference-in-difference approach comparing the demographic characteristics and performance of those intending to teach chemistry with those who went on to teach the subject. A large proportion of test takers (53%) did not answer all the demographic questions, and were excluded, hence the 2🔒 rating.

Motamedi et al. (2021) also found that Hispanic and other teacher candidates of colour were less likely than White candidates to pass the basic skills and content knowledge tests and less likely to gain certification to continue on the teacher pathway. They took longer to pass and gain certification. This study analysed data from Washington State from 2009 to 2019, which included 63,497 who took the Washington teacher preparation test or who submitted a score for an alternative to the basic skills test. The findings suggest that the failure to meet entry requirements and relatively poor performance at certification assessments were key barriers for candidates of colour. 2🔒.

Even when they were successful in gaining entry into teaching preparation, ethnic minority individuals were less successful in completing their course of study. Williams et al. (2019) found that African American and other candidates of colour scored lower on edTPA (Educative Teacher Performance Assessment) than their White peers even though there was no difference in their perceptions of test difficulty. The edTPA test is a performance-based assessment for teacher preparation programmes. The findings provide some evidence that edTPA could be a barrier to teacher licensure that disproportionately affects candidates of colour. Additionally, candidates had to pay to retake the test. This could be a barrier to ethnic minority students who were more likely to be of lower socio-economic status. The study included 820 enrolled in teacher preparation programmes and 132 on alternative programmes. 1🔒.

A students' subject major at university may pose a barrier to entering teaching. Not having an education degree, for example, is a disadvantage. Redding and Baker (2019) analysed nationally representative data from the Baccalaureate and Beyond 2008 longitudinal cohort study, which followed teachers from college to teaching. The sample included 13,320 respondents. They found that White college graduates were more likely to have a degree in education than Black, Latinx, and other graduates of colour. Having a bachelor's in education increased the likelihood of Black teachers' being accepted into teaching, reducing the entry gap between White and Black graduates by 3.4 percentage point. For graduates of other colour, the reduction in the gap was even bigger (4.1 percentage points). Black and to a lesser extent Latinx individuals had lower college entrance exam scores than White graduates. Differences in college entrance exam scores explain around 20% of ethnic gaps in entry into teaching. Black graduates were also less likely to have graduated from a selective college or university than graduates identifying as White. 2🔒.


Barriers to teaching may begin much earlier, while students are still at school. Irisarry and Donaldson (2012), for example, suggested that racialised practices, such as early academic tracking and setting based on teacher assessment and high stakes tests were disadvantaging some ethnic minority groups. The researchers interviewed high school students, undergraduate preservice teachers, and in-service teachers about their perspectives and experiences. They found that, all along the pipeline, ethnic minority students reported having more difficulties in manoeuvring academically, and some lacked information about course requirements and prerequisite qualifications to enter college and teacher preparation programmes. Ethnic minority students were less likely to know which tests to take, how to pay for them, and how to prepare for them. They thought school counsellors and university staff were hostile or unsupportive regarding their need to meet test requirements. The article is


based on three studies, the first two are multiyear ethnographic studies, one involving seven Latina/o high school students considering teaching as a career and the other focused on Latina/o preservice teachers (sample unknown). The third study is based on a large-scale survey about the characteristics of 2029 Latinas/os (response rate 62%) who entered the profession through Teach For America (TFA). 1 .

In summary, there is evidence that the requirements for admission qualifications and licensure tests and the costs of training have made it difficult for ethnic minorities to gain access into teaching. The lack of ethnic minority students majoring in education is another reason for the shortage of minority teachers.

## Alternative certification

To address the barriers discussed above, a range of routes for training have been introduced trying to make it easier for individuals from diverse backgrounds to enter teaching. In Texas (USA), for example, Community colleges have developed certificate programmes and associate arts degrees in teacher education. The next section examines some of the studies on the impact of this theme.

Redding (2022) drew on nationally representative data from six cohorts from the Schools and Staffing Survey and the National Teacher and Principal Survey, which included 9720 teachers in their first year of teaching. Using a difference-in-differences design, Redding estimated the impact of alternative certification policies on the characteristics of beginning teachers. The results showed that the introduction of alternative pathways to teaching was associated with a 1.8% point increase in Black teachers and a 6.2% point increase in other race teachers. 3 .

Shen (1998) also found that alternative certification appears to be more successful in recruiting higher percentages of minority teachers than the traditional, university-based routes. The analysis was based on data on 14,791 respondents from the School and Staffing Survey for 1993–94 (SASS93). 2 .

One of the most widely evaluated programmes is the Pathways to Teaching Careers Program (PTTCP) in the USA, funded by the Wallace Foundation. The programme targets teachers from racial/ethnic minority backgrounds who were already working in schools as substitute teachers, classroom aides or emergency certified teachers. It worked in partnership with colleges and universities to develop strategies for recruiting and preparing teachers.

Clewell and Villegas (2001a, 2001b) conducted a six-year evaluation of this programme, involving 11.41 participants (response rate 44%) with 71% of these followed up over three or more years. Using a difference-in-difference-in-differences approach, comparing data before and after the implementation of the programme with the national average, they found that compared to all newly prepared teachers, Pathways recruited proportionately more ethnic minority teachers, increasing the number of new ethnic minority teachers in the USA by 14.7%, and the number of all new teachers by 1.6%. Pathways teachers also had higher completion rates compared to the national average, they were rated higher in effectiveness than other novice teachers by principals and university staff, and they received slightly higher Praxis III scores than average novice teachers.

The authors identified some elements of the Pathways programme that may have contributed to effectiveness. These included targeted recruitment based on demographics, academic talent, motivation; university/school partnerships in high need areas; providing financial assistance especially for those working full-time in education already; orientation and mentoring/counselling by university or school staff; tailored scheduling of teacher training courses; teacher training focused on supporting diverse students, individualised strategies, and reflective practice; and employment assistance, induction programmes, and

networking. Pathways teachers were also given a longer time to complete their study, and the courses were tailored to their experience and needs. Candidates were supported with funding for tuition. The low response rate reduces the quality of the evidence. 2🔒.

A survey of 65 teachers on the Pathways to Teaching Careers Program (Lau et al., 2007) suggests that it was the mentoring and social support that participants received that helped them to complete the course. The Pathways programme provided mechanisms to help scholars to overcome some of the obstacles associated with new teachers. Examples included workshops, Friday replacements, the Emergency Fund, and tuition reimbursement, all designed to help the scholars overcome foreseeable and unanticipated obstacles. This study was rated 1🔒 because of the poor response rate (61%). This means that the responses are based on self-selected individuals' perceptions. Typically, these are likely to be successful candidates, so the views of the unsuccessful scholars may not be well represented.

Perkins and Arvidson (2017) analysed data from 4881 students from the offices of institutional research of one urban community college and two universities in North Texas to see if a community college certificate programme and associate of arts degrees in teacher education increased the number of Black and Hispanic students gaining entry into teaching. The results showed that these alternative provisions increased the graduation rates of Black (50% graduation rate) and Hispanic students (72.2% graduation rate). These rates were higher than the national average. The authors suggest that the mentoring support, field experiences and positive role models enhanced the chances of transferring to and graduating from 4-year institutions for Black and Hispanic students. 2🔒.

Another evaluation of an alternative training path, known as Project 29, also reported positive results in recruiting ethnic minority teachers (Sakash & Chou, 2007). Project 29 recruited and trained experienced teachers to be bilingual/ESL teachers. Compared with those from other universities in Chicago and in Illinois generally, Project 29 teachers were more likely to teach in Chicago Public Schools (93% vs. 59%). They were also more likely to teach in predominantly Latino, high poverty, and low-performing schools. The study did not control for school and teacher characteristics and other unobserved factors. Sample size unknown. 1🔒.

Together, these studies suggest that alternative routes to teaching may be more effective in recruiting ethnic minority teachers because of the lower tuition fees and financial aid offered. However, Powell (2012) compared the success rates of teachers in historically Black colleges and predominantly White colleges where tuition fees were similar. The number of participants is not clear, but the analysis was based on 95 institutions of higher education randomly selected for participation. The analysis suggests that it was the quality of the training institutions that explained a difference in the accreditation rates of White and Black teachers. Predominantly White colleges were more than 25 times more likely to have full-time research staff. Accredited institutions had an average of 33.6 full-time research staff while non-accredited institutions had only 1.25. This may be an indication that the low accreditation rates among ethnic minority candidates is a consequence of the quality of training received, which is related to the kind of institutions students attended and the resources available, such as endowments. There is a strong positive correlation between university endowments and the number of full-time research staff. Access to finance and faculty resources was highlighted in the interviews as a possible strategy for overcoming barriers. 1🔒.

Unlike in the USA, ethnic minority teachers in England were more likely to be trained via the traditional university route. Using the School Workforce (national data), Worth et al. (2022), showed that ethnic minority teachers were less likely to complete training and gain qualifications compared to their White counterparts. One of the explanations is that ethnic minority teachers were more likely than their White counterparts to be trained via higher education institutions where QTS pass rates were lower generally. 2🔒.

In conclusion, these studies indicate that it is not the types of initial training programmes per se, but a combination of certification criteria, quality of training, mentoring support, field

experiences, funding support, and individualised strategies that ultimately determine the success rates of ethnic minority teachers in gaining qualifications. While the evidence for each of these factors is not strong, as all of the studies are correlational, it does point to possible areas for future, more robust research.

## School characteristics and SES composition of students

Moving on from recruiting and training new teachers, we now look at the employment of ethnic minority teachers in schools. The strongest evidence suggests a correlation between school characteristics, in particular the student demographics, and the proportion of ethnic minority teachers in the school.

Analysis of multiple year-by-year cohorts of administrative data on teachers, districts, and schools in Washington State from 2015 to 2020 showed that schools with high proportions (75%+) of students of colour and low socioeconomic status had a 10-percentage point higher number of beginning teachers of colour than did other schools (Elfers et al., 2022). Black, Asian/Pacific, and multiracial teachers were more likely to be concentrated in urban areas, and Latinx and Native American teachers were more evenly split between urban and rural areas, reflecting the ethnic population of the areas where students live. 2🔒

Ronfeldt et al. (2016) suggest that ethnic minority teachers' preference for schools with a high proportion of disadvantaged and ethnic minority students may explain why they were more likely to teach in these schools. This was a longitudinal study, which drew on administrative data from a large urban district. This study was rated 1🔒 because of its low response rate and high attrition, which may bias the results.

## Teacher personal characteristics and motivations

Ethnic minority teachers' motivations and the societal or cultural value attached to teaching may explain why some minority groups are more or less likely to enter teaching. However, the evidence for this is rather weak as most of the relevant studies were based on participants' reported experiences rather than on experiments or quasi-experiments.

In almost all studies on preservice teachers' motivations for going into teaching, the desire to work with children is among the top-cited reasons (See et al., 2022). However, Hispanic preservice teachers in all certification routes were found to be proportionately more likely than their White counterparts to indicate this (Van Overschelde & Garza, 2020). The authors reported that Hispanic teachers were also more likely to be motivated by their perceived ability to be an agent of social change. This study was based on an analysis of 1600 pre-service teachers (1134 White, 466 Hispanic) in a traditional teacher education programme in a Hispanic-serving institution. 1🔒

On the other hand, Asian Americans (e.g., those of Chinese heritage) in the USA were less likely to be in the teaching profession than Whites. One study (Gordon, 2000) found that the perceived lack of respect for teachers in classrooms, parental pressure to acquire high status professions, fear of 'losing face' or being laughed at because of their accent or making mistakes, and a concern about their ability to teach other people's children were reasons given by Chinese participants for not wanting to be teachers. Gordon found that among Chinese Americans, there was a general aversion to teaching as a profession. The study was based on only 20 Asian American students. 1🔒

A survey of 105 Pathways teachers (89 African American, 16 White) in Georgia, USA (Lau et al., 2007), noted that African Americans were more likely to indicate wanting to teach because of their strong sense of personal mission and their desire to give back to their communities.

But this is likely because the screening process ensured that potential candidates possessed these attributes anyway. This weakens the study's evidence, hence the 1🔒 rating.

## Financial reasons

One of the reasons why alternative pathways programmes in the USA may be more effective in recruiting ethnic minority teachers is partly due to the financial assistance provided.

The cost of training has been suggested as an explanation for the lower completion rates of teachers of minority ethnicity. Van Overschelde and Wiggins (2020) found that Black and other ethnic minority teachers were more likely to go through the alternative certification route than White teachers because they were paid as teachers of record while doing their clinical teaching experience. This reduced the financial burden of becoming a teacher. Those on the traditional routes, on the other hand, were less likely to complete the student teaching clinical experience because of the financial burden, even though they also received Pell grants. The study analysed the demographic characteristics of over 225,000 alternative certified and traditionally certified teachers in Texas over 11 years. The findings suggest that the financial burden of training may be a deterrent for ethnic minority students entering and completing training. 3🔒.

Steiner et al. (2022) surveyed 2360 teachers (54% response rate) and interviewed 60 teachers and 14 panellists (including policy makers, practitioners and researchers) on their perspectives on 18 policies and practices that could be effective for increasing the number of teachers of colour. Among ethnic minority students, reducing the cost of teacher preparation (e.g., loan forgiveness and scholarships) was slightly more popular—58% of teachers of colour, 67% of Blacks or African Americans and 56% of Hispanic students selected this approach compared to 55% of Whites. 1🔒.

## Other factors

Other factors, such as inadequate preparation of administrators to deal with ethnic minority students in teacher training could be a reason for the poor recruitment of ethnic minority teachers. Burrell (2022) drew on three sources of data—a literature review, individual interviews with 10 principals, and document analysis—and concluded that administrators generally did not have confidence in their ability to effectively recruit students of colour. They lacked the resources and training necessary to recruit students of colour into their preservice teaching programmes.

In summary, concerning teacher recruitment, implicit bias in hiring practices and disparities in entry requirements are key factors that may contribute to the under-representation of ethnic minority teachers in the profession. These factors can be addressed by policy.

## Factors influencing retention of ethnic minority teachers

We now address factors related to the retention of ethnic minority teachers. Analysis of government data in England has shown that the disparity in ethnic minority teacher representation in schools is not only due to challenges in recruitment, but also partly due to the higher attrition rates among ethnic minority teachers (Gorard, Chen et al., 2023; Gorard, Ventista et al., 2023). Several studies in the USA highlighted the need to examine the organisational, personal, professional and school level factors associated with minority ethnic teachers leaving the profession and moving schools unduly (Bartanen & Grissom, 2019; Ingersoll et al., 2020; Nguyen



et al., 2021). In their narrative review, Achinstein et al. (2010) argued that combined factors like school culture or racialised climate, diverse school leadership and positive relationships among colleagues, play a critical role in shaping the experiences of ethnic minority teachers, potentially influencing their career decisions as seen in job applications and retention rates.

The current review has identified seven themes that are associated with lower retention or higher attrition rates among ethnic minority teachers. As with teacher recruitment, the strongest evidence suggests that principal-race congruence, administrative support and school characteristics are important factors (Table 6).

## Principal-race congruence

Overall, there is good evidence that the race of the principal is an important factor in the retention of ethnic minority teachers. A number of high-quality studies showed that minority teachers were more likely to stay on in schools with a principal of a similar race to themselves.

Bartanen and Grissom (2019) (reported above) found that having Black principals reduced the probability of Black teachers changing schools by 2.8 percentage points in Missouri and 5.6 percentage points in Tennessee. The effect of White principals on White teachers was smaller (around 2 percentage points in Missouri and 0.9 percentage points in Tennessee). This study took advantage of the variation in principal and teacher transitions over long-term administrative data panels in Missouri and Tennessee to estimate the effects of principal race on the hiring and turnover of ethnically diverse teachers. Teachers with same-race principals also reported better perceived working conditions. The data came from personnel records from the two states, 2007–17. 3🔒

Goff et al. (2018) analysed the pattern and frequency of searching for and applying to teaching by White and minoritised (the authors' terms) teachers. Using data from Wisconsin, they found that both White and minoritised teachers had the same rate of searching for jobs overall, but minoritised teachers were around half as likely as Whites to search for a new job when working with a minority principal. White teachers were also more likely to change schools when working with a minority principal. Where minoritised teachers' race is in congruence with that of their principal, they were less likely to change schools. 3🔒

Edwards (2020) found that the best predictor of retention for all teachers, but particularly for Black and Latinx teachers, was principal-teacher race match. But teacher salary and a traditional preparation background were also important. This study looked at 10 years of administrative data from Texas's 20 largest districts, representing information from over 1 million unique teacher-year observations, which included data on teachers' employment, school level student information and teacher certification. 2🔒




Rodriguez et al. (2022) found mixed results. Black teachers were less likely (4%) to leave schools led by a Black principal compared to when they were paired with a principal of a different racial/ethnic background (16%). However, the relationship was the reverse for Hispanic teachers. Turnover was higher in schools led by Hispanic principals. This study was based on administrative data for New York city, over a seven-year period. 2🔒

## School working conditions, school leadership and administrative support (including professional development and induction)


There is ample research evidence that experiencing a poor work environment is an important determining factor in teacher attrition (e.g., Geiger & Pivovarova, 2018; Kraft et al., 2016; Sims, 2020). As ethnic minority teachers are more likely to work in challenging and poorly resourced schools with a high proportion of disadvantaged students, it is



**TABLE 6** Factors influencing retention (staying on in teaching and in a school) of ethnic minority teachers ( $n=44$  outcomes).

Themes	3 	2 	1 
Principal-teacher race congruence	Bartanen and Grissom (2019), Goff et al. (2018), Rodriguez et al. (2022)	Edwards (2020)	
Administrative support and working conditions (including professional development and induction support)		Edwards (2020, 2024), Fitchett et al. (2017), Rodriguez et al. (2022), Ronfeldt & McQueen (2017), and Sun (2018)	Bednar and Gicheva (2019), Campoli (2017), Campoli and Conrad-Popova (2017), Caven et al. (2021), Educators For Excellence (2023), Farinde-Wu and Fitchett (2018), Hopper et al. (2022), Steiner et al. (2022), and Sutcher et al. (2016)
School characteristics (teacher and pupil demographics)	Renzulli et al. (2011) and Shirrell (2018)	Rodriguez et al. (2022), Sun (2018), and Strunk and Robinson (2006)	Achinstein and Ogawa (2011), Boyd et al. (2005), Bristol (2018), Hanushek et al. (2004), Imazeki (2005), Nelson and Johnson (2023), Patrick and Santelli (2022), and Scafidi et al. (2007)
Teacher characteristics (personal attributes and motivation)		Elfers et al. (2022)	Irisarry and Donaldson (2012), Lau et al. (2007), and Worth et al. (2022)
Alternative certification	Van Overschelde and Wiggins (2020)		Clewell and Villegas (2001a), Lau et al. (2007), and Sakash and Chou (2007)
Implicit bias			Irisarry and Donaldson (2012), Lau et al. (2007), and Steiner et al. (2022)
Financial incentives			Steiner et al. (2022)

not surprising that attrition rates are therefore highest among ethnic minority teachers (Carver-Thomas, 2018; Ingersoll et al., 2017). For example, they are often given the most challenging classes (Griffin & Tackie, 2016) and are more likely to report hostile racial climates and isolation in the workplace (Achinstein & Ogawa, 2011; Bristol, 2020; Bristol & Shirrell, 2019; Kohli, 2018). In this review we synthesised studies that looked at the impact of working conditions on minority teachers. School leadership and administrative support are important to consider here as these are crucial in shaping the working conditions in terms of the support, culture and ethos of the schools. These two factors are inter-related and are discussed together in this section.

Using school-level data, Edwards (2020, 2024) found that Black teachers were more likely than their White colleagues to teach in challenging schools and schools experiencing accountability pressures related to student test scores. Black teachers were also more likely to teach in large urban and suburban districts where turnover rates are high. It is unclear what the teacher population was, but the findings indicate that the high attrition rates of ethnic minority teachers, especially for Black teachers, are partly a consequence of the poor working conditions. This was a large study based on a series of panel regression analyses using administrative data from the 20 largest districts of Texas for 2008 to 2018 (including 20,700 school year observations). 2 .

Studies across the USA reported similar findings. All used large administrative datasets comparing turnover rates of Black or teachers of colour with White majority teachers. Sun (2018) used data from 65,000 teachers in North Carolina, and found that Black teachers consistently had lower retention rates than White teachers across years. This could be because they tended to work in schools in high poverty areas with a high rate of unemployment and higher proportions of lower-achieving students and students with long-term suspensions. They were more likely to be in schools with weaker principal leadership, less effective mentoring and lower-quality professional development. However, this was true only for Black maths teachers, but not for Black reading and science teachers. 2🔒.

Black teachers in New York City (Rodriguez et al., 2022) also had higher turnover rates as they were more likely to teach in schools that were under-resourced and where the working environment was challenging. However, the effect of school leadership and collegial teacher relationship was weaker for Black teachers and Hispanic teachers than other teachers. This is probably because they were more likely to be in schools with weak leadership. 2🔒.

Looking at Black female teachers specifically, Campoli and Conrad-Popova (2017) found that those who stayed tended to report better working conditions. The regression analyses suggest that collegiality and teacher autonomy were the most important factors for stayers versus movers. However, the comparison was only made between Black female teachers who stayed and moved. There was no comparison with other ethnic groups, so it is difficult to say if these factors were particularly salient for Black females only. 1🔒.

There is some suggestive evidence from large-scale studies that support is positively correlated with teacher job satisfaction, well-being and intention to stay (See et al., 2024). Support for professional development and mentoring/induction could also reduce attrition of teachers, in general, but the effect on ethnic minority teachers is not clear. The relevant studies tended to be weaker in terms of their strength of evidence either due to the research design or because the outcomes were based on teachers' own report (i.e., not objectively measured). Therefore, one needs to be careful in interpreting the findings of these studies.

Ronfeldt and McQueen (2017) showed that teachers who received induction support and other extensive support were less likely to leave teaching, after controlling for school and teacher characteristics. Because Black teachers were more likely to report (80–100%) receiving intensive induction support than White teachers, the authors argued that such induction support would reduce attrition of minority teachers. This study drew on administrative data from three surveys in the USA (the Schools and Staffing and Teacher Follow-Up Surveys and the Beginning Teacher Longitudinal Study) from 2003–04, 2007–08 and 2011–12. Using propensity scores, they matched 1600 teachers receiving extensive induction (i.e., 4–6 induction supports) with 1130 teachers not receiving extensive induction (i.e., 0–3 types of support) to compare their outcomes. However, there was no breakdown by ethnicity. Induction support has a positive effect on all teachers including minority teachers. 2🔒.

Having a mentor of the same race/ethnicity could also support the retention of ethnic minority teachers. Caven et al. (2021) used employment data and teacher and mentor surveys of a district-wide mentoring programme to examine the retention of matched mentor-mentee pairs. Where new teachers were paired with a mentor of the same race/ethnicity, they stayed at a higher rate than those with a mentor of a different race/ethnicity, but this could be driven by the high one-year retention rate among White new teachers with a White mentor. Only 192 of the 222 teachers who completed the survey could be matched. Overall, there were no clear differences in retention rates by ethnicity. However, retention was slightly lower for White new teachers with a mentor of another race/ethnicity. Although the amount of mentoring received did not differ much by race/ethnicity, the content they received differed substantially by race/ethnicity. White and Hispanic new teachers reported receiving substantially more time on classroom management than Black teachers. A focus on classroom management appeared to be associated with slightly lower retention. 1🔒.

Support from school leaders has also been considered as a factor in the retention of minority teachers. Campoli (2017) analysed data of 1600 Black African American teachers who participated in the Schools and Staffing Survey (2007/08) and the Teacher Follow-up Survey in 2008/09. The results showed that Black teachers who perceived their principals as supportive and their fellow staff as collegial were more likely to report being satisfied with their job and less likely to move school. The direction of causation is not clear here. 1🔒

Using linked data from four waves of the Schools and Staffing Survey from 1999/2000 to 2011/12, Bednar and Gicheva (2019) examined the relationship between perceived support and the retention of 4120 public school teachers. Judging teacher retention levels was based on principal report. Controlling for teacher characteristics, support from the school's administration was found to reduce the likelihood of teachers moving to a different school for all teachers, but the relationship was especially pronounced for non-white or Hispanic teachers at schools where 10% or fewer of all teachers were also non-white or Hispanic. The effect was particularly strong for new teachers and teachers in schools with more students from low-income families or located in rural areas. When administrative and teacher support were included jointly in the model, support from other teachers mattered less than support from the principal. This study was rated 1🔒 as only 19% of teachers were retained in later analyses. Teachers who moved to another school and those who left the profession altogether were excluded.

A similar study by Farinde-Wu and Fitchett (2018) using SASS data for 2007/08, also found that administrative support, student behaviour, and urban school environments were related to higher job satisfaction and the retention of Black female teachers. This was a correlational study. 1🔒

A more recent study by some of the same authors (Hopper et al., 2022), tracked 2180 African American beginning teachers over 5 years using the 2007/08 SASS. Controlling for demographics and other workplace conditions, African American teachers' perceptions of administrative support were most predictive of their intention to stay in teaching. This study made no comparisons with teachers of other ethnicity/race and no actual retention data was used, hence the 1🔒 rating.

Although working conditions have been shown in many studies to be predictive of retention of ethnic minority teachers, when asked, teachers did not rate strategies to improve their working environment as effective for retention. Steiner et al. (2022) surveyed over 2000 teachers and interviewed a subsample of teachers and a panel of policymakers, practitioners, and researchers to gain their perspectives on which recruitment, hiring and retention policies were deemed effective to be prioritised. Less than a third of teachers (both White teachers and teachers of colour) considered any of the workplace strategies to be effective in the retention of ethnic minority teachers. 1🔒

## School characteristics (teacher and pupil demographics)

The composition and characteristics of schools may be an explanation for both differential recruitment and attrition of Black and other teachers. Previous research has consistently shown that the teacher and pupil demographics of schools are predictive of teachers' likelihood of leaving a school or teaching entirely (Gorard, Gao et al., 2024; Gorard, Tereshchenko et al., 2024).

In our review, several studies with weaker evidence suggested that the ethnic composition of the student population in schools has differential effects on the retention of teachers from different ethnic backgrounds. Boyd et al. (2005), for example, found that White teachers were twice as likely to transfer out of school or to leave the teaching profession entirely where the student population was predominantly non-White compared to schools with

predominantly White student bodies. Similar findings were observed in studies in Georgia (Scafidi et al., 2007) and Wisconsin (Imazeki, 2005). Black teachers were more likely than White teachers to remain in schools where both the teacher and student racial demographics were predominantly Black (Hanushek et al., 2004). Similarly, Dworkin (1980) found in Texas that White teachers in urban schools were more inclined to consider leaving teaching than non-White teachers in schools where the majority of the student population belonged to a different ethnicity. The ethnic demography of the student population appears to be an important concern for White teachers, but not for ethnic minority groups. These studies are all rated 1🔒 for evidence because of their correlational design, which does not establish the direction of the causation, and for having no controls for other variables that could potentially explain the observed associations.

The somewhat stronger studies (rated 2🔒 and above) also suggested that teachers of colour (Black and Hispanic) who taught in schools where they were in the racial minority were more likely to leave the teaching profession than teachers of colour who taught in schools where they were in the majority. Rodriguez et al. (2022), for example, found that Black teachers in New York City had especially lower transfer rates in schools with a higher share of Black peer teachers. As the teachers in this study were neither randomly assigned to schools nor matched, there is a possibility that ethnic minority teachers chose to teach in schools with a high proportion of teachers like themselves, and this possible bias is reflected in the rating of 2🔒.

Studies of 11,000 teacher observations in Tennessee over 4 years (Patrick & Santelli, 2022) also revealed that Black teachers in schools with a high proportion (at least 60%) of fellow Black teachers expressed greater intention to stay than other Black teachers, all else being equal. However, this relationship did not apply to Latinx teachers, perhaps because of the small sample size and lack of variation in demographic isolation among Latinx teachers. There was a low response rate to the survey (only 35% of Black teachers and 45% of Latinx teachers were included in the analysis), hence the 1🔒 rating. Fitchett et al. (2017) suggested that the perceived level of racial congruence between teachers and other staff or students in their schools may be a source of stress for female African American teachers, accounting for the greater intention to leave in schools where they were in the minority.

Looking at only male teachers, Bristol (2018) reported that Black male teachers in schools where there were other Black male colleagues were less likely to indicate a desire to leave their current school. One reason could be the support they felt when there were other teachers of similar ethnicity. Where the teacher was the only Black male teacher in the school, they were more likely to express intention to leave the school. To explain this, they mentioned the challenges of working with other colleagues in a school where they were the minority. The survey included 3467 teachers across 121 schools, but Bristol's study included only 86 Black male teachers who responded to the BTEM Survey, and the retention outcome was based on participants' perceptions rather than the actual attrition, contributing to the 1🔒 rating.

On the other hand, Strunk and Robinson (2006) showed that teacher and student race congruence was a stronger factor than teacher and staff congruence in the retention of ethnic minority teachers. Black teachers were less likely to quit if they taught in schools with higher proportions of Black students. But interestingly, Hispanic and Asian/Pacific Islander teachers were more likely to leave a school if there was a higher proportion of same-race/ethnicity teachers. Results were the same even after including poverty measures. Black students seemed to increase the retention of Black teachers but not White teachers. 2🔒.

Renzulli et al. (2011) explained that perhaps it is not the presence or absence of ethnic minority students, but teachers' perceptions of the quality of the students that mattered. When student quality was added to the regression model, Black teachers' different satisfaction in Black majority schools disappeared. Similarly, the negative relationship between White teachers in majority Black schools and their satisfaction also disappeared. This was a large

study involving 32,930 teachers in 7190 schools with a relatively high response rate (83.1% for public school teachers and 78.6% for charter school teachers). 3🔒.

The strongest study in this review suggests that one factor could be a sense of responsibility that ethnic minority teachers feel towards children of their own ethnicity, who tend to be lower-performing students from disadvantaged backgrounds (Shirrell, 2018). Shirrell found that Black teachers who were held accountable for the performance of the Black students were less likely to leave their school than Black teachers in schools not accountable for the Black students' performance. There was no difference in attrition for the White subgroup. Under the No Child Left Behind (NCLB) Act, teachers were held accountable for the performance of their students if their number was 40 and above. Shirrell (2018) employed a regression discontinuity analysis using the cut-off point of 40 (the size of the subgroup where teachers would be accountable for the students' performance) and compared the attrition rates of teachers in schools on either side of the threshold before and after the NCLB policy was introduced. A difference-in-difference analysis was used to compare attrition of teachers of different ethnic sub-groups. This was a large study, which analysed the job assignments of every North Carolina elementary school teacher between the 1999–2000 and 2003–04 school years ( $n=29,387$  teachers in the pre-NCLB period and 31,211 teachers in the post-NCLB period). 3🔒.

Overall, these studies suggest that ethnicity of the student population could be more of an issue for White than non-White teachers. There is also some suggestion that the teacher demographic of the school may be related to opportunities for professional support and mentoring. But this is not supported by the strongest studies, which showed that Black teachers were actually more likely to report receiving intensive induction support.

## Teacher characteristics (personal attributes and motivation)

Other factors that may influence the decision to stay in teaching include individual teacher circumstances and characteristics, such as their terms of employment and their motivation to teach. However, the evidence from this group of studies is weak.

Elfers et al. (2022) noticed clear patterns in the characteristics of teachers who were more likely to leave teaching when they analysed the retention of four cohorts of teachers in Washington State, 2015–20. For ethnic minority teachers on a part-time contract, being Black (vs. being Latinx) strongly predicted the likelihood of teachers staying/leaving school. This was a large study including around 5000 to 6400 in each cohort, hence the 2🔒 rating.

Focusing on Latinas/os in the Teach for America programme, Irisarry and Donaldson (2012) found that the odds of Latina/o STEM majors leaving the profession were twice those of White STEM majors. And Latinas/os with STEM majors were over three times more likely to leave than those without these majors. This was a small study based on the perspectives of 137 in-service teachers in the Teach for America programme, hence the 1🔒.

A study using the School Workforce Census for England (Worth et al., 2022) suggested that a teacher's age might be an explanation for higher attrition rates. On average, trainees from Black and other ethnic groups were older than White trainees. Across all ethnic groups, older trainees tended to have lower QTS rates. This probably explains the relatively higher attrition rates among this group. However, a lot of the variance was not accounted for by any of the observable characteristics, suggesting that there were other factors, such as working conditions, terms of employment (e.g., full-time or part-time), entry qualifications, subject major and routes into teaching, that could explain these gaps. With these uncontrolled factors, the evidence was rated as 1🔒.

Other teacher attributes may have also contributed to the early departure of ethnic minority teachers from the workforce. Lau et al. (2007), described in the section on recruitment



above, highlighted seven purportedly undesirable personal attributes associated with Black teachers' lower commitment to teaching. Black teachers were more often described as inflexible, easily stressed, impatient, intolerant and unorganised. Those who were nurturing, compassionate, empathetic, approachable and passionate and had received formal mentoring and support were more likely to commit to teaching. Teachers' personal qualities explained the most variance (17%) in Black teachers' commitment to teaching. 1🔒.

## Alternative certification

The strongest study in this group (3🔒) showed that teachers on traditional routes, including Latinx, White and 'Other' ethnicities, were less likely to leave teaching than those on the alternative certification route (Van Overschelde & Wiggins, 2020). On average, teachers on traditional preparation routes were less likely to leave teaching even after 10 years. This study was based on an analysis of 225,902 new teachers (125,562 ACP and 100,340 TPP).

However, other studies, such as Clewell and Villegas (2001a) and Sakash and Chou (2007) showed that teachers on alternative routes were more likely to stay in teaching for longer. These are weaker studies due to several methodological limitations. Clewell and Villegas's (2001a) 6-year evaluation of the 1141 Pathways to Teaching Careers programme showed that retention rates for Pathways teachers were higher for ethnic minority teachers (87–94%) than for White teachers (81%). However, the study excluded non-responders who may be more likely to have left teaching. This study was therefore rated 1🔒. Similarly, Sakash and Chou (2007) found that teachers on alternative programmes, such as Project 29 were more likely to stay in teaching for longer. On average, they taught longer in Chicago public schools (5.1 years vs. 3.7 years) in schools with similar achievement compared to graduates from other programmes. This was rated 1🔒 as it is not an empirical study, but describes a Project 29 pathways programme that recruits and trains experienced teachers to be bilingual/ESL teachers.

Both studies identified certain elements in these alternative pathways that may support ethnic minority teachers. For example, the Pathways to Teaching Careers programme included diversity training, reflective practice, supervised teaching experiences and induction supports. Lau et al. (2007) suggested that the mentoring and social support that Pathways Scholars received were important factors in the retention of Black teachers, explaining around 10% of the total variance in teachers' commitment to teaching. Project 29 had a peer support system, and it accommodated the needs of Project 29 scholars in combining full-time teaching with graduate school. Although these elements were suggested as reasons for the higher completion and retention rates of ethnic minority teachers on alternative pathways, the evidence is not strong. This was rated 1🔒 for strength of evidence as it was based on interviews and focus groups of 105 teachers.

## Implicit bias

Another factor that has been suggested as contributing to ethnic minority teachers leaving teaching is implicit bias by other stakeholders. However, our review found no strong evidence that implicit bias or racism was a factor. This does not mean that implicit bias does not occur, but rather that the evidence is not strong as most of the studies looking at this issue were based on anecdotal reports by self-selected individuals.

In their study of Pathways Scholars, Black teachers in Lau et al. (2007) reported that discrimination against them by other teachers, the school and parents was one of the factors that deterred them from remaining in teaching. However, the evidence is based on a survey



of 105 Pathways teachers, most of whom (95%) were African Americans. Therefore, it is not possible to tell if discrimination was racially motivated or would be equivalent in other groups. 1🔒.

Steiner et al. (2022) interviewed some teachers of colour who said that, although anti-racist professional development courses were organised for them, they often felt tokenised and vulnerable as they had to share their traumatic experiences.

Overall, there is currently no strong evidence that implicit bias or racial discrimination is a factor in the attrition of ethnic minority teachers. Most of the studies that mention this are small surveys involving predominantly ethnic minority participants and their perceptions. There were no comparisons with other teachers. It is, therefore, difficult to tell if implicit bias is an issue specific to ethnic minority teachers.

## Financial incentives

Although financial issues might plausibly explain why some teachers leave their training programmes or exit the teaching profession altogether, we found no evidence that this factor was more relevant to ethnic minority teachers. Other factors might be more influential in their decision-making. This highlights the complexity of teacher retention and the need for more robust research that takes account of both observed and so far unobserved factors.

Our review found only one study that examined teachers' views on the role of financial factors in ethnic minority teachers' entry and staying on in teaching (Steiner et al., 2022). The study used data from the 2022 State of the American Teacher Survey, which included a sample of 2360 teachers (54% response rate). It explored teachers' perspectives on 18 policies and practices that could be effective for increasing the number of teachers of colour. The survey found that teachers were generally in favour of pay-based approaches (e.g., increasing teacher salaries) as an effective strategy for retaining teachers (72% teachers of colour, 75% Hispanic, 70%, Black, 71% White). Teachers ranked this as the most effective approach of all the pay-based policies in retaining teachers of colour. 1🔒.

In summary, principal-teacher race match and the ethnic composition of the school are important factors in the retention of ethnic minority teachers. School working conditions may be important, but not more so for ethnic minority teachers. There is little evidence of differential effect of alternative routes into teaching for ethnic minority teachers.

## LIMITATIONS OF THE REVIEW

To understand the implications of this review, it should be kept in mind that most of the included studies were conducted in the USA and concerned Black American and Hispanic teachers. Ethnic minority teachers in England are largely Black Caribbean, Black African and Asian (e.g., Indian, Pakistani, Bangladeshi, Sri Lankan). The motivation, culture and behaviour of UK-based minority teachers may not be the same as US-based ones.

This also applies to ethnic minorities in other countries like Australia and New Zealand and Europe where the ethnic demographics of students are quite different to those in the USA. Nevertheless, there are some lessons that can be learnt. Although our review identified 129 studies from many of these countries in the initial stage (75 from Australia, 19 from New Zealand and 35 from Canada), all were excluded eventually as they did not directly address the research questions. These studies typically explored the experiences of ethnic minority/immigrant teachers teaching in schools in these countries, without reporting recruitment or

retention outcomes. The fact that studies from these countries have not been included suggests that no robust research on this topic has been conducted in these countries, helpful to establishing a causal claim, perhaps because access to population data is challenging. On the other hand, the fact that US state-level education systems have rich administrative datasets facilitated studies that were eventually included in this review. Many of these studies also used analytical procedures to try and control for pre-existing differences between groups.

The lack of robust causal studies from any country is one of the main limitations of this review. Almost all existing research in this area is correlational. This makes it difficult to conclusively judge what affects minority teacher recruitment and retention and what does not. Research on how to improve the supply of ethnic minority teachers in England is largely anecdotal, based on a few respondents' experiences. Studies that employed large administrative data were often missing several potentially important variables. The findings of this review are therefore based on the best evidence currently available in English worldwide.

We are currently conducting a separate structured review of evidence on the most promising approaches or programmes to improve the representation of ethnic minority teachers and leaders in the schools of England, which we hope will provide clearer evidence on how we can increase the share of ethnic minority teachers in schools.

## DISCUSSION AND IMPLICATIONS

Previous reviews have identified a number of factors associated with the recruitment and retention of teachers in general. See et al. (2020a, 2020b), for example, suggests that targeted financial incentives are promising strategies (e.g., bonus incentives, bursaries, scholarships and higher wages) to attract people into teaching, although they are not effective in retaining teachers. These monetary factors appear to be attractive only to those who already have the intention to go into teaching anyway. Their effects are also short-lived. Most people do not go into teaching for the pay. Although there is some suggestion that providing alternative routes into teaching has increased the supply of teachers, the evidence is not conclusive.

While the majority of studies in this current review are from the USA, research in England has shown that government policies, such as reform in higher education admissions criteria and tuition fees in England, may have made it more difficult for some students to enter teaching (See & Gorard, 2020). Compounding this issue was the raising of the minimum entrance requirements. Since 2013 prospective teachers were required to pass a literacy and numeracy test, and for some applicants there was a requirement to take a Subject Knowledge Enhancement (SKE) course. All these may have implications for the recruitment of minority ethnic teachers.

There are also cultural differences in individuals' motivation to go into teaching. See et al. (2022) found that teachers in Shanghai and Taiwan, South Korea and Singapore chose teaching as a career because it fits in with their personal responsibilities (family life), whereas teachers in England are most likely to report being more motivated by the altruistic values of teaching. Although in almost all countries, teachers report going into teaching for some altruistic reasons (such as wanting to make a difference to disadvantaged children's lives and to contribute to society), in Finland teachers are more likely to go into teaching because it offers a steady career and a reliable income. African-origin teachers, on the other hand, are more likely to go into teaching because they have a passion for teaching and for job security. Minority ethnic teachers in England often cited reasons as wanting to serve the community and act as role models as motivations for wanting to be teachers (Cunningham and Hargreaves, 2007).

However, knowing these motivating factors does not help us in understanding the barriers or facilitators in recruiting minority ethnic teachers. With regard to the recruitment and retention of minority ethnic teachers, the individual, cultural and political factors may be

important, but institutional practices matter more. For example, Gorard, Chen et al. (2023) and Gorard, Ventista et al. (2023), using national data from the School Workforce Census for England, have shown that consistently from 2014 to 2021, minority ethnic applicants to teacher training were least likely to be accepted into training and least likely to gain subsequent QTS (Qualified Teacher Status) or a teaching post compared to White British applicants. Studies in the USA have examined some of these institutional practices, which may be relevant to the English context.

Previous research (e.g., Basit et al., 2006; Basit & Roberts, 2006; McNamara et al., 2009) has also highlighted structural and systemic barriers to career progression, such as racism and assumptions about minority ethnic teachers' abilities based on racial/ethnic stereotypes. However, it needs to be mentioned that these studies do not have counterfactuals, and are based solely on anecdotal accounts by teachers. The lack of career progression may also be a factor that affects White British teachers' retention. Whether this issue is more germane to minority ethnic teachers needs to be established. However, other studies found that BME (Black and minority ethnic) teachers were more likely to have their requests for CPD (continuing professional development) rejected than their white colleagues (Clare et al., 2016) or were less likely to be encouraged to apply for promotion than their white colleagues (Harris et al., 2003). The profound lack of minority ethnic school leaders in England (Gorard, Chen et al., 2023; Gorard, Ventista et al., 2023) provides some evidence of the impact of such structural barriers. Although the Runnymede Trust report (Haque & Elliot, 2023) identified some barriers and challenges faced by BME teachers, there was no comparison with White British teachers. It is, therefore, difficult to say if their experiences were unique of BME teachers or teachers in England in general.

## Recruitment

Despite attempts by the US government to address the under-representation of ethnic minority teachers in schools, such as via alternative pathways, our review found no strong evidence that alternative routes into teaching were any more effective than the traditional routes.

This review reveals that the factor most likely to influence the entry into teaching and employment of ethnic minority teachers is principal-teacher race/ethnicity congruence. Studies have consistently shown that ethnic minority teachers are somewhat more likely to be recruited by principals who share their race/ethnicity, suggesting an element of implicit bias somewhere in the recruitment process. This bias may act as a barrier to teachers of minority ethnicity being employed in schools, reflecting systematic partiality in hiring practices. Of course, this may be because ethnic minority principals are more likely to be in schools with a high proportion of ethnic minority students, and their hiring practice is merely a reflection of the student and local population demographic of the school. However, an experiment in two states in the USA (Shand & Batts, 2023) showed that training in anti-bias and EDI (equality, diversity and inclusion) led to a substantial increase in the proportion of ethnic minority teachers compared to similar schools in the city/district.

This provides good justification for increasing the number of ethnic minority principals in schools if addressing under-representation of ethnic minority teachers is a policy concern.

Several high-quality studies, which analysed state or district level data, have indicated that ethnic minority candidates can face disadvantages in meeting entry qualifications and passing teacher certification tests, such as the knowledge and content Praxis tests (e.g., Gitomer et al., 1999; Motamedi et al., 2021; Shah et al., 2018; Van Overschelde & López, 2018; Williams et al., 2019). While there is no evidence from England or UK that

ethnic minorities face disadvantages in meeting entry requirements, analysis of policy reforms (See & Gorard, 2020) showed that strict entry requirements to training have led to lower acceptance rates by training providers in England.

In summary, implicit bias in hiring practices and disparities in meeting entry requirements are key factors that may contribute to the under-representation of new ethnic minority teachers. These factors may be addressed by conscientiously examining and revising the hiring and recruitment policies adopted by schools, making the criteria for selection more transparent.

## Retention

Regarding retention of ethnic minority teachers, there is also strong evidence that principal-teacher race congruence is an important factor. Research using large administrative panels from several states in the USA collectively suggests that teachers whose race/ethnicity is similar to that of the principal are less likely to move schools, and more likely to report better perceived working conditions and increased likelihood of retention.

There is no similar research in the UK yet that focuses on principal-teacher race congruence as a factor in teacher retention. Much of the UK-based research was generalised for all teachers and shows that teachers leaving schools or the profession is influenced by factors such as workload, stress and illness, pupil behaviour, government policy, school leadership policy and culture, Ofsted inspection pressure and accountabilities, and low salaries (e.g., Department for Education, 2018b).

Basit et al. (2006) conducted a survey of 170 minority ethnic trainees in England which reported personal, family and financial reasons as top reasons for minority ethnic trainees dropping out of training. Compared to White majority trainees, a significantly larger proportion of minority ethnic trainees reported negative experiences, such as discrimination and racism at training institutions and placement schools (e.g., difficult relationships with mentors). These were reported by a small minority of minority ethnic trainees for non-completion of training. There is also small-scale evidence suggesting that ethnic minority teachers report discrimination from staff, pupils and parents, disillusionment with their ability to make a difference for pupils from ethnic minority backgrounds, and a lack of progression opportunities (e.g., Haque & Elliot, 2023). Unfortunately, regression analyses that could identify the determining factors (e.g., whether it is age, type of school, training institution practices or ethnicity) that explain the differential withdrawal rates of minority and majority teachers were not conducted. It is, therefore, difficult to be certain if these negative experiences were unique to minority ethnic trainees.

Although there is evidence that a challenging working environment in school is a factor in teacher attrition, the effect is no stronger for ethnic minority teachers (e.g., Rodriguez et al., 2022; Ronfeldt & McQueen, 2017). Ethnic minority teachers (particularly those in the USA) were more likely to work in high poverty, under-resourced schools with poor working conditions where turnover rates are high. But this does not mean that ethnic minority teachers are more strongly affected by poor working conditions than non-minority teachers. Given similar conditions, non-minority teachers exit at similar or even higher rates. However, this does suggest that improving working conditions can help reduce the attrition rates of ethnic minority teachers (as well as others).

Effective leadership is associated with teacher retention, but again there is no conclusive evidence of an additional effect for ethnic minority teachers, based on the current review. The stronger evidence suggests that induction support is an important factor for retention of all teachers, and it is not necessarily stronger for ethnic minority teachers. We found no evidence that minority ethnic teachers were more likely to leave teaching compared to their White peers after accounting for other factors.

There is some evidence that the student ethnic mix of the school may be an important factor in the retention of ethnic minority teachers, especially for Black teachers, but the staff composition mattered less (e.g., Strunk & Robinson, 2006). Although minority ethnic teachers may be less likely to leave schools where there is also a high proportion of teachers of the same race/ethnicity, this only applied to Black teachers, but not Hispanic/Latinx teachers (see Gorard, Gao et al., 2024; Gorard, Tereshchenko et al., 2024; Patrick & Santelli, 2022).

There are many possible explanations for the differential effect of the student ethnic population on minority and non-minority teachers' decisions to stay at or leave a school. One explanation is that it is not the ethnicity of the students per se, but what is associated with a particular ethnic group. For example, in the USA, schools with a high proportion of ethnic minority students tend to be in large urban cities with high deprivation and a high proportion of low income and low-performing students (Edwards, 2020, 2024; Sun, 2018). So, the student demographic of a school could be a reflection of the working conditions. Shirrell (2018), however, argued that it was because minority ethnic teachers felt a greater responsibility towards children of their own ethnicity as they tend to be from disadvantaged backgrounds. Also, minority ethnic teachers were more likely to be motivated by their desire to give back to their communities (Lau et al., 2007), and see themselves as agents of social change (Van Overschelde & Garza, 2020). These personal motivations, perhaps, explain why minority ethnic teachers, in particular Black teachers, were more likely to stay on in schools with a high proportion of minority ethnic children from disadvantaged backgrounds. Another potential explanation is social identity theory, which maintains that people tend to feel more comfortable with people similar to themselves (Tajfel & Turner, 2004).

Drawing on evidence from in-depth interviews and job shadowing with 56 White teachers in five metropolitan schools, Nelson and Johnson (2023) reported that White teachers in schools with a Black majority staff felt uncomfortable and anxious when racial discussions arose for fear of accusations of racism or bigotry.

Although ethnic minority teachers on alternative pathways may initially appear to have lower attrition rates, this review found that teachers from all ethnic backgrounds on traditional routes tended to stay in teaching longer. However, certain alternative pathways may offer advantages, such as through specialised support structures, that support ethnic minority teachers in completing their training and staying on in teaching.

## Recommendations

The lack of robust causal studies is a key limitation in research in this area, making it difficult for definitive conclusions to be made about some of the important factors, such as working conditions and presence of implicit bias. Funders could consider funding larger scale research using rigorous experimental (randomised control trials) or quasi-experimental designs (e.g., regression discontinuity) to address this. Although racism and implicit bias has been suggested as an important factor influencing the recruitment of ethnic minority teachers, no experimental studies have been conducted to confirm this. A similar study to that by Shand and Batts (2023) in the USA could be trialled to test this. Some of the stronger US studies that evaluated the effect of admissions criteria and entry qualifications could be replicated to see if these findings are relevant in the UK context.

Based on the evidence in this review, promising ways to increase and retain the minority ethnic teacher workforce appear to include:

- Addressing implicit bias (and any racism) in hiring practices (especially through training)
- Closing disparities in entry requirements
- Improving working conditions in schools



- Providing tailored support to prospective ethnic minority teachers to meet their needs.
- And working to avoid the clustering or segregation of ethnic minority pupils between schools

At the same time, policies could try to increase the number of minority ethnic principals in schools (especially outside London in England), and to focus on improving the recruitment of minority ethnic students to university- based education programmes. Given that the ethnic mix of pupils can be a factor both in the attractiveness of a school and the retention of minority ethnic teachers, encouraging ethnic and socio-economic mixing of school intakes is advisable (Gorard et al., 2022). We predict this would have beneficial impacts for the school system, even beyond encouraging the recruitment and retention of teachers.

With advances in artificial intelligence (AI), the potential role of AI in augmenting human decision-making processes for teacher recruitment to enhance diversity and equity could be considered. Klassen et al. (2023), for example, have developed an online scenario-based learning intervention that could be adapted to potentially increase prospective ethnic minority teachers' self-efficacy, career intentions and perceived fit with the profession. Using AI in screening and selecting teachers for admissions to training and recruitment to complement human selections might help to address implicit bias.

## AUTHOR CONTRIBUTIONS

**Beng Huat See:** Conceptualization; investigation; writing – original draft; writing – review and editing; methodology; formal analysis; data curation. **Stephen Gorard:** Conceptualization; methodology; writing – review and editing; formal analysis; supervision. **Yiyang Gao:** Investigation; formal analysis; project administration; data curation. **Loraine Hitt:** Investigation; writing – review and editing; formal analysis; data curation; project administration. **Nadia Siddiqui:** Conceptualization; formal analysis; data curation. **Feyisa Demie:** Conceptualization. **Antonina Tereshchenko:** Conceptualization. **Nada El Soufi:** Investigation; formal analysis; data curation.

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## CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

## ETHICS STATEMENT

The study was conducted with approval by the Durham University Ethics Committee and in accordance with the British Educational Research Association's Ethical guidelines.

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# APPENDIX 1

References	Country	Aim of study	Research design	Sample (no. of participants, how identified/ selected)	Attrition/ response rate/ missing data	Analysis
Bartanen and Grissom (2019)	USA	To determine effects of principal race (Black vs. White) on recruitment and retention of Black or White teachers and on student outcomes	Longitudinal, correlations study, using extant personnel records from the two states, Tennessee (years 2007–2017) and Missouri (years 1999–2016). Information for each individual includes: gender, race/ ethnicity, school worked at, years' experience in the state system, highest academic qualification, and salary). Races/ ethnicities other than Black/White were not considered due to small samples. This personnel data was linked to school-level data from the Common Core of Data, looking at schooling stage and urbanity, and size, ethnicity, and SES of students (based on FSM)	1,000,000 (Missouri) and 690,000 (Tennessee) 'teacher-year' observations. Presumably all public school teachers in the state were sought for data collection through the state system, but those who were not clearly listed as 'Black' or 'White' are not included due to low numbers. There is no mention of how teachers of mixed race/ ethnicity were counted	Not specified but likely extremely low missing data, given the administrative nature of the data. In rare cases where gender or race/ethnicity data was missing, this was taken from other years of the same teacher's/ principal's file. Any missing data did not affect outcomes, according to authors (see p. 8). Participants who are not Black or White (3–7% of total teaching force) are not analysed (see p. 53)	Used panel data supplied by state on teachers and other school staff. Linear probability model predicts teacher race based on principal race, controlling for principals' qualifications and experience, school characteristics, and calendar year (to account for economic 'shocks' in certain years). They also include fixed-effects related to specific schools and districts. Analyses are 'nested.' To model retention, moves within schools, districts, and states are considered, as well as turnover to non-teaching roles, using a binary model (stayed vs. moved) and categorical model (type of turnover event), controlling for intrinsic teacher and school variables and changing school, principal, and school year variables



Factors influencing recruitment	Broad recruitment theme	Factors influencing retention	Broad retention theme	Rating
<p>Overall, only 12% of teachers in Tennessee were Black, while in Missouri 6% were black, with the remainder overwhelmingly White. Principal's race predicts teacher race at a 'significant' level. Quote from paper: 'in Missouri schools with Black principals, 41.2% of teachers are Black, compared to only 2.4% in schools with White principals. Tennessee has a similar disparity' (p. 14). However, the unique contribution of principal race is smaller than this would indicate, given that community and school factors also likely influence the proportion of Black/White teachers. Authors illustrate this by showing the impact of changing principal's race within the same schools, with clear trends of a switch in principal race to an increased proportion of teachers with the same race as the principal, which increases over time (p. 49). Having a Black principal increases black teachers by 2. 3</p>	Principal-teacher race congruence	<p>For all races, Missouri had higher teacher exit rates and district changes, overall, while Tennessee had more within district moves. Black teachers had higher turnover rates in both states, with about 1/4 of all Black teachers turning over each year (p. 24). Schools with Black principals had higher turnover rates for all teachers than those with White principals. Principal turnover was correlated with higher teacher turnover in the same year. However, in Tennessee, Black teachers under Black principals were less likely to leave teaching altogether or change districts. Race-match between principals and teachers decreases turn-over events, mainly reducing the chance of a teacher changing schools, with some effect on reduction in leaving the profession. Black principals reduced black teacher turn-over by 2.8 percentage points in Missouri (10% of base turnover), while in Tennessee they reduced turnover by 5.6 percentage points (23% of base turnover). White principals reduced white teacher turnover by 2.0 percentage points (10% of base turnover) in Missouri and by 0.9 percentage points in Tennessee. Teachers reported better perceived working conditions overall under a same-race principal (p. 7)</p>	Principal-teacher race congruence	3

(Continues)

APPENDIX 1 (Continued)

References	Country	Aim of study	Research design	Sample (no. of participants, how identified/ selected)	Attrition/ response rate/ missing data	Analysis
Clewell and Villegas (2001a, 2001b)	USA	To report the processes and outcomes of the Pathways to Teaching Careers Program (1994–2000), which aimed to train and recruit qualified teachers, especially teachers of colour and especially through alternative certification pathways. In four different strands, teacher recruitment and certification efforts were aimed at pre-college and college students, as well as paraprofessionals and uncertified teachers or school staff, and Peace Corps volunteers. In all, 40 training and recruitment projects were led by different agencies across the USA (mainly, South, Northeast and Midwest areas). The pre-college and college strands of Pathways were mainly led and evaluated by university teams, and not described in detail in this report, which focuses instead on the emergency certified/substitute teachers, paraprofessionals/ school staff, and Peace Corps strands (p. 5)	Longitudinal study that included different teacher candidate cohorts within each strand and site, but only overall outcomes and strand-specific are reported (not by cohort/ site). This report is of the summative evaluation, and it used descriptives and qualitative analysis of interviews, surveys, teaching observations and formal assessments, and teacher retention data. Data was collected from teacher candidates themselves, program staff, school staff, and trained Praxis III evaluators	$n=2,593$	Attrition from the program was 18% (21% emergency certified/ substitutes; 18% paraprofessionals; 12% Peace Corps). A sample of these were phone interviewed to determine reasons for drop-out. Response rate to surveys ranged from 63% to 95% (p. 10). Outside survey companies were used to increase responses. Not surprisingly, the highest response rates were for surveys conducted during the early years of the program and by program staff, and the lowest response rates were for surveys conducted in the later years and by teacher candidates themselves, with the lowest response of all being for the follow-up survey of 3-year teacher retention outcomes	Only some outcomes are reported by demographic group. There is no regression or other attempt to model the contribution of specific teacher candidate variables to R/R outcomes, but this seems appropriate given the range of implementation sites and approaches. 'The summative component focused on determining the overall success of the Pathways program in: a) meeting its numerical goal of recruiting nontraditional individuals, including those of racial/ ethnic minority background into teacher preparation programs; b) retaining participants through program completion and certification, and ensuring that they worked in targeted districts after completing the program; c) preparing effective teachers; and d) producing teachers who are more likely than their national counterparts to remain in teaching' (p. 7). 'For this report, we have aggregated data from the various surveys across a six- year period to answer the main evaluation questions. We have also done tests of significance, confidence intervals and other statistical tests where appropriate' (p. 11)

Factors influencing recruitment	Broad recruitment theme	Factors influencing retention	Broad retention theme	Rating
<p>Pathways program was considered effective in recruiting teachers through non-traditional pathways, especially among individuals already working in education in some way. The program exceeded its planned recruitment by 18% (p. 12). Compared to newly prepared teachers overall, Pathways had proportionately higher recruitment rates for EM teachers, but not male teachers. Pathways increase the number of new EM teachers in the USA by 14.7%, whereas it increased the number of all new teachers in the USA by 1.6%. The emergency certified/ substitute strand and paraprofessionals/ teacher aide strand recruited more EM teachers than the Peace Corps strand (88%, 82%, and 19% non-White teachers respectively, p. 14). No comparison is reported with newly prepared teachers in other non-traditional teacher preparation programmes in the USA. 84% of Pathways teachers entered schools in targeted, high-need areas (p. 18). Pathways teachers were rated higher in effectiveness than other novice teachers by principals and university staff, and they received slightly higher Praxis III scores than average novice teachers. The Pathways program was implemented in numerous sites throughout the US, and in each site, different combinations of interventions were offered to recruit and support non-traditional teachers. Some potentially effective elements included: targeted recruitment based on demographics, academic talent, motivation, etc.; university/ school partnerships in high need areas (this was a grant requirement and similar to GYO programmes); financial assistance for university classes especially for those working full-time in education already; orientation and mentoring/counselling by university or school staff; tailored scheduling of teacher training courses; teacher training focused on supporting diverse students, individualisation strategies, and reflective practice; employment assistance, induction programmes, and networking for Pathways alumni. It is not possible to rank the importance of such factors for recruiting Pathways teachers overall or specifically recruiting EM teachers in the Pathways program, given the limitations of the data and lack of control on implementation across sites. Based on follow-up surveys of those who left without completing Pathways, there were more EMs who left than Whites, and most had issues unrelated to the Pathways program, some had unmet needs from the program, and a few candidates were forced to leave (p. D-5</p>	Alternative certification (2🔒)	<p>Pathways teachers had higher rates of retention at 3-years than US teachers overall (though this is based on a survey with a 63% response rate, so it is possible that non-responders were more likely to leave teaching). Pathways retention was higher for EM teachers (87–94%) than for White teachers (81%), and it was higher for those in the emergency certified/substitute and paraprofessional/teacher aide strands (91–92%) than for the Peace Corps strand (75%). Peace Corp volunteers tended to be younger, equally male/female, more often single (vs. married or divorced), and less likely to have children. The other two strands included more EMs and females, and people already working in schools, with a better knowledge of the demands of teaching, but they were also more likely to have family commitments, which could have been a challenge for Pathways participation. It is not clear which retention factors were important for EM teachers vs. White teachers, but Pathways program elements such as diversity training, reflective practice, supervised teaching experiences, and induction supports could be related to 3-year teacher retention. For those not retained, most left due to parenting or other family/ personal issues, or to pursue work in another field outside of teaching, while fewer left for reasons directly related to their schools or teaching demands (p. 31)</p>	Alternative certification	1🔒 High attrition

(Continues)

APPENDIX 1 (Continued)

References	Country	Aim of study	Research design	Sample (no. of participants, how identified/ selected)	Attrition/ response rate/ missing data	Analysis
Renzulli et al. (2011)	USA	To examine how racial mismatch between teachers and students influences teacher satisfaction and how that relationship is altered by school type	A cross-sectional study based on two data sources: the 1999–2000 Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS). The data for this analysis come from the teacher surveys of public and charter schools	The study eliminated teachers who were not full-time or standard teachers, such as student teachers and teachers' aides. The analysis is further limited to White, Black, and Hispanic teachers due to the relatively small number of Asian and Native American teachers in the sample. The study kept the Asian and Native American students in the data because the focus is on the racial mismatch teachers can have in their schools. After eliminating these cases, the final SASS sample includes approximately 32,930 teachers in 7,190 schools (31,170 traditional public school teachers in 6,740 traditional public schools, and 1,760 charter school teachers in 450 charter schools)	The weighted response rates for public school teachers and charter school teachers were 83.1% and 78.6% respectively	Multinomial regression analysis and descriptive analyses The multinomial regression analysis was used to model the three-category dependent variable created from the Teacher Follow-up Survey (TFS) data, while the descriptive analyses were used to compare the characteristics of teachers and schools in traditional public and charter schools

Factors influencing recruitment	Broad recruitment theme	Factors influencing retention	Broad retention theme	Rating
NA	NA	Racial mismatch between teachers and students can have a negative impact on teacher satisfaction and retention, especially for teachers of colour. Teachers of colour who teach in schools where they are in the racial minority are more likely to leave the teaching profession than teachers of colour who teach in schools where they are in the racial majority. The study also found that teacher turnover is influenced by factors such as job satisfaction, school type, and teacher characteristics, such as age and experience	School characteristics (Ethnic and SES composition of students); Personal attributes	2🔒

(Continues)

APPENDIX 1 (Continued)

References	Country	Aim of study	Research design	Sample (no. of participants, how identified/ selected)	Attrition/ response rate/ missing data	Analysis
Van Overschelde and López (2018)	USA, Texas	This study examines whether increasing GPA admission requirements for teacher preparation programmes impacts on student outcomes and the number of teachers, e.g., teachers of colour	This is a longitudinal correlational study of preservice teachers, looking at who are likely to be denied admission if GPA admission requirement was raised. Teacher certification data from the Texas State Board of Educator Certification from 2003	$n = 1,314$ . Sample included undergraduate preservice students enrolled 2 years prior to 2010–2011 in a teacher education programme at an institution in Texas serving Latinx students. But only 18% of the sample was Latinx (majority were White). This was the year when GPA requirements were raised	Not stated	The study uses simulations to predict what would have happened if prospective teachers' GPA were raised comparing students who were admitted prior to the policy change and after to see how likely they would be admitted or denied. Logistic regression analysis to predict which student characteristics were most likely to be denied admissions. IV were school year, gender, Black, White and Latinx. The DV was whether student would be admitted or denied. Inferential analyses were used to determine if certain groups of students were more likely to be denied admissions as a result of an increase in GPA by using admission figures before the policy came into place (before 2010–11) and remove those who had lower GPA than the requirement in 2010–11



Factors influencing recruitment	Broad recruitment theme	Factors influencing retention	Broad retention theme	Rating
<p>Logistic regression analysis indicated that Black students were 2.5 times more likely to be denied admission than Other students, and males 1.4 times more likely to be denied admission than female students. The analysis also showed that if the GPA criterion were increased, Black students were 2.8 and Latinx students were 2.0 times more likely to be denied admission than Other students. Increasing GPA criterion would reduce the number of teachers of colour</p> <p>When GPA was raised to 3.0, students who were admitted were more likely to be rated highly on final teaching evaluation, more likely to graduate and gain certification status than students who were denied. However, subgroup analysis by ethnicity was not analysed. But, as teachers of colour on average had lower GPA, they were therefore less likely to be admitted and gain certification</p>	Entry qualifications and admissions criteria	NA	NA	3🔒