Does diversity of staff impact student outcomes in higher education?

Rapid review of the literature
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Executive summary

Background

The term ‘diversity’ generally means taking account of and valuing differences between people and groups of people. In a UK context, diversity is typically considered in relation to the nine characteristics protected by the Equality Act 2010, which are: age, disability, gender/sex, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, and sexual orientation. Socio-economic background is also often considered when thinking about diversity.

The UK higher education sector is increasingly aware of the value of staff diversity to individual and collective experiences in higher education, as well as the need to enable students from all backgrounds to participate and succeed (ECU, 2014; Morgan, 2016).

Despite this, national inequalities in experience and outcomes for students from some protected characteristic and socio-economic groups are well known in the UK higher education sector (ECU, 2017), including gaps in student satisfaction, which have also recently been in the spotlight (Neves and Hillman, 2018).

It is often theorised that diverse staff are uniquely positioned to support students from diverse backgrounds in higher education. Yet little is actually known about how issues of staff diversity relate to student experiences or outcomes.

Given this, the primary aim of this project was to review the evidence base for a positive relationship between the diversity of staff of higher education institutions (HEIs) and student outcomes, particularly for students from equality and socio-economic groups. This was with a view to ascertaining whether there is in fact evidence to confirm the notion that having a more diverse staff body could enhance student outcomes, which would support this being added to the existing arguments for continuing to increase staff diversity in higher education.

Methodology

Since the research question was broad in scope, the approach taken was a rapid review of the literature to give an overview of the existing evidence in this area. The review findings therefore are not exhaustive, but provide a useful high-level picture of the evidence base from which policies and future research could be developed.

The approach included a search of academic databases as well as a general Google search, as it was expected from the outset that a wide range of evidence sources would need to be included in order to find emerging ideas and evidence. Additionally, the review looked beyond the UK to capture useful international evidence sources that might contain findings to inform UK research or approaches.

The rapid review was structured thematically to encompass key aspects of staff diversity and student outcomes. The following research themes were used to guide the review:

+ staff diversity and student recruitment and access to higher education
+ staff diversity and student learning and teaching
+ staff diversity and student support
+ staff diversity and student attainment
+ staff diversity and student progression into postgraduate study and academia

‘Diversity’ encompassed the protected characteristics of the Equality Act 2010 as well as socio-economic background, and was considered both for staff and in relation to student outcomes. ‘Staff’ encompassed academic, professional, and support and leadership.
Research findings

A total of 38 evidence sources were deemed to be sufficiently relevant to the research themes for inclusion in the final selection.

The state of the evidence base

From the review process, the following broad conclusions were identified about the state of the evidence base and the gaps that persist.

+ The majority of the literature relates to gender and race, and there is comparatively little relating to other protected characteristics or to socio-economic background.

+ The majority of the literature pertains to diversity of academic staff and the impacts of this on students, with just a couple of evidence sources mentioning diversity of support staff or leadership.

+ There is a strong dominance of US-based research in the literature. This research is generally robust and provides interesting findings, but there are some questions about the transferability of these, given the cultural specificity of some aspects of diversity and inclusion.

+ The UK-based literature is more limited and includes less research. In general, coverage of staff diversity and its impact on students is conjecture or recommendation rather than empirical evidence. There is limited available evidence that directly addresses the guiding research question of this review. Often, the topic is covered as a sub-theme rather than as a primary focus.

+ It is clear, therefore, that there needs to be further UK-based research on this topic.

Areas where staff diversity could support student outcomes

+ Staff diversity could support recruitment of underrepresented groups to higher education

Two UK evidence sources proposed that greater representation of black and minority ethnic (BME) people in the academy could improve recruitment of BME students through impacting on aspirations and self-confidence (Maylor, 2010; Morgan, 2016). However, no research was found to support this hypothesis. Same-sex role models were recommended and implemented for enhancing the recruitment of white working class boys into UK higher education (Hillman and Robinson, 2016; Action on Access, 2009) and girls into science, technology, engineering and mathematics (STEM) in the US (Margolis and Fisher, 2002; Hill et al, 2010), however no empirical evidence was found to confirm the efficacy of this mechanism. Socio-economic background was markedly absent in relation to this theme, a fact that was explicitly discussed by Brook (2010).
Staff diversity could make student learning and teaching more inclusive
Clear race differences exist in relation to student satisfaction with learning and teaching in UK higher education (Neves and Hillman, 2018; NUS, 2011). UK sources suggest greater diversity of staff could address this, although the evidence base for this is lacking in the UK. The US sources offer this evidence base; numerous studies found that diverse faculty (academic staff), namely BME, women and working class faculty, are more likely to integrate race, gender or class issues into their curricula (Zandy, 1990; Milem and Astin, 1993; Frey, 1998; Tate, 1998; Hurtado, 2001; Milem, 2001). A number also found that BME, women and working class faculty employ a wider and more inclusive range of pedagogical techniques (Hurtado, 2001; Milem, 2001; Umbach, 2006; Stricker, 2011). There has also been exploration of how black students hold high expectations in terms of the diversity competence of black faculty, which did not always hold true (Guiffrida, 2005; Tuitt, 2012). While showing an impact of staff diversity on learning and teaching, the US literature generally does not link this to impacts on student outcomes, with the exception of Hurtado (2001), who shows student growth on a number of educational outcomes.

Staff diversity could enhance student support for BME and working class students
Several UK sources shared some negative experiences and views of student support from BME students. They also suggested that increased staff diversity, amongst both academic and support staff, might make BME students more likely to engage in academic and pastoral support (Dhanda, 2009; Housee, 2011; NUS, 2011). However, they did not provide evidence of the difference staff diversity makes to student support. Meanwhile, a number of the US-based studies found that BME, women and working class faculty are more likely to play an active role in supporting diverse students, both academically and pastorally. They suggest diverse faculty create a comfortable environment and provide mentoring and encouragement for students from similar backgrounds to themselves (Cole and Barber, 2003; Umbach, 2006; Stricker, 2011; Griffith, 2014). However, US research also revealed the potential downside of this, that is diverse faculty can be overburdened with support for diverse students, and this can negatively affect research output and progression to senior levels (Baez, 2000; Social Sciences Feminist Network Research Interest Group, 2017).
Does diversity of staff impact student outcomes in higher education?

+ **Staff diversity could improve attainment of BME and women students**

While there has been significant study of the BME attainment gap in UK higher education, the findings of this review suggest that there has been little research focused on how diversity of staff might contribute to, or help to address this attainment gap. Only one UK study suggested that a greater representation of BME staff in institutions could support BME student attainment (Dhanda, 2009). However, this does appear to be an emerging area of study, with a new PhD at the University of Portsmouth set to encompass this topic (Gilbert, 2017). BME students’ perceptions of staff expectations of their performance, and possible implications, were considered by two studies, one UK-based (Dhanda, 2009) and one US-based (Tuitt, 2012). In the US, there has been more study of staff diversity impacting on student attainment in relation to gender. A number of studies examined the impact of instructor gender on student achievement, with one finding a positive impact of female instructors on female performance (Johnson, 2014), one finding students earn higher grades in courses taught by same-gender instructors in fields traditionally dominated by the opposite gender (Griffith, 2014), and a third finding only a small gender effect (Hoffmann and Oreopoulos, 2009).

+ **Staff diversity could increase the progression of women and BME students into postgraduate study and academia**

Two UK-based studies of postgraduate students (Lober Newsome, 2008; Wellcome Trust, 2013) found that some female participants were discouraged from pursuing a research career by a lack of female role models in their academic fields. No UK studies concerning race were found, however a range of other evidence sources suggested a lack of BME role models amongst academics is one reason why BME students are less likely to progress into postgraduate study, and ultimately academic careers (Maylor, 2010; Black, 2014; UCL, 2014; Morgan, 2016). In the US and Canada, the focus in terms of staff diversity and student progression was on student major choice, which leaves the door open for further study and careers in a subject area. The literature was divided on this topic; three sources suggested a positive impact of female role models on female student major choice to some degree (Rothstein, 1995; Rask and Bailey, 2002; Bettinger and Long, 2005), and two found this not to be the case (Hoffmann and Oreopoulos, 2009; Griffith, 2014).
**Introduction**

The term ‘diversity’ generally means taking account of and valuing differences between people and groups of people. In a UK context, diversity is typically considered in relation to the nine characteristics protected by the Equality Act 2010, which are: age, disability, gender/sex, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, and sexual orientation. Socio-economic background is also often considered when thinking about diversity.

The UK higher education sector is increasingly aware of the value of staff diversity to individual and collective experiences in higher education, as well as the need to enable students from all backgrounds to participate and succeed (ECU, 2014; Morgan, 2016).

Despite this, national inequalities in experience and outcomes for students from some equality and socio-economic groups are well known in the UK higher education sector. As Equality Challenge Unit’s (ECU) annual statistics reports convey, there are persistent gaps in participation, attainment and progression. For example, in the academic year 2015/16 (ECU, 2017):

- overall, 78.4% of white students received a first or 2:1 compared with 63.4% of black and minority ethnic (BME) students, representing a BME degree attainment gap of 15%; there was a 29.4% degree attainment gap between black male qualifiers and white female qualifiers
- while 12.8% of first degree undergraduates declared disabled, this dropped to 7.6% and 7.3% for research and taught postgraduates respectively
- BME representation was relatively high among first degree undergraduates and taught postgraduates (23.0% and 20.5%, respectively); it was markedly lower among research postgraduates (16.9%)
- overall, 56.5% of all students studying in UK higher education were female, however, there was considerable variation across subjects; the subjects with the widest gender gaps were computer science (82.8% male) and engineering and technology (83.0% male)
- data returns for newer protected characteristics are incomplete; 81.6% of institutions returned data on sexual orientation, 78.5% returned data on gender reassignment and 79.1% returned data on religion and belief

Diversity gaps in student satisfaction have also recently been in the spotlight; there are clear differences by ethnicity in student satisfaction with learning gain, value for money and teaching quality (Neves and Hillman, 2018).

It is often theorised that diverse staff are uniquely positioned to support students from diverse backgrounds. As Prof Kathryn Mitchell, Vice-Chancellor of the University of Derby, puts it:

> "We want a diverse workforce, as they are our strategic enablers. They allow us to work with a group of people who come here to be educated with very different backgrounds, outlooks and skills."

Jolin (2015)

Yet little is actually known about how issues of staff diversity relate to student experiences or outcomes. For example, while students from BME backgrounds are underrepresented in certain institutions, notably elite research-intensive institutions, and consistently receive lower degree classifications than their white counterparts, we know little about how the racial diversity of university staff influences these issues (Singh and Kwhali, 2015). It is therefore timely to ask the question of whether the diversity of staff of higher education institutions (HEIs) has an impact on student outcomes.

Given this, the primary aim of this project was to review the evidence base for a positive relationship between diversity of university staff and student outcomes, particularly for students from protected characteristic and socio-economic groups. This was with a view to ascertaining whether there is in fact evidence to confirm the notion that having a more diverse staff body could enhance student outcomes, which would support this being added to the existing arguments for continuing to increase staff diversity in higher education.
Methodology

Since the research question was broad in scope, the approach taken was a rapid review of the literature to give an overview of the existing evidence supporting the notion that staff diversity impacts on student experience and outcomes. The review findings are therefore not exhaustive, but instead provide a useful high-level picture of the evidence base from which a range of policies and future research could be developed.

The approach included a search of academic databases as well as a general Google search, as it was expected from the outset that there may be few research studies on this topic, and therefore a wider range of evidence sources would need to be included in order to find emerging ideas and evidence, for example blog posts. Additionally, the review looked beyond the UK to capture useful international evidence sources that might contain findings to inform UK research or approaches. The approach was pragmatic and iterative, for example citations in relevant journal articles and blogs were used to identify further avenues to investigate.

The rapid review was structured thematically in order to encompass key aspects of staff diversity and student experience and outcomes. The following research themes were used to guide the review and informing key search terms:

- staff diversity and student recruitment and access
- staff diversity and student learning and teaching
- staff diversity and student support
- staff diversity and student attainment
- staff diversity and student progression into postgraduate study and academia

‘Staff diversity’ and each student outcome were considered in terms of the following aspects:

- protected characteristics – age, disability, gender/sex, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sexual orientation
- socio-economic background

‘Staff’ encompassed:

- academic staff
- professional and support staff
- leadership

‘Students’ encompassed:

- prospective students (in relation to recruitment and access)
- undergraduate students
- postgraduate students
Stage 1: planning the search
The first stage of the review was exploratory, with the aim of identifying key search terms and the most useful databases, journals and websites for enquiry. This involved experimentation with strings of words and terms across a range of databases and search engines to ascertain which would produce the most relevant literature.

Stage 2: conducting the search
The second stage involved applying the search terms identified across JSTOR, Academic Search Complete, Project Muse, Google, Google Scholar and Google Books. Additionally, the websites of higher education sector agencies were searched, including those of ECU, National Union of Students (NUS), Higher Education Academy (HEA), Higher Education Policy Institute (HEPI), Action on Access and Leadership Foundation for Higher Education (LFHE). The project manager at Advance-HE was also approached for suggestions of sources to review.

The search results were reviewed to determine their relevance to the study. The vast majority were not sufficiently relevant, thus narrowing the results considerably, and more than expected. To seek to address this, the references of relevant journal articles, books and blogs were searched to find additional sources. This returned a number of additional evidence sources for inclusion in the review, which in turn were searched for relevant citations. The review thus became an iterative process.

Stage 3: analysis of the selected sources
A simple coding framework in Excel format was developed in advance of the review. Data was extracted from each selected source and compiled into the framework. Recurrent themes amongst the sources were then identified. Gaps were also identified in terms of types of student outcomes, staff groups or student/staff characteristics that were absent or covered by relatively few sources.

Stage 4: creating the report
Finally, the review findings were utilised to create this report. The report presents an overview of the identified evidence sources followed by a thematic analysis of the sources, structured around the five research themes, and finally conclusions about the state of the evidence base and the areas where staff diversity might be able to have an impact.
Overview of the identified evidence sources

A total of 38 evidence sources were deemed to be sufficiently relevant for inclusion in the final selection. The appendix summarises these sources.

Country of origin and type of evidence source

The majority of the literature selected (21 sources) focuses on the US higher education system. Fewer evidence sources relating to the UK higher education system were found (15 sources). Even fewer were uncovered relating to other parts of the world, including one from Australia and one from Canada.

The UK literature is more mixed in terms of types than the US literature, including more blogs, videos, grey literature and fewer research studies.

Table 1: Country of origin of selected sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Books/book chapter</th>
<th>Journal articles</th>
<th>Other (blog, grey literature)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>5</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>UK</td>
<td>0</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Rest of the world</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Protected characteristics

Protected characteristic coverage was limited, with the majority of the sources focused on race or gender. Just one US study considered sexual orientation in addition to race and gender and another considered age in addition to race and gender.

Table 2: Protected characteristics covered by the selected sources

<table>
<thead>
<tr>
<th>Protected characteristic</th>
<th>Overall number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>2</td>
</tr>
<tr>
<td>Disability</td>
<td>1</td>
</tr>
<tr>
<td>Gender/sex</td>
<td>19</td>
</tr>
<tr>
<td>Gender reassignment</td>
<td>0</td>
</tr>
<tr>
<td>Marriage and civil partnership</td>
<td>0</td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
<td>0</td>
</tr>
<tr>
<td>Race</td>
<td>21</td>
</tr>
<tr>
<td>Religion and belief</td>
<td>0</td>
</tr>
<tr>
<td>Sexual orientation</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Each source has been counted once for each characteristic it covers.

Socio-economic background

The review found that socio-economic background coverage was limited. It was explicitly covered by eight of the selected evidence sources. Of these, four were from the US, three were from the UK, and one was from Australia.
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**Student outcome themes**

There was a fairly even spread of evidence sources across the student outcome themes, with just marginally more (12) pertaining to learning and teaching and marginally fewer (7) pertaining to recruitment.

*Table 3: Student outcomes themes covered by the selected sources*

<table>
<thead>
<tr>
<th>Student outcome topics</th>
<th>Number of sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment</td>
<td>7</td>
</tr>
<tr>
<td>Learning and teaching</td>
<td>12</td>
</tr>
<tr>
<td>Attainment</td>
<td>9</td>
</tr>
<tr>
<td>Support</td>
<td>9</td>
</tr>
<tr>
<td>Progression into academia</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: Where a source covered more than one outcome area it has been counted once for each area it covers.

**Staff types**

The focus of the sources in relation to HEI staff was primarily on academic staff. Just a few covered early career academics, professional and support staff or leadership.

*Table 4: Staff types covered by the selected sources*

<table>
<thead>
<tr>
<th>Type of staff</th>
<th>Number of sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic staff</td>
<td>33</td>
</tr>
<tr>
<td>Early career academics</td>
<td>3</td>
</tr>
<tr>
<td>Professional and support staff</td>
<td>3</td>
</tr>
<tr>
<td>Leadership and senior management</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Sources that covered more than one type of staff have been counted for each type they covered.
Thematic analysis

Below follows a thematic analysis of the evidence sources identified by the review process structured around the five research themes.

1 Staff diversity and student recruitment and access to higher education

In the UK, while current estimates suggest that BME students are ‘overrepresented’ in higher education in relation to their proportion of the population, there remain disparities in representation by institution type and location, for example at research-intensive institutions there is still a significant underrepresentation, particularly in relation to black Caribbean students (Singh and Kwhali, 2015). Amongst the UK sources, Maylor’s 2010 paper argued that wider representation of BME academics would demonstrate to prospective BME students that they are able to enter higher education, and to succeed and become academics in higher education if they wish to do so (Maylor, 2010). She sees greater representation of BME staff in the academy as a vital step in ‘raising the aspirations of BME students and enhancing their self-belief’, and one that is key to widening access to underrepresented BME groups. Morgan (2016) supports this notion, arguing that

“There is no doubt that having black leaders and professors in science, engineering and technology (SET) subjects is essential if we want to encourage more black students to study science at school and university, and then to go into SET careers.”

Morgan (2016)

While this sounds perfectly rational, unfortunately, no empirical evidence sources were found by this review to confirm this hypothesis, suggesting that it remains in the realm of conjecture.

Over the past decade one focus within work to widen participation in UK higher education has been white working class boys, due to a significant gap in entry between white British men from the most disadvantaged backgrounds and those from the most advantaged backgrounds (Hillman and Robinson, 2016). Only loose links to the diversity of higher education staff have been drawn into the debate and activity in this area. A recent HEPI report (Hillman and Robinson, 2016) recommended that male role models are involved in all activities aimed at widening participation in higher education, which could include HEI staff. This is not a new idea; Action on Access (2009) shared a range of Aimhigher initiatives aimed at working class boys, with several using male staff and students as role models. For example, ‘Boys into Health’ by Aimhigher Peninsula Healthcare Strand held an event for boys facilitated by male healthcare practitioners to give

“Substance to the idea that the health and social care professions were a legitimate place for males to work.”

Aimhigher Peninsula Healthcare Strand (p12)

This initiative received positive feedback from participants, however longer-term outcomes were not included in the report.

Another area of focus in widening access, both in the UK and US, has been the recruitment of female students to areas where they are underrepresented, notably within science, technology, engineering and mathematics (STEM) disciplines. In the UK and the US, HEIs commonly employ female role models in efforts to attract women into STEM, including using female STEM academics in outreach activities and featuring successful women on webpages and in recruitment material (Drury et al, 2011). The review uncovered no UK research into the impact of this, although that is not to say that such literature does not exist, given the rapid nature of this review. In the US literature, faculty (academic staff) gender diversity and specifically the use of female role models to support recruitment of women to STEM areas was recommended by three evidence sources. Margolis and Fisher (2002) stressed that having gender diversity amongst faculty is critical to the recruitment of women into computer science.
A national report on women in STEM in the US published by the American Association of University Women (AAUW), which advances equity for women and girls through advocacy, education, philanthropy and research, similarly recommends female role models are used to raise girls’ aspirations and help to eliminate the stereotype that men are better than women in STEM areas (Hill et al., 2010), and Drury et al. (2011) argue that female role models can be effective in STEM recruitment when used in a targeted manner. However, as with the UK situation, no empirical evidence sources were found that would support this recommendation.

Socio-economic background was surprisingly absent from the literature relating to this theme, insofar as this review could ascertain. With the focus of UK widening participation activity historically being on socio-economic background, one might expect to see this considered in relation to staff diversity and the impacts of this on student outcomes, however it appears it has not been the focus of much research. There is a similar situation in Australia; Brook (2010) lamented that despite the focus on widening participation to working class students in Australia, the resource constituted by working class academics is overlooked. She suggests that there is reluctance amongst Australian academics of this background to make it known to colleagues, and thus the role they could play as role models to potential students is not taken advantage of. The review thus was unable to find evidence that a more diverse range of socio-economic backgrounds amongst HEI staff might support recruitment and access to higher education of lower socio-economic groups.

**Key points**

+ Maylor (2010) and Morgan (2016) suggest that greater representation of BME people amongst HEI staff could increase recruitment of BME students, where they are underrepresented, although no empirical evidence was found to support this hypothesis.

+ Female role models in STEM and male role models in widening participation activity are recommended for increasing recruitment of women and white working class men, where they are underrepresented, although no empirical evidence was found supporting this recommendation.

+ The socio-economic background of staff and the impact of this on access to higher education for lower socio-economic groups was absent from the review findings.
2 Staff diversity and learning and teaching

Amongst the UK evidence sources, a possible link between staff diversity and the learning and teaching of BME students surfaced a number of times. A recent report of the national student academic satisfaction survey (Neves and Hillman, 2018) found differences in satisfaction with teaching quality and learning gain by ethnic group, with notably lower scores for Asian students. NUS research with black students in 2011 identified lower satisfaction with learning and teaching amongst black students than with white students. Both reports recommend recruiting more diverse staff as a solution, but they are not, in and of themselves, evidence that this would make a difference.

Curriculum

The NUS (2011) report recounted how black students said their curriculum did not take into account diverse backgrounds and views. The students linked this to a lack of diversity amongst the academic staff designing and teaching their courses, and

"Increased ethnic representation among teaching and tutoring staff was often suggested as a way to increase the potential for black perspectives to be included in curriculum content and delivery of courses and to provide assurance that black students would be treated equally and fairly."

NUS (2011, p30)

Again, this is a recommendation rather than evidence that staff diversity would result in a more diverse curriculum.

For studies examining this hypothesis, we must turn to the US. Several of the US sources presented evidence that diverse faculty, particularly women and BME, are more likely to embed diversity issues into their curricula. First of these, Milem and Astin (1993), who examined faculty attitudes using national surveys, found that more women than men and more African-American and Hispanic faculty than white or Asian-American faculty had ‘mainstreamed’ the perspectives of women and/or minorities into the courses they taught. Similarly, Hurtado (2001) examined data from the 1989/90 faculty survey administered by University of California, Los Angeles (UCLA)’s Higher Educational Research Institute, which included responses from faculty at 159 predominantly white institutions across the US, to examine the influence of faculty gender and race/ethnicity on classroom strategies and curriculum supporting diversity. She found that women academics were significantly more likely than men to require readings on racial/ethnic and gender issues in their courses. She also found that African-American faculty were the most likely racial group to report having required readings on race/ethnicity and gender in their courses. Milem (2001), achieved similar results, finding that African-American, Chicano and Latino, and ‘American Indian’ faculty were at least twice as likely as white faculty to integrate readings on race/ethnicity issues into their curricula, while Asian-American faculty were the least likely to do so. Additionally, he found that women were twice as likely as men to include readings on race/ethnicity issues in their classrooms. We see here, then, a robust empirical evidence base supporting the notion that diverse faculty create and employ a more diverse curriculum.
Relatedly, Milem (2001) found that BME academics were more likely to engage in research relating to diversity. In his study, African-American and Chicano/Latino faculty were far more likely than white or Asian-American faculty to have done so. Milem and Astin (1993) similarly found women, African-American and Hispanic faculty, as well as faculty in the 35–54-year age range, were more likely to have conducted research relating to gender and/or race. Almost half of African-American faculty in their study also indicated that some of their research had focused on race issues. The implication of both studies is that by engaging in research on these topics, these faculty are more likely to embed it within their curricula, thereby exposing their students to a broader, more inclusive curriculum.

Though a little dated now, a small body of predominantly autobiographical US literature considered the socio-economic aspect of our review theme with regards to curriculum. It explored how faculty from working class backgrounds have come to use their experiences in their curriculum to better connect with and enable learning of working class students. Zandy (1990) described her work to create ‘a working class democratic pedagogy’ (p295), which involved incorporation of stories of working class people into the curriculum. Similarly, Tate (1998) described how he reconnected with his working class roots and found a more meaningful way of teaching that was more ‘compassionate’ and ‘imaginative’ (p259). Frey (1998) shared how over time she incorporated experiences of working class life into her curriculum to move it to a place where it was more immediate, lively, rich, practical and meaningful to her students, many of whom were working class.

**Pedagogy**

The review found two key US sources that provided evidence to show that diverse academic staff, in relation to race, gender and socio-economic background, employ a wider range of pedagogical techniques than their counterparts. These drew on other work in this domain, suggesting a broader body of research is available. Umbach’s 2006 study, which used a survey of faculty at 137 colleges and universities, found that BME faculty employ a broader range of pedagogical techniques than their white counterparts, including more active learning methodologies (Umbach, 2006). Hurtado’s previously mentioned 2001 study also assessed the influence of faculty gender and race on classroom strategies. She found that the gender and race of an instructor had a clear impact on how classes were taught (Hurtado, 2001). Female faculty were much more likely than male faculty to require cooperative learning, experiential learning or field studies and group projects in some or most of their courses. In terms of race, Latino and African-American faculty were most likely to use cooperative learning techniques, while Asian-American faculty were least likely to do so. Native American faculty were most likely to use experiential learning/field studies. Stricker (2011) found that working class academics use their understanding of their own backgrounds to influence their pedagogy in a way that makes it more inclusive of all students.

Interestingly, among the US sources, there was consideration of whether incorporation of diversity into learning and teaching is expected of black faculty, especially by black students. Guiffrida (2005) and Tuitt (2012) studied black students’ views of black faculty and both found that black students hold an expectation that black faculty will be willing and able to address diversity
issues with comfort, including in their curricula and pedagogy. However, the students admitted that this was not always the case. Being black did not automatically mean that their professor was comfortable with and well versed in diversity issues. This problematises the idea that diverse staff automatically embed diversity in their learning and teaching.

While the US evidence sources considering curriculum and pedagogy do suggest diverse staff approach learning and teaching more inclusively, the majority of the sources do not demonstrate what impact this has on student outcomes. The exception is Hurtado (2001), who specifically examined how the impact of exposure to multicultural curricula and opportunities to study and interact with diverse perspectives, including via diverse faculty, affected student development. Longitudinal student data and staff survey data were examined to understand the link between faculty diversity, activities associated with having a diverse student body, such as exposure to multicultural curricula and opportunities to study and interact with diverse peers, and student self-reported growth on 20 general educational outcomes. Results showed a significant relationship between activities associated with having a diverse student body (which she found was more likely to be facilitated by diverse faculty) and various educational outcomes. She argued that her findings strongly suggest that interacting with diverse curricula and inclusive pedagogy has a substantial positive effect on the development of skills needed to succeed in an increasingly diverse society, as well as vital academic skills.

**Key points**

+ Increasing the diversity of staff, particularly in terms of race, has been suggested as a means of improving the learning and teaching of BME students by several UK sources.
+ US research demonstrates that BME, women and working class faculty are more likely to embed diversity in their curricula.
+ US research shows that BME, women and working class faculty are more likely to employ more inclusive pedagogical techniques, which support all students, including those from diverse backgrounds, to learn effectively.
3 Staff diversity and student support

Staff diversity and support for students surfaced only a couple of times amongst the UK evidence sources. The NUS report highlighted disparities in academic support, with large numbers of respondents stating that they were often reluctant to approach academic staff for support because they perceived non-black staff might be biased in feedback and assessment, and may not understand their issues (NUS, 2011). For example, one student commented:

"Through my experience, a lot of my teachers have been Caucasian which I think can make it hard for students to relate to [them]. The lack of ethnic diversity in the teaching system means that some pupils may find it hard to approach members of the teaching team because they will feel that they won’t understand a student’s situation."

NUS (2011, p40)

The black students expressed a perception that the degree to which black students were supported by their lecturers and tutors was a crucial aspect of not only their academic success, but also their overall self-esteem both inside and outside the classroom.

Dhanda’s (2009) findings also point to staff diversity impacting on support for students. A comment is included from a black student about the university not having any black counselling staff who could look at his issues from a black perspective. This is similar to a comment received by Housee (2011) in her study with BME students. In this study, an Afro-Caribbean male expressed his feeling that support staff did not fully understand him because they were white women. These are, of course, comments of just one or two students, but their sentiments should not be overlooked when considering the severity of the BME degree attainment gap in UK higher education today. None of the evidenced sources examined the topic in detail, nor did they look into how to enhance the diversity competence of support staff, which could be useful avenues of future research.

The majority of the literature sources on this sub-theme was gleaned from the US. A noteworthy body of US research suggests that BME, women and working class faculty are more likely to play an active role in supporting students from these backgrounds/groups, both academically and pastorally, ostensibly supporting these students to achieve better outcomes. Cole and Barber (2003) and Umbach (2006) found that BME faculty interact more frequently with BME students, and also provide them with additional support and mentoring. They suggested that part of the reason for this is because BME faculty create a comfortable environment for BME students. Umbach (2006) suggests that BME students look to faculty who they believe will be able to understand them and provide the encouragement they need. Tuitt’s (2012) research with black graduate students adds to this. He found that black students expected black professors to exhibit higher levels of comfort and trust, show empathetic racial identification and be more accessible and easier to connect with. However, as noted previously, these expectations did not always hold true.

In relation to gender, Griffith (2014) suggested that women faculty in traditionally male-dominated fields may provide more encouragement or slightly different treatment to female students than would a male professor. She argues that this could lead to a tighter connection between the female student and the subject, which may
Does diversity of staff impact student outcomes in higher education?

translate into increased involvement in the subject. Similar findings are presented by Stricker (2011) in relation to academics from lower socio-economic backgrounds being uniquely positioned to support students from similar backgrounds. She found evidence amongst working class academics’ autobiographical narratives that faculty willing to reveal their working class roots created a more hospitable environment for working class students, and their shared backgrounds created possibilities for mentoring relationships.

US research also revealed the downside of the greater role diverse staff may play in the support of diverse students. Two sources, which follow on from an older body of US research on this topic, revealed how diverse faculty can be overburdened with support for diverse students, and this can negatively affect their research output and progression to senior levels. Baez (2000) found that BME faculty are often called upon to support and mentor BME students, and this can reduce their opportunity for advancement. He argued that, rather than reducing service demands on BME faculty, we should question the structures and norms that create this conflict. Similarly, a recent study by the Social Sciences Feminist Network Research Interest Group (2017) examined how faculty in five departments at a large research university use their time on a daily basis to identify whether a service burden falls on particular groups. They received mixed results with regard to gender, but found important differences with regard to other axes of inequality. Specifically, they found that BME faculty, lesbian, gay and bisexual (LGB) faculty and faculty from working class backgrounds spent a disproportionate amount of their time on the ‘invisible’ work of academia, leaving them less time for the work that matters for tenure and promotion. They concluded that this is likely a factor in the ‘leaky pipeline’ for BME faculty. Together, these sources point to a need to ensure support for students from all backgrounds is all staff members’ responsibility, and that it is properly recognised in the criteria for advancement.

Key points

+ BME students in UK studies have expressed dissatisfaction with the support they receive from staff, and some have linked this to a lack of diversity amongst staff.
+ US research finds BME, women and working class faculty can create comfortable environments for students from these backgrounds/groups and often act as mentors to these students, however some of this came down to students’ own expectations and perceptions.
+ US research found that BME, LGB and working class faculty can be overburdened by their role in supporting diverse students, which can negatively impact on their advancement.
4 Staff diversity and student attainment

While there has been significant study of the BME attainment gap in UK higher education (Singh, 2011; Singh and Kwhali, 2015), the findings of this review suggest that, in the UK, there has been little research focused on how diversity of staff might contribute to this attainment gap. The review found just one UK study that evidenced a link between the BME attainment gap and staff diversity. Dhanda (2009) conducted qualitative research with BME students at the University of Wolverhampton to better understand the attainment gap. Her findings suggested that BME students often relate to and learn better from BME staff, and the students criticised a dearth of BME ‘faces’ amongst tutors in the university. Importantly, students make recommendations for how to improve their performance, which include increasing the number of BME academic staff. Dhanda ultimately recommended that the university redouble its effort to improve the proportion of BME staff at all levels.

While the evidence linking BME attainment and staff diversity is slim at present, this topic does appear to be an emerging area of study in the UK, with a new PhD by Gilbert at the University of Portsmouth set to encompass this topic. She will be undertaking qualitative research with students from BME and lower socio-economic backgrounds across the University of Portsmouth (Gilbert, 2015).

A related area of the standards or expectations faculty have of BME students is considered both in the US and UK literature. Guiffrida (2005) and Tuit (2012) explored the extent to which black students expect to be held to higher standards by black professors in the US. Both found that students do generally expect this, and that it may not always be positive, since it can create extra pressure and lead to students being discouraged. As Tuitt (2012) puts it:

“This black-on-black tough-love phenomenon can be problematic for some students, especially those who enter the learning environment with expectations of solidarity, comfort, and trust that black professors will know how to relate to and teach them.”
Tuitt (2012, p196)

Dhanda (2009) found that BME students at the University of Wolverhampton feel that predominantly white academic staff do not expect enough or do not challenge BME students as much as they should, and that these low expectations may contribute towards lowering achievement.

In terms of other student characteristics and attainment, few UK-based evidence sources were found relating to higher education. There does, however, appear to be a sizeable body of UK research looking at gender diversity of school teaching staff and the impact of this on student attainment in terms of gender differences (Carrington et al, 2013; Hillman and Robinson, 2016). This literature was not included in the review due to questions about its transferability to higher education.

Turning to the North American literature, a considerable body of research examining the impact of academic staff gender on student performance was found. Two US studies and one Canadian study focused on instructor gender and student performance. Johnson (2014)
used non-aggregated data from a single institution to examine the effect of having a female instructor on female achievement and found that female instructors have a significant positive effect on female student grade performance and do not have a statistically significant effect on male student performance. Griffith (2014) used institutional data from a private liberal arts institution for the period 1995–2009 to examine outcomes for students in courses taught by new faculty members for which the students did not know the gender before registering. Her results suggested what she calls a role model effect for both genders; students earn higher grades in courses taught by same-gender instructors in fields traditionally dominated by the opposite gender. In her results, female students received grades 0.19 points higher in courses taught by female instructors in male-dominated fields. Similarly, male students earned grades 0.18 points higher in male-taught courses in female-dominated fields. The only Canadian study included in the review presented contrasting findings. Hoffmann and Oreopoulos (2009) determined that instructor gender plays only a minor role in determining college student achievement. They used detailed student and instructor administrative data from the University of Toronto’s Arts and Science Faculty and found that a same-sex instructor increased students’ average grade performance by at most five per cent, but these small effects were driven more by males performing worse when assigned to a female instructor, with females performing about the same. Nevertheless, the authors concluded that these small effects provide evidence that gender role models matter to some college students.

**Key points**

+ There is little UK research on the impact of staff racial diversity on the BME degree attainment gap, although it has been suggested to be an issue by BME students, and appears to be an emerging area of research interest.

+ Faculty academic expectations of their students may be influenced by race, both that of the faculty member and that of the students, and expectations can play a part in the ultimate academic achievement of BME students.

+ North American research on the impact of instructor gender on student achievement provides mixed results, although the results are promising in areas that are traditionally male dominated.
5 Staff diversity and student progression into postgraduate study and academia

How the diversity of academic staff influences the progression of women students into academia is considered by two of the UK evidence sources. In the first of these, the UK Resource Centre for Women in SET and the Royal Society of Chemistry found in a study of final year chemistry students and recent PhD graduates that some female participants were discouraged from pursuing a research career by a lack of female role models who were seen to have a good balance between family life and academic career, which seemed to imply to them that this is very difficult to achieve (Lober Newsome, 2008). Many believed they would need to make sacrifices, such as with regard to motherhood, in order to succeed in academia. Additionally, some reported being uncomfortable with the culture of their research group, especially where this was particularly ‘macho’. Others experienced a lack of integration with their research group, isolation and exclusion (and in rare instances, bullying). The report concluded that the chemistry PhD programme and academic careers were modelled on masculine ways of thinking and doing, which leaves women neither supported as PhD students nor wishing to remain in research in the longer term. The report suggested that measures are needed to demonstrate that women and men can pursue a successful research career in chemistry, as well as achieving a work–life balance, including more positive female role models amongst academic staff.

The Wellcome Trust obtained comparable results in its qualitative study of the career decisions and priorities of a group of PhD students, conducted in autumn 2012. They found that women in the study seemed to leave academia sooner than the men, with most of those leaving doing so straight after their PhD, suggesting that their experience during the PhD, and/or their perception of what post-doctoral academic work might be like, influenced their decision (Wellcome Trust, 2013). As in the previous study, women expressed concerns about the absence of female role models for aspiring researchers, which made it hard for them to visualise what a successful academic career could look like. They also found the culture of science off-putting, for example the extreme competitiveness to secure a grant or post. The report concluded that women could benefit from seeing more female role models following careers in academic research, particularly if accompanied by information on their background and how they have overcome any challenges.

Clearly, the findings of both of these studies are relevant to the lack of gender diversity within some STEM areas, and the impacts of this on the culture and working practices of some STEM departments. As both studies indicated, greater gender diversity amongst academics in these departments could go some way to improving the attractiveness of careers in science to women students, therefore supporting progression. However, both of these studies can only suggest, rather than prove, the impact of gender diversity on progression of students into academia.

With regards to race, no UK studies were found concerning the impact of staff racial diversity on progression of students into academia. However, other evidence sources were uncovered, including a paper, news article, video and blog, which suggested a lack of BME role models amongst academics is one reason why BME students are less likely to progress into postgraduate study, and ultimately into academic careers. University College London (UCL) students shared their reasons for not wanting to pursue an academic career in a film that featured in the university’s ‘Why isn’t my professor black?’ event (UCL, 2014). These included: experiences of prejudice, isolation and financial difficulties, as well as seeing no role models from the same background as them amongst academic staff, especially UK black academics. Similarly, Black (2014) shared her experience as a black female student in an environment with few black students or academics. She suggested that this situation can make it hard for black students to see a possible career pathway in academia. Morgan (2016) supported this idea in his aforementioned article. Having black leaders and professors in SET is essential, in his view, to showing black students that they too, can have an academic SET career.
The earlier discussion of staff diversity and the BME attainment gap is also relevant here. Singh and Kwhali (2015) commented that

"Lower degree classifications could make it more difficult for BME students to move on to Masters or doctoral studies, and possibly close down options for an academic career."

Singh and Kwhali (2015, p8)

Maylor (2010) argued that improving BME student attainment, and addressing negative higher education experiences, is necessary to increase the pool of potential doctoral students, researchers and lecturers and ensure favourable competition in the academic labour market. While the link between the BME attainment gap and the academic pipeline is thus made, it does not yet appear to have been a specific topic of study, insofar as this review could ascertain.

Amongst the US literature, the focus in terms of progression tended to be on student major choice. Five of the US studies explored the influence of faculty gender on student major choice. First, using the national longitudinal study of 1972, Rothstein (1995) found that as the percentage of female faculty in a department increased, the probability that female majors would go on for an advanced degree also increased, suggesting a link between the two. Next, Rask and Bailey (2002) investigated course-taking behaviour within a department at Colgate University and found that the more classes a female student took with a female professor, the more likely they were to major in that department, although the effects were small. Neither of these studies controlled for students' selection into classes in terms of their prior knowledge of the gender of the instructor, therefore student preferences may have introduced bias to these studies.

The three subsequent studies did control for student selection, but they achieved more mixed results. Bettinger and Long (2005) studied the gender role model effect in student major choice using a national longitudinal data set of nearly 54,000 students. They found that female instructors do positively influence women's major choices in some disciplines, thus supporting a possible gender role model effect. However, this positive effect was not found in some male-dominated fields, bringing into question the consistency of the effect and its efficacy in the most gender imbalanced subject areas. The previously mentioned Canadian study (Hoffmann and Oreopoulos, 2009) did not find any impact of female role models on female student major choice, however they discovered that female professors increased the probability that a male student would choose not to major in that subject. Griffith (2014) found no positive effect of instructor gender on major choices for students of either gender. Contrary to what she expected to see, female students were significantly less likely to pursue a major in a male-dominated department after taking a course with a female instructor. She suggested that it may be too late by the time students have commenced college for same-sex role models to have an impact on student major choice, and ultimately careers.

Key points

- UK studies point to a lack of female role models in STEM subjects as one factor in the leaky pipeline for women in some STEM disciplines.
- A range of UK evidence sources, but no research, suggests a lack of BME role models in academia is a reason for low rates of progression by BME students into academia.
- North American research of student major choice receives mixed results in terms of the impact of the gender of instructors on the choices made by men and women.
Conclusions

The state of the evidence base

The following broad conclusions can be drawn about the state of the evidence base on the theme in question, and the gaps that persist.

+ The majority of the literature pertains to gender and race, and there is comparatively little relating to other protected characteristics or socio-economic background. It also primarily considers diversity of academic staff, and the impacts of this on students, with just a couple of evidence sources mentioning diversity of support staff or leadership. These obvious gaps in knowledge about this topic certainly warrant exploring.

+ There is a strong dominance of US-based research in the literature. This research is generally robust and provides interesting findings. There are questions however as to the transferability of the findings of this research, since significant differences exist between the postsecondary education systems in the US and UK, and given the cultural specificity of some aspects of diversity and inclusion. However, universities and policy in the US have a longer history of considering some equality issues, particularly those relating to race. Additionally, there is precedent for diversity-related concepts developed in the US to be emulated in the UK, for example both inclusive pedagogies and affirmative action policies aimed at disadvantaged groups originated in the US.

+ The UK-based literature is more limited and includes less research. It offers a wealth of suggestions or hypotheses regarding the impact diverse staff could have on a range of student outcomes, including increasing recruitment of underrepresented groups, improving BME student attainment and encouraging more women and BME students to progress to academic careers. However, these are generally not supported by empirical evidence. There is limited available evidence that directly addresses the guiding research question of this review. At times, the topic is covered as a sub-theme rather than as a primary focus.

+ Ultimately, there is a dearth of UK research on this topic. The available UK evidence sources documented in this report, plus the breadth of study that has been undertaken in the US, provide a strong rationale for robust studies to be undertaken.
Does diversity of staff impact student outcomes in higher education?

Areas where staff diversity might positively impact student outcomes

Diversity of staff is believed to improve recruitment of BME, women and men students to higher education, in areas where they are underrepresented

How the diversity of university staff might influence student choices in regard to studying at university was explored by several of the evidence sources, including sources from the UK, the US and Australia. Generally, this literature focused on how diverse staff, in terms of gender, race and class background, might act as positive role models to dispel stereotypes and increase aspirations amongst prospective students. However, no studies were found that proved that gender and BME role models were effective in terms of increasing recruitment of students from underrepresented groups. While diversity of staff is a widely recommended strategy, both here and in the US, there is little evidence to support its impact, as far as this review could determine. The review was also unable to find evidence that a socio-economic diversity amongst HEI staff might support access of lower socio-economic groups into higher education.

Staff diversity could make learning and teaching more diverse and inclusive

A small but significant collection of UK evidence sources revealed issues for BME students that stem from receiving learning and teaching designed and delivered by predominantly white staff. These sources recommended increased diversity amongst academic and teaching staff as a means to address this. However, no UK-based research was found that demonstrates that staff diversity does have an impact on staff design and delivery of learning and teaching for the benefit of diversity.

Turning to the US, we find a significant body of literature that supported the notion that a more diverse faculty, particularly in relation to gender, race and socio-economic background, leads to enhanced learning and teaching, including a more inclusive curriculum and pedagogical techniques. The evidence this provides is significant and suggests this area warrants study in the UK. However, the US evidence sources do not, on the whole, demonstrate what impact these enhancements to learning and teaching have on outcomes for students in general and for particular groups of students in particular. Therefore, the most useful future UK studies should aim to establish this link.
Staff diversity may enhance support for BME and women students

This area is only touched upon by two of the UK evidence sources, which suggested a lack of racial diversity amongst staff impacts on BME students’ willingness to seek support, and potentially also influences the diversity competence of the support available to them. None of the UK evidence sources examined the topic in detail, nor did they look into how to enhance the diversity competence of support staff, which could be useful avenues of future research.

In the US, the area has been given much more consideration. Several studies found that BME, women and working class faculty create a comfortable environment for students from these backgrounds/groups, and often spend more time supporting and mentoring these students. The fact that this can become a burden to diverse faculty and hinder their progression is also highlighted by two evidence sources, which points to a need to ensure that support for students for all backgrounds is every staff member’s responsibility, and that it is properly recognised in the criteria for advancement.

Staff diversity could improve BME attainment

While there has been significant study of the BME attainment gap in UK higher education, the findings of this review suggest that there has been little research focused on how diversity of staff might contribute to this attainment gap. Just one UK study evidenced a link between the BME attainment gap and staff diversity, with BME students suggesting greater staff diversity could improve their performance, although a forthcoming PhD should give more insight into this area. Staff expectations of BME students surfaced as an important factor for student achievement, including those of BME and white staff. While extensive, the US research on gender role model impact on student performance appears too mixed to draw firm conclusions.

Staff diversity could encourage progression to academia by BME and women students

In the UK, a recent study has examined the role that faculty gender diversity plays in the progression of women into STEM academia, finding that a lack of positive role models is a factor in the leaky pipeline for women. A range of evidence sources point to a lack of BME diversity amongst faculty being off-putting to potential BME academics. The review found that no studies directly correlating faculty gender and/or race and women/BME progression have been undertaken in the UK, but the evidence uncovered does suggest this would be worthwhile.

US study of this theme focuses on student major choice as an indicator of progression in a subject. A body of research found mixed results regarding the impact of instructor gender on progression of women within an academic field.
## Appendix

### Summary of the evidence sources found by the review

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<th>Source</th>
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<td><strong>Action on Access</strong> (2009) <em>Boys into higher education: how can Aimhigher Partnerships and higher education institutions increase the participation of young men in higher education?</em> Action on Access, Leicester.</td>
<td>A UK paper focused on the issues of male access to higher education, specifically white working class males. It is informed by analysis of a number of examples of interventions submitted from Aimhigher Partnerships and HEIs. Several examples provided include the use of male role models in terms of teaching staff and student ambassadors.</td>
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<td><strong>Baez, B</strong> (2000) ‘Race-related service and faculty of color: conceptualizing critical agency in academe.’ <em>Higher Education</em> 39(3): 363–391.</td>
<td>Based on a qualitative study of 16 BME faculty at a US private research university, this article argues that race-related service, though certainly presenting obstacles to the promotion and retention of BME faculty, may be a way for BME faculty to redefine oppressive academic structures. Service that promotes the success of BME people may contribute to the redefinition of the academy.</td>
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<td><strong>Black, LN</strong> (2014) ‘Why isn’t my professor black? On reflection.’ <em>UCL blog</em>. University College London.</td>
<td>A UK-based blog post reflecting on the UCL ‘Why isn’t my professor black?’ event. The author, a black female academic, shares her experience of progressing into academia. She felt alienated at university because there were no black academics, and few black students. She believes this is a major issue as it does not show that black people can achieve in academia.</td>
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<td><strong>Brook, H</strong> (2010) ‘Working-class intellectuals: (oxy) moronic professors and educational equality (a response to Ken Oldfield, Administration &amp; Society 41, 1016–1038).’ <em>Administration &amp; Society</em> 42(3): 368–372.</td>
<td>A response to a study by Ken Oldfield. It suggests that working class people are underrepresented amongst Australian academics, and there is reluctance to be open about being from a working class background in the academy. She links this to the widening participation agenda, lamenting that the resource constituted by working class academics is not being utilised to attract more working class students.</td>
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<td><strong>Cole, S and Barber, E</strong> (2003) <em>Increasing faculty diversity: the occupational choices of high-achieving minority students</em>. Harvard University Press, Cambridge, MA.</td>
<td>A US book examining the issues and options for increasing faculty diversity, particularly in terms of race. It considers the whole pipeline, and therefore the student experience and outcomes. Chapter 7 discusses diverse faculty serving as role models. The study data presented shows African-American students are more likely to have same-race role models even while African-American faculty are in the minority. Additionally, the majority (70%) had a same-gender role model.</td>
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<td>Dhanda, M (2009) <em>Understanding disparities in attainment: black and minority ethnic students’ experience</em>. University of Wolverhampton.</td>
<td>Based on mixed-methods analysis, this UK study examines the experiences of BME students at the University of Wolverhampton, which has a high percentage of non-white students. Some of the key issues discussed include a lack of BME staff to act as role models to BME students. The report recommends recruitment of more BME staff.</td>
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<td>Drury, BJ, Siy, JO and Cheryan, S (2011) ‘When do female role models benefit women? The importance of differentiating recruitment from retention in STEM.’ <em>Psychological Inquiry</em> 22: 265–269.</td>
<td>A US-based article considering the efficacy of female role models for recruitment and retention of women in STEM. A review of the literature suggests that female role models have been found to be effective in the retention of women in STEM, but not in the recruitment of women to STEM. The authors propose that although female role models may be effective in the retention of women in STEM, female and male role models can be equally effective in recruitment efforts.</td>
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<td>Frey, O (1998) ‘Stupid clown of the spirit’s motive: class bias in literary and composition studies.’ In <em>Shepard, A, MacMillan, J and Tate, G (eds) Coming to class: pedagogy and the social class of teachers</em>. pp252–261. Boynton Cook, Portsmouth NH.</td>
<td>An autobiographical account by a working class academic. It shares how over time she incorporated experiences of working class life into her curriculum to move it to a place where it was more immediate, lively, rich, practical and meaningful to her students, many of whom were working class.</td>
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<td>Griffith, AM (2014) ‘Faculty gender in the college classroom: does it matter for achievement and major choice?’ <em>Southern Economic Journal</em> 81(1): 211–231.</td>
<td>A study using institutional data from a private US liberal arts institution for the period 1995–2009 to examine outcomes for students in courses taught by new faculty members for which the students did not know the gender before registering. Results suggest a role model effect for both genders; students earn higher grades in courses taught by same-gender instructors in fields traditionally dominated by the opposite gender.</td>
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<td>Guiffrida, D (2005) ‘Othermothering as a framework for understanding African American students’ definitions of student-centered faculty.’ <em>Journal of Higher Education</em> 76(6): 701–723.</td>
<td>A qualitative study aiming to understand, from African-American students’ perspectives, the faculty characteristics that facilitate meaningful relationships with African-American students. These results are connected to a long-held tradition of education within the African-American community called ‘othermothering’. Results show how black students feel better connected with and supported by black academics. They also convey the various expectations black students have of black faculty.</td>
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Does diversity of staff impact student outcomes in higher education?

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<td><strong>Hill, C, Corbett, C and St. Rose, A</strong> (2010) <em>Why so few? Women in Science, Engineering, Technology and Mathematics</em>. American Association of University Women, Washington, DC.</td>
<td>A national report examining women in STEM in the US by the American Association of University Women. It considers the lack of gender diversity amongst STEM faculty as a challenge to recruitment and retention of women in STEM disciplines. It recommends that female role models are used to raise girls’ aspirations and help eliminate the stereotype that men are better than women in STEM areas.</td>
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<td><strong>Hillman, N and Robinson, N</strong> (2016) <em>Boys to men: the underachievement of young men in higher education – and how to start tackling it</em>. Higher Education Policy Institute, London.</td>
<td>A UK research and policy report on male access to and attainment in higher education. Considers the access and attainment issues of white working class boys. Proposes policy solutions, including use of male role models in all HEI widening participation activities.</td>
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<td><strong>Hoffmann, F and Oreopoulos, P</strong> (2009) ‘A professor like me: the influence of instructor gender on college achievement.’ <em>The Journal of Human Resources</em> 44(2): 479–494.</td>
<td>A Canadian study examining the impact of having a same-sex instructor on classroom performance using both within-student and within-instructor variation. It states that it is the first study to do so in this way. The study uses detailed student and instructor administrative data from the University of Toronto’s Arts and Science Faculty. The data cover the autumn and winter school year terms between 1996 and 2005. The study finds instructor gender plays only a minor role in determining college student achievement, but the authors conclude that, nevertheless, the small effects provide evidence that gender role models matter to some college students. It also finds that having female professors increased the probability that a male student would choose not to major in that subject.</td>
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<td><strong>Housee, S</strong> (2011) ‘What difference does ‘difference’ make? A discussion with ethnic minority students about their learning experience in higher education.’ <em>The International Journal of Higher Education in the Social Sciences</em> 4(1): 70–91.</td>
<td>A qualitative study of BME students at one UK HEI. It explores their experiences of learning and teaching, as well as support services. A relevant example is included from one Afro-Caribbean male who felt support staff did not understand him because they were white females.</td>
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<td><strong>Hurtado, S</strong> (2001) ‘Linking diversity and educational purpose: how diversity affects the classroom environment and student development.’ In Orfield, G and Kurlaender, M (eds) <em>Diversity challenged: evidence on the impact of affirmative action</em>. pp187–203. Harvard University Press, Cambridge, MA.</td>
<td>This US study examined the impact of diversity on students’ self-perceived improvement in a set of key educational outcomes. The study also examined the influence of faculty gender and race/ethnicity on classroom strategies and curriculum supporting diversity. Data came from the 1989/90 faculty survey, which included responses from faculty at 159 predominantly white institutions. Longitudinal student data was also examined to understand the link between activities associated with diverse students and faculty and student self-reported growth on 20 educational outcomes. Student responses came from a 1987–91 student survey from 309 institutions. Data analysis indicated faculty gender and race distinctly impacted students in terms of how classes were taught and course content. There was a significant relationship between student growth on educational outcomes and having a diverse faculty.</td>
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<tr>
<td>Johnson, IY (2014) ‘Female faculty role models and student outcomes: a caveat about aggregation.’ Research in Higher Education 55(7): 686–709.</td>
<td>A US study examining the impact of exposure to female faculty on student achievement. The study applies both non-aggregated and aggregated measures to the same data to provide what the author sees as more accurate results than seen in previous studies. Finds that female instructors have a significant positive effect on female student grade performance and do not have a statistically significant effect on male student performance.</td>
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<td>Lober Newsome, J. for the UK Resource Centre for Women in SET and the Royal Society of Chemistry (2008) The chemistry PhD: the impact on women's retention. Royal Society of Chemistry, London.</td>
<td>A UK study of final year students and recent PhD graduates aimed at understanding why women do not pursue academic careers in chemistry. It found that some female participants were discouraged from pursuing a research career by a lack of female role models who were seen to have a good balance between their family life and academic career, which seemed to imply to them that this is very difficult to achieve. It recommends measures to demonstrate that women and men can pursue a successful research career in chemistry, as well as achieving work–life balance, including positive female role models.</td>
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<td>Margolis, J and Fisher, A (2002) Unlocking the clubhouse: women in computing. Massachusetts Institute of Technology, Cambridge, MA.</td>
<td>A book examining the issues in relation to attracting and retaining more women in computing in the US. It considers the issue of faculty diversity and stresses that having gender diversity amongst faculty is critical to the recruitment of women into computer science.</td>
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<td>Maylor, U (2010) Widening participation: a worthwhile strategy? In Weekes-Bernard, D. (ed.) Widening participation and race equality, Runnymede Perspectives Series. Runnymede, London.</td>
<td>In this collection of UK-based papers, the authors address what race equality has to do with widening participation in higher education. Maylor argues that greater representation of BME staff in the academy is a vital step in raising the aspirations of BME students and enhancing their self-belief. She believes that wider representation of BME lecturers would go some way towards encouraging prospective BME students that not only is their entry into higher education achievable, but it is possible for BME students to succeed and become lecturers in higher education if that is their goal.</td>
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<td>Milem, JF (2001) Increasing diversity benefits: how campus climate and teaching methods affect student outcomes. In Orfield, G. (ed.) Diversity challenged: evidence on the impact of affirmative action. Harvard Education Publishing Group, Cambridge, MA.</td>
<td>This US study explored the relationship between student diversity, campus climate, faculty composition, and research and teaching content. Data came from three primary sources: a survey of college and university faculty; the Higher Education Governance Institutional Survey database, and the Carnegie Foundation. Four outcomes related to maximising the benefits of racial diversity in teaching and learning were considered: (1) teaching practices associated with active learning; (2) curricular inclusion of readings on diverse racial and ethnic groups; (3) faculty participation in research on race, ethnicity or gender; (4) faculty attendance at workshops on racial awareness or curriculum inclusion. Women and BME faculty were most likely to participate in teaching and learning activities supporting diversity.</td>
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<td><strong>Milem, JF and Astin HS (1993)</strong> ‘The changing composition of the faculty.’ <em>Change</em> 25(2): 21–28.</td>
<td>A study of the changes in composition of faculty from the perspectives of gender and race/ethnicity, as well as changes in faculty’s overall views, attitudes, and practices with respect to diversity in educational and curricular matters.</td>
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<td><strong>Morgan, W (2016)</strong> ‘Why is my professor still not black? Winston Morgan explores what his career might reveal about the position of ethnic minority academics.’ <em>Times Higher Education</em>, 14 March 2016.</td>
<td>An article exploring the issues of academic staff racial diversity in UK higher education and the slow rate of progress. It considers the drive for international students and concurrent recruitment of international staff, which has increased diversity in terms of Asian staff, but not black. Morgan argues that having black leaders and professors in SET subjects is essential if we want to encourage more black students to study science at school and university, and then go into SET careers. However, major change comes only when there are wider social, political and economic drivers ensuring that change takes place.</td>
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<td><strong>Neves, J and Hillman, N (2018)</strong> 2018 Student academic experience survey. Advance HE and Higher Education Policy Institute, London.</td>
<td>A report on the outcomes of the 2018 national student academic experience survey conducted by HEPI and HEA (now Advance HE). The survey examines student satisfaction across a range of areas, such as value for money, learning gain, and quality of teaching and assessment. The report presents some important findings in relation to student diversity, including differences in satisfaction with teaching quality and learning gain by ethnic group, with notably lower scores for Asian students in these areas.</td>
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<td><strong>NUS (2011)</strong> <em>Race for equality: a report on the experiences of black students in further and higher education</em>. National Union of Students, London.</td>
<td>One of the largest UK studies capturing ‘the voice’ of black students. It is based on an online survey of over 900 black students from across the UK and a series of regional focus groups. It contains some findings and recommendations relating to staff diversity and the impact of this on black students, notably the impact of a lack of diversity on curriculum and academic support.</td>
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<td><strong>Rask, KN and Bailey, EM (2002)</strong> ‘Are faculty role models? Evidence from major choice in an undergraduate institution.’ <em>Journal of Economic Education</em> 33(2): 99–124.</td>
<td>A US study of course-taking behaviour by gender within a department at Colgate University. It found that the more classes a female student took with a female professor, the more likely they were to major in that department, although the effects were small.</td>
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<td><strong>Rothstein, DS (1995)</strong> ‘Do female faculty influence female students’ educational and labor market attainments?’ <em>Industrial and Labor Relations Review</em> 48(3): 515–530.</td>
<td>A US study of the gender role model effect using the national longitudinal study of 1972. It found that as the percentage of female faculty in a department increased, the probability that female majors would go on to an advanced degree also increased, suggesting a link between the two.</td>
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<td><strong>Singh, G (2011)</strong> <em>Black and minority ethnic (BME) students’ participation and success in higher education: improving retention and success—a synthesis of research evidence.</em> Higher Education Academy, York.</td>
<td>A report presenting a selection of key literature in the area of BME student participation and success in UK higher education. It contains brief summaries and a thematic analysis of a selection of some of the key sources of data that address most directly the issue of BME student experience and attainment. Several of the sources make reference to a lack of BME diversity amongst higher education staff and how this might be a factor in BME student inequalities.</td>
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<td><strong>Singh, G and Kwhali, J (2015)</strong> <em>How can we make not break black and minority ethnic leaders in higher education?</em> Leadership Foundation for Higher Education, London.</td>
<td>A stimulus paper for higher education leaders contemplating the issue of BME leaders in UK higher education. It presents the issues in terms of BME staffing, considers the academic pipeline, shares learning from the US and proposes solutions for the UK. It describes a link between BME staff and BME student outcomes as ‘plausible’, but states that we do not have evidence of this yet.</td>
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<td><strong>Social Sciences Feminist Network Research Interest Group (2017)</strong> <em>‘The burden of invisible work in academia: social inequalities and time use in five university departments.’ Humboldt Journal of Social Relations 39: 228–245.</em></td>
<td>A US study examining whether a heavier service burden could be at the root of the ‘leaky pipeline’ from PhD to full professor among women and BME faculty. Research included faculty in five departments at a large research university. The results were mixed with regard to gender, but revealed that BME faculty, LGB faculty, and faculty from working class backgrounds together spent a disproportionate amount of their time on the ‘invisible’ work of academia, leaving them less time for the work that matters for tenure and promotion.</td>
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<td><strong>Stricker, K (2011)</strong> <em>‘Class consciousness and critical mass; exploring the practice and scholarship of academics from the working class.’ Race, Gender &amp; Class 18(3–4): 372–384.</em></td>
<td>A qualitative US study of autobiographical narratives published by working class academics which highlights ways in which class background has influenced the scholarship and pedagogy of working class academics. It discusses the importance of class diversity in faculty, including for the sake of diversifying the curriculum, inclusive pedagogy and access for students from working class backgrounds.</td>
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<td><strong>Tate, G (1998)</strong> <em>‘Halfway back home.’ In Shepard, A, MacMillan, J and Tate, G (eds) Coming to class: pedagogy and the social class of teachers. pp252–261. Boynton Cook, Portsmouth, NH.</em></td>
<td>An autobiographical account of how a US working class academic came to reconnect with his background and use his experiences to provide a more engaging curriculum and pedagogy for his students.</td>
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<td><strong>Tuitt, F (2012)</strong> ‘Black like me: graduate students’ perceptions of their pedagogical experiences in classes taught by black faculty in a predominantly white institution.’ <em>Journal of Black Studies</em> 43(2): 186–206.</td>
<td>A US qualitative study with ten black graduate school students carried out to gain a deeper understanding of the range of perceptions and expectations black students held related to their pedagogical interaction with black faculty in a predominantly white institution. The study found that the students expected black professors to exhibit higher levels of comfort and trust, show empathetic racial identification, be more accessible and easier to connect with, raise the bar and hold them to higher standards, and demonstrate a willingness to address diversity issues with comfort.</td>
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<td><strong>UCL (2014) ‘Why isn’t my professor black?’ UCL panel discussion. University College London.</strong></td>
<td>An event hosted by UCL asking the question why there is underrepresentation of black people amongst UK higher education academics, especially at senior levels. A video of the event is available on YouTube. In the introductory section, interviews with BME students reveal some interesting views and experiences that have impacted on these students wanting to progress into academia.</td>
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<td><strong>Umbach, PD (2006) ‘The contribution of faculty of color to undergraduate education.’ <em>Research in Higher Education</em> 47(3): 317–345.</strong></td>
<td>A US study examining BME faculty learning and teaching and support for students using a survey of faculty at 137 colleges and universities. The study found that BME faculty employ a broader range of pedagogical techniques and interact more frequently with students than their white counterparts. It concludes that greater structural diversity among faculty leads to an increased use of effective educational practices.</td>
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<td><strong>Wellcome Trust (2013) Risks and rewards: how PhD students choose their careers: qualitative research report. Wellcome Trust, London.</strong></td>
<td>A qualitative UK-based study, conducted in autumn 2012, looked at the career decisions and priorities of a group of PhD students in science. It presents some key findings in relation to gender, including how women’s experiences during their PhD, and/or their perception of what post-doctoral academic work might be like, influenced their decision to leave academia. Particular issues were cited in relation to a macho culture and working practices, as well as a lack of female role models in their field.</td>
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<td><strong>Zandy, J (ed.) (1990) Introduction. <em>Calling home: working-class women’s writing, an anthology.</em> Rutgers University Press, New Brunswick, NJ.</strong></td>
<td>An autobiographical account by a female working class academic in the US who ‘returned’ to her roots to create a more lively, immediate curriculum for the benefit of her students, many of whom were working class themselves.</td>
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</table>
References

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Author biography

Freya Douglas Oloyede (MA, MSc) is an equality, diversity and inclusion consultant specialising in higher education. She has extensive experience in this field and a special interest in student access in relation to equality and diversity. She began her career in the widening participation team at the University of Edinburgh before moving to Equality Challenge Unit (ECU), where she worked for six years, latterly developing and managing ECU’s programme of work in Scotland. During her time at ECU, Freya led equality and diversity research and policy projects in a broad range of areas, including widening student participation in higher education, equality and diversity in relation to university governance, and support for institutions to meet their public sector equality duties.

As a consultant, Freya works with a diverse range of universities and sector bodies on equality and diversity projects, research, training delivery, and strategy and policy development. Freya has authored numerous equality and diversity-related publications, including research publications, such as *Governing bodies, equality and diversity in Scottish higher education: research report* (ECU, 2015) and guidance publications, including *Setting equality outcomes* (ECU, 2016).