Connecting the dots: a systematic review of explanatory factors linking contextual indicators, institutional culture and degree awarding gaps

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Abstract

Purpose – The primary aim of this paper is to illuminate the critical issue of the degree awarding gap in the UK, which significantly impacts students from lower socio-economic backgrounds and minority groups. By conducting a systematic review of existing literature following the PRISMA protocol, this study seeks to uncover the complex web of explanatory factors that mediate the relationship between contextual indicators, institutional culture, and degree awarding disparities. Addressing this gap is vital for promoting social justice, enhancing the economy, safeguarding the reputation of UK universities, and adhering to legal responsibilities. This paper endeavours to provide a comprehensive understanding of the underlying causes of degree awarding gaps and offer evidence-based recommendations for the higher education sector to mitigate these disparities.

Design/methodology/approach – This study employs a systematic review design, adhering to the PRISMA protocol, to meticulously analyse the existing body of literature concerning the degree awarding gap in UK higher education. By systematically gathering, evaluating, and synthesizing relevant studies, the review aims to identify and understand the multifaceted factors mediating the link between contextual indicators, institutional culture, and the disparities observed in degree awarding. This methodological approach ensures a rigorous and transparent examination of the literature, enabling the identification of both the breadth and depth of research on the topic. Through this design, the paper aspires to uncover nuanced insights into the mechanisms driving degree awarding gaps.

Findings – The review's findings reveal that degree awarding gaps in UK universities are influenced by a constellation of factors, highlighting the complexity of this issue. Key among these are unconscious bias, limited student engagement opportunities with academic staff, institutional racism, inadequate support systems, and a scarcity of social and cultural capital. These factors collectively contribute to significant disparities in degree outcomes, disproportionately disadvantaging students from lower socio-economic backgrounds and minority groups. The evidence suggests that institutional practices and culture play a pivotal role in either exacerbating or alleviating these disparities, indicating the need for targeted interventions to address the root causes of degree awarding gaps.

Research limitations/implications – One strength of conducting a systematic review is its rigorous and meticulous nature, which ensures that the process is carefully planned and executed. This comprehensive approach allows for the elimination of biases, as the review systematically gathers and analyses existing literature on the topic. By adhering to a structured methodology, the systematic review enhances the validity and reliability of the findings, providing a robust and unbiased synthesis of the available evidence. This strength lends credibility to the research and reinforces the confidence in the conclusions drawn from the review.

Practical implications – The practical implications arising from this information indicate that universities need to address the identified issues directly by implementing supportive strategies and interventions.

Declaration: There are no conflicts of interest to declare.

By doing so, they can create a learning environment that is more inclusive and equitable, allowing all students to unlock their full potential. This may involve measures such as raising awareness about unconscious bias, promoting engagement between academic staff and students, implementing anti-racist policies, establishing comprehensive support systems, and actively fostering social and cultural capital. Such practical actions will contribute to reducing the degree awarding gaps and promoting equal opportunities for all students, ultimately leading to a more equitable and successful educational experience.

Social implications – The social implications derived from this information are significant. By implementing supportive strategies and interventions to address the identified issues, universities can contribute to creating a more inclusive and equitable learning environment. This has the potential to have a transformative impact on society by providing equal opportunities for all students to unlock their full potential. By raising awareness about unconscious bias and implementing anti-racist policies, universities can foster a more diverse and inclusive community. Promoting engagement between academic staff and students and establishing comprehensive support systems can enhance social cohesion and create a sense of belonging. Ultimately, these efforts can lead to reduced degree awarding gaps and contribute to a more equitable and successful educational experience, positively influencing broader social equality and cohesion.

Originality/value – This paper contributes significantly to the literature by offering a comprehensive, systematic review of the factors contributing to the degree awarding gap in UK higher education, highlighting its originality and value. By focusing on the interplay between contextual indicators, institutional culture, and degree awarding disparities, the study provides novel insights into how these dynamics contribute to educational inequities. Furthermore, the evidence-based recommendations for institutional interventions presented in this paper furnish the higher education sector with actionable strategies to foster a more inclusive and equitable learning environment. This work not only advances academic understanding of degree awarding gaps but also offers practical value to policymakers and educational institutions aiming to enhance social justice in higher education.

Keywords Degree awarding gap, Higher education, University, Institutional culture

Paper type Research paper

1. Introduction

In the UK, a well-documented degree awarding gap exists, delineating disparities in degree outcomes across various demographic groups (Boero *et al.*, 2022; Codiroli, 2021). Specifically, this gap reflects that students from Black Minority Ethnic backgrounds and lower socio-economic backgrounds attain lower degree classifications compared to their counterparts from other demographic sub-groups (Banerjee *et al.*, 2024; Crawford, 2014; Universities UK, 2022). This degree awarding gap has been a persistent issue within UK higher education, maintaining its presence over time despite various efforts to eradicate it (Richardson and Woodley, 2003; Banerjee *et al.*, 2024; Office for Students OfS, 2021). In 2021, the Office for Students (OfS) - the regulatory body for higher education in England – published a report revealing a slight narrowing of the overall degree awarding gap in recent years. However, substantial disparities remain for certain demographic groups. For instance, the gap between White and Black students receiving first or upper second-class degrees at English higher education (HE) providers narrowed from 24% points in 2014–15 to 19% points in 2021–22 (Gabi *et al.*, 2024). Similarly, the gap between students from the most and least deprived socio-economic backgrounds marked by the Index of Multiple Deprivation (IMD) quintiles 1 and 5 was at 17.8% points in 2021–22 (OfS, 2021; Banerjee *et al.*, 2024).

Several reasons underscore the importance of addressing the degree awarding gap in the UK. Firstly, this gap disproportionately impacts certain student groups, primarily those from underrepresented minorities. Mitigating this gap is integral to promoting social justice and ensuring equitable access to higher education opportunities and outcomes for all students (Hubble *et al.*, 2021). Secondly, closing the degree awarding gap can yield significant economic benefits, including enhanced productivity, improved social mobility, and reduced inequality (Naylor *et al.*, 2016). By optimising access to higher education and ensuring that all students are afforded an equal chance to succeed, the UK can bolster its economy and uplift the well-being of its citizens. Thirdly, the degree awarding gap presents a substantial challenge to the reputation of UK universities. The UK's higher education system enjoys international acclaim; thus, addressing the gap is imperative for maintaining this standing

and ensuring the UK continues to be an attractive destination for international students. Finally, under the Equality Act 2010, universities are legally obligated to promote equality and diversity, necessitating action on the degree awarding gap to fulfil these commitments and evade potential legal challenges.

At the practice and policy level, there is a broad consensus on the need to close the degree awarding gap. However, beyond this consensus, it is less evident where the weight of evidence lies and what the most efficacious approaches and components may be for higher education institutions. Several contextual indicators have been linked to degree awarding gaps (Banerjee *et al.*, 2024). Contextual indicators, when referring to student background factors, encompass a range of demographic and socio-economic characteristics that provide essential background information about students. In contemporary debates the focus has been on socio-economic status, ethnicity, gender, disability, age, prior attainment and first in the family to go to university (Boero *et al.*, 2022).

Socio-economic status, for example, due to a range of explanatory factors, including financial constraints, lack of support from family and friends, and lower academic attainment at school is linked to attainment in higher education. Similarly, ethnicity often leads to experiences of systemic racism, discrimination, and lack of representation in higher education. Likewise, gender is another important factor. Women are more likely to attain degrees than men, but there are still degree awarding gaps in certain science, technology, engineering, and maths (STEM) subjects, where men are overrepresented. Students with disabilities are also more likely to experience degree awarding gaps due to a lack of accessibility and support in higher education. Prior attainment is yet another important factor as students who enter university with lower academic qualifications are more likely to experience degree awarding gaps. This is explained by the lack of preparation for the academic rigour of university and a lack of confidence in their academic abilities. First generation learners are less likely to be aware of norms compared to their peers.

There is generally a lot of discussion on these aspects. What is also essential but is relatively less discussed is institutional culture. The culture of universities and the attitudes of staff and students can contribute to degree awarding gaps. In addressing the existing scholarly gap and focusing on this distinct area of study, this systematic review aims to integrate disparate strands of research. It unravels the nexus between contextual indicators, institutional culture, and degree awarding gaps. The review seeks to offer a comprehensive exploration of these interlinked factors to better understand how certain institutional factors, linked to the contextual indicators discussed above, can lead to a degree awarding gap. This paper presents a review of pertinent literature and data sources, encompassing both published and unpublished studies, reports, and other relevant documents. The objective of this review is to offer a comprehensive and impartial summary of the current state of knowledge on the topic, identify gaps, inconsistencies, and areas warranting further research. The review employs a rigorous and transparent methodology, incorporating clearly defined inclusion and exclusion criteria, a comprehensive search strategy, and a systematic approach to data extraction and analysis.

2. Research questions
Various research reports have established attainment disparities by contextual indicators. In the higher education (HE) context, contextual indicators have been linked to degree awarding gaps (Gabi *et al.*, 2024; Banerjee *et al.*, 2024). Based on these findings, which are firmly established in the literature, the main objective was to understand the role institutional cultures play in mediating the link between contextual indicators and degree awarding gaps. Consequently, the main research question answered in this review is:

"How does institutional culture mediate and explain the link between contextual indicators and degree awarding gaps?

3. Conceptual and theoretical framework

The conceptual framework that guides this review is anchored on the symbiotic triad of contextual indicators, institutional culture, and degree awarding gaps. The framework adopts a holistic perspective, recognising the interdependence of these three components and their impact on disparities in degree awarding in higher education. *Contextual indicators* represent the socio-economic, demographic, and other background indicators surrounding the individual. Factors, such as community demographic profiles, funding availability, and legislative frameworks, influence the institution's operational dynamics and its degree-awarding policies. Furthermore, these indicators reflect the environmental pressure exerted on institutions, which may shape their norms, rules, and structures, ultimately impacting the degree awarding gaps. *Institutional culture* is an integral factor in this framework, representing the values, norms, and practices within an educational institution. It comprises both overt aspects, such as codes of conduct or explicit institutional policies, and covert aspects, including hidden curricula or implicit bias. The institutional culture can affect student performance, engagement, and success rates, thereby influencing the degree awarding gaps. The potential disparity in degree awarding can emerge due to cultural barriers that may hinder the academic progress of certain student populations.

Degree awarding gaps, the central concern of this review, refer to the disparities in the rates of degree attainment among different student demographics. They represent the measurable outcome of the interactions between contextual indicators and institutional culture. The gaps can manifest along lines of socio-economic status, race, ethnicity, gender, or other demographic factors. The interrelationships between these three factors are underpinned by several theoretical perspectives. Two main theories provide the structure for this framework: the Systems Theory and the Institutional Theory.

Systems Theory posits that any given organisation, including an educational institution, can be understood as a system embedded within a broader environment, which in this case are the contextual indicator (Von Bertalanffy, 1950). The environment informs and shapes the institutional practices and culture, which subsequently impact the degree awarding gaps. This theory emphasises the importance of understanding the broader systemic factors to address the disparities in degree awarding. Institutional Theory, on the other hand, focuses on the internal dynamics of an institution, particularly the influence of institutional norms, values, and practices on its outcomes. It posits that the culture within an institution can promote or hinder equity in degree awarding. According to this theory, changes in the institutional culture could be a pathway to reduce the degree awarding gaps (Scott, 2013).

In the interplay of these theories, it is envisioned that a change in the broader environmental factors (contextual indicators) can lead to modifications in the institutional culture, which in turn could influence the degree awarding gaps. Similarly, an evolution within the institutional culture can shift the degree awarding patterns, thereby modifying the degree awarding gaps, even in the face of constant contextual indicators. This conceptual framework has been instrumental in guiding this review. It has provided a lens to examine and understand the interrelationships between contextual indicators, institutional culture, and degree awarding gaps. This understanding is vital in informing policy recommendations aimed at reducing disparities in degree awarding, thereby promoting equity in higher education.

In addition to Systems Theory and Institutional Theory, several other theoretical perspectives provide further insight into the topic. For example, social reproduction theory, rooted in the work of Pierre Bourdieu and others, explores how social inequalities are reproduced and maintained through social institutions, including educational institutions (Nash, 1990). This theory emphasises the role of cultural capital, habitus, and institutional practices in perpetuating disparities in educational outcomes. It helps to understand how

contextual indicators, such as socio-economic background and educational resources, influence institutional culture and contribute to degree awarding gaps.

Organisational culture theory focuses on how the shared values, beliefs, and practices within an organisation shape its functioning and outcomes (Saad and Kaur, 2020). Applying this theory to educational institutions, it helps us examine how institutional culture influences degree awarding gaps. Institutional cultures that foster inclusivity, support diverse student populations, and prioritise equity in educational outcomes are more likely to reduce degree awarding gaps. Conversely, institutional cultures that reinforce biases or perpetuate inequities may contribute to widening degree awarding gaps.

Intersectionality theory (McCall, 2005) recognises that individuals possess multiple social identities (e.g., race, gender, class) that intersect and interact to shape their experiences and opportunities. Applying this theory to the context of degree awarding gaps helps to understand how multiple dimensions of identity and social location intersect to influence educational outcomes. It recognises that degree awarding gaps may vary across different intersections of identity and that the experiences of individuals with multiple marginalised identities may be compounded. Similarly, Critical race theory examines how race and racism intersect with social institutions and systems to perpetuate inequities (Vaught and Castagno, 2020). Within the context of degree awarding gaps, applying this theory helps to analyse the role of race and racial discrimination in shaping educational outcomes. It highlights how institutional practices, biases, and structural barriers contribute to racial disparities in degree attainment.

Policy and governance theories provide insights into the role of government policies, regulations, and institutional governance structures in addressing degree awarding gaps (Katsamunska, 2016). These theories examine how policy frameworks and institutional governance can either reinforce or challenge inequities. They shed light on the importance of inclusive policies, targeted interventions, and accountability mechanisms in narrowing degree awarding gaps. By incorporating these theoretical frameworks, the paper analyses the explanatory factors linking contextual indicators, institutional culture, and degree awarding gaps. These theories provide lenses through which to understand the complex interactions between social, organisational, and policy factors that influence educational outcomes. Applying these theories helps to uncover the underlying mechanisms and processes that contribute to degree awarding gaps, enabling a more comprehensive analysis of the topic.

In synthesising these theoretical frameworks, this review illuminates the intricate web connecting contextual indicators, institutional culture, and degree awarding gaps. Systems Theory and Institutional Theory lay the foundation, highlighting the dynamic interplay between external environmental factors and internal institutional dynamics. Social Reproduction Theory and Organisational Culture Theory further elucidate how socio-economic backgrounds and shared institutional values shape educational outcomes. Intersectionality and Critical Race Theory provide a nuanced understanding of how multiple identity facets and systemic racial factors intersect within educational contexts. Lastly, Policy and Governance Theories underscore the role of institutional and governmental policies in either perpetuating or mitigating these disparities. Together, these theories form a comprehensive matrix that not only explains the multifaceted nature of degree awarding gaps but also guides potential interventions for promoting equity in higher education.

4. Methodology
In conducting this systematic review, the methodology was meticulously designed to adhere to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, a widely recognised protocol for conducting systematic reviews. The

PRISMA protocol offers a comprehensive framework for the identification, screening, eligibility assessment, and inclusion of studies, ensuring the transparency and replicability of the review process. Following the PRISMA guidelines, an initial literature search was conducted across multiple databases, including Google scholar, ProQuest and ERIC, to gather relevant studies. This search was supplemented by manual searches of reference lists from identified articles to capture additional pertinent studies. The selection criteria were pre-defined, focusing on studies that provided empirical evidence related to the research question. Duplicate studies were excluded, and the remaining studies underwent a rigorous screening process based on abstracts and full texts. Quality assessment of the included studies was performed ensuring the reliability and validity of the findings. Data extraction was done systematically to synthesise the findings. This methical approach, grounded in the PRISMA protocol, ensures that the review's findings are comprehensive, unbiased, and replicable, contributing valuable insights to the field (Moher *et al.*, 2009).

4.1 Choice of databases
When conducting a systematic review, the choice of databases is critical to ensure comprehensive coverage of the relevant literature. Each database has its own scope and coverage. Google Scholar covers a wide range of scholarly articles across various disciplines but may include non-peer-reviewed and less credible sources. ProQuest offers a broad collection of dissertations, theses, and scholarly journals, while Education Resources Information Centre (ERIC) specifically focuses on education literature. Given that the review was on the topic of education, these databases provided access to all necessary peer-reviewed journals.

Systematic reviews require precise search capabilities to ensure that all relevant literature is captured. Some databases may offer more advanced search features than others, allowing for more accurate and comprehensive searches. The author had to be mindful of limitations in terms of completing the searches within the available timeframe and with the resources at hand. Hence, the decision was made to use these three databases. One of the other advantages of using these databases was that they provided comprehensive indexing, allowing for more effective search strategies. Using multiple databases can lead to duplication of results, which requires careful screening and management. However, it also ensures that the widest possible range of relevant literature is captured, as some studies may be indexed in one database but not another.

Many guidelines for conducting systematic reviews, such as those from the Cochrane Collaboration or the PRISMA statement, recommend using multiple databases to ensure comprehensive literature coverage. They often suggest including subject-specific databases in addition to multidisciplinary ones. For these reasons, and considering the research question and the scope of the review, a decision was made to use these databases.

4.2 Search strategy
The search strategy to identify relevant literature from databases required construction of search terms, pre-decided inclusion and exclusion criteria, hand-searching and identifying reports of interest from relevant databases. The first step was to identify relevant keywords from the research questions such as: degree awarding gaps, disparities, degree attainment rates, contextual indicators, students and look for the names of different groups which were of interest. A search string was then constructed for each research question by starting with main keywords, using Boolean operators, truncation, and wildcard symbols to capture variations of keywords (summarised in Table 1).

Research question	Keywords	Search string
How do different contextual indicators that have been identified as being linked to degree awarding gaps among different groups of students contribute to disparities in degree attainment rates?	- degree awarding gaps - disparities - degree attainment rates - contextual indicators - students - different groups	("degree awarding gaps" OR "degree attainment gaps" OR "degree disparities") AND ("contextual indicators" OR "institutional factors" OR "environmental factors") AND ("students" OR "learners" OR "undergraduates" OR "graduates" OR "postgraduates") AND ("different groups" OR "diverse groups" OR "minority groups" OR "marginalised groups" OR "underrepresented groups")
Which factors mediate/explain the link between contextual indicators and degree awarding gaps?	- Degree awarding gap - Contextual indicators - Factors - Mediation - Explanation	("degree awarding gap" OR "degree attainment gap" OR "degree outcome gap") AND ("contextual indicators" OR "background factors" OR "socioeconomic status" OR "minority groups") AND ("factors" OR "mediation" OR "explanation")

Source(s): Table by author

This syntax was then used on electronic databases (google scholar, ProQuest, ERIC) to search for relevant literature. Limiters and filters were then used to refine the search results. The following pre-decided selection criteria were used for shortlisting papers:

(1) *Inclusion criteria:* Studies examining contextual indicators linked to degree awarding gaps/disparities among diverse groups of students contributing to disparities in degree attainment rates published between 2010 and 2023. Largely studies based in the UK and US have been included. All empirical research with the potential to contribute to evidence-based decision making was included irrespective of the methodology chosen for the study if it had robust research design.

(2) *Exclusion criteria:* Studies not directly related to the research question, not published in English and not relevant to the UK context were excluded. A decision regarding grey literature had to be made. PhD theses were included and Masters dissertation were excluded.

351 research reports were identified through searches. Hand-searching of reference lists of the identified studies was then carried out for additional relevant studies. Additionally, twenty-three studies known from previous work on the topic and recommended by experts were included. Dealing with duplicate papers in a systematic review is a crucial step in the screening process. This step ensures that the data analysed is accurate and not skewed by repeated information. Therefore, before screening duplicate articles were removed for this review. Duplicates often occur when the same study is indexed in multiple databases. To deal with duplicate papers, reference management software was used which automatically identified and removed duplicates. Manual checking was also carried out on the returned list to ensure no duplicates are missed. After removing duplicates 245 records were identified. The first two stages of screening were through the titles and abstracts of the studies for relevance. This left 56 research reports eliminating others which were not relevant for the focus of the review. This was followed by full-text screening of the remaining studies and data was then extracted from the twenty-five included studies. The findings were then synthesised by mapping out the key themes identified (see also Figure 1).
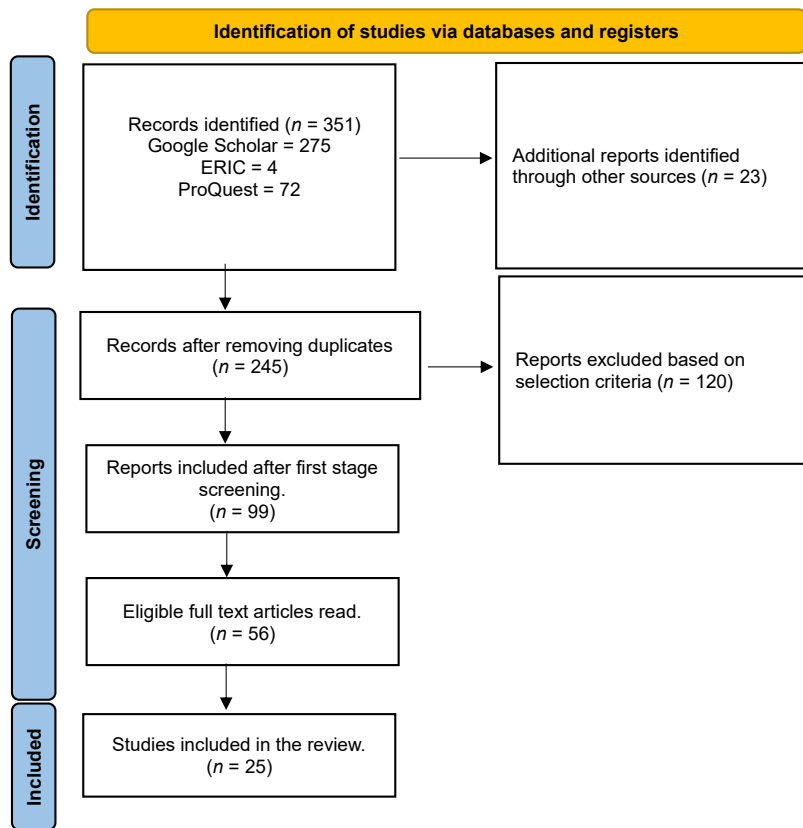
Source(s): Figure by author

4.3 Data collection, analysis, and theoretical framework
Grounded theory is an inductive research approach widely used for thematic analysis in qualitative research. According to Gioia *et al.* (2012), this approach can help identify patterns and relationships in large datasets, ensuring the validity, reliability and providing rich insights into research questions. Charmaz (2014) also highlights the flexibility and adaptability of grounded theory to various research questions and contexts. The data was analysed using a process of coding, categorising, and comparing to identify patterns and themes in this review. This process involved constant comparison and refinement of categories, ensuring that they were grounded in the data (Charmaz, 2014). An important aspect of grounded theory analysis is the use of memos to document the thought processes and decision-making during analysis, which helps researchers track emerging themes and ideas and reflect on the implications of their findings (Thomas, 2006). Grounded theory approach provides a rigorous and systematic way of analysing data in a review, allowing for the emergence of themes that are grounded in the data.

Mapping and clustering techniques used to synthesise the results of the included studies involved creating a matrix to organise the studies based on their characteristics, including study design, population, intervention or exposure, and outcome measures. This allowed to

identify patterns and gaps in the literature and to determine which studies were most relevant to the research question. Clustering involved grouping studies based on similarities or differences in their findings. A qualitative synthesis was then used to identify the themes or patterns across the studies. The studies were reviewed for commonalities and grouped together based on their similarities. These groups were then analysed to identify the factors that contributed to differences or similarities in the results of the studies. Clustering allowed generation of new hypotheses based on the identified themes.

4.4 Eliminating bias

A systematic review is a rigorous and time-consuming process that requires careful planning and execution. Appropriate databases were selected, a comprehensive search strategy was designed, and predetermined selection criteria were used for screening of search results. However, given the nature of research questions there were language and geographical restrictions. It was not possible to include studies from multiple languages as the researcher is only fluent in English. Likewise geographical regions were chosen to be relevant to the UK context. Publication bias can occur when studies with positive results are more likely to be published than studies with negative results. To address publication bias, grey literature, such as conference abstracts, theses, and dissertations, were included in the search strategy. By including grey literature, a systematic review can present a more accurate, diverse, and holistic analysis of the factors influencing degree awarding gaps. At the same time a thorough and comprehensive search of the databases was conducted to eliminate any publication bias.

4.5 Quality assessment

The Qualitative Assessment and Review Instrument (JBI-QARI) was utilised for quality assessment (Joanna Briggs Institute, 2017). JBI-QARI is tailored specifically for the appraisal of qualitative research and was selected due to its comprehensive criteria that assess the methodological integrity and relevance of qualitative studies. This instrument enabled a systematic evaluation of each study's credibility, dependability, confirmability, and transferability, allowing for a critical appraisal of the extent to which the studies contributed to our understanding of the complex dynamics between institutional culture, contextual indicators, and degree awarding gaps. However, JBI-QARI is designed exclusively for evaluating qualitative research and is not suitable for assessing quantitative studies, which differ significantly in methodological approaches and criteria. Quantitative studies necessitate a distinct set of appraisal criteria focusing on aspects such as study design, sample size, data collection methods, statistical analysis techniques, and result reporting, which are not applicable to qualitative research. To evaluate the quality and rigour of quantitative studies, the emphasis was placed on elements critical to the reliability and validity of quantitative findings (see Table 2 for a list of included studies).

4.6 Single reviewer model

In conducting systematic reviews, the utilisation of a single reviewer, though not ideal, is sometimes necessitated by resource constraints. This approach has distinct advantages, including ensuring consistency across the application of inclusion and exclusion criteria, enhancing the efficiency of the review process, and allowing for deep engagement with the literature. A sole reviewer can streamline logistics and decision-making, potentially offering a cost-effective and pragmatic solution in contexts of limited funding. Moreover, this can serve as an invaluable learning experience, fostering the development of a comprehensive skill set encompassing literature search, critical appraisal, data extraction, and synthesis.

	Author (year of publication)	Theme	Country of study	Focus
1	Mountford-Zimdars *et al.* (2015)	Unconscious bias	UK	examined the influence of unconscious bias on degree attainment for students with disabilities in higher education
2	Miller (2016)		UK	Unconscious bias can influence how staff members assess and provide feedback to students, resulting in certain groups receiving more critical or harsher feedback than others
3	Tate and Page (2018)		UK	Challenge the notion that bias is solely unconscious, arguing that it is (un)conscious and intertwined with Charles Mills' concept of the "Racial Contract" and its associated "epistemologies of ignorance."
4	Mahmud and Gagnon (2023)		UK	Racial disparities in student outcomes in British higher education. Examine mindsets and bias
5	Wong *et al.* (2021)	Limited opportunities for engagement with academic staff	UK	When students feel connected to their institution and have a sense of belonging, they are more likely to persist and complete their degrees
6	Thomas (2012)		UK	highlights the importance of student engagement and belonging for student success and degree completion
7	Stevenson (2012)	Views of future possible selves	UK	minority ethnic students were less likely than their white peers to have a clear vision of their future possible selves and concluded this can impact their degree attainment
8	Keyser (2016)		UK	self-regulated learning (SRL) and future-oriented focus can significantly influence academic performance
9	Ferguson (2019)		Canada	Students' academic achievement is influenced by their expectancy-value and motivational beliefs
10	Jones *et al.* (2015)	Institutional racism	US	students of colour are more likely to attend under-resourced schools, which may have fewer opportunities for academic and social support
11	Mckown and Weinstein (2008)		US	encounter biased academic and disciplinary policies and practices, which may hinder their academic progress
12	Strayhorn (2018)		US	Black students face various forms of institutional racism, including negative stereotypes, bias, and discrimination in academic and social settings
13	Warikoo and Carter (2009)		US	Ethnicity, gender and academic preparation have significant effects on student retention
14	Zewolde (2022)		UK	investigated the relationship between race and academic performance among Black African students in the UK's higher education system

Table 2.
List of studies included under findings

(*continued*)

	Author (year of publication)	Theme	Country of study	Focus
15	Jang *et al.* (2010)	Inadequate support system	US	investigated the effects of autonomy support and structure on student engagement in learning activities
16	Perna (2006)	Social and cultural capital	US	college access and choice includes social capital as a key factor that influences students' decisions and outcomes in higher education
17	Mishra (2020)		Germany	Social capital, including parental involvement and support, peer networks, and community resources, are positively associated with academic achievement
18	Sekhon (2015)		UK	First generation university students and the degree awarding gap
19	Yeager *et al.* (2014)		US	examine the role of purpose in fostering academic self-regulation among students
20	Pascarella and Terenzini (2005)		US	Social capital, including both familial and peer networks, has a positive impact on students' academic performance
21	DiMaggio (1982)		US	examines the relationship between cultural capital and academic success
22	Reay *et al.* (2010)		UK	experiences of working-class students in UK higher education
23	Harris and Tienda (2010)		US	role of high school counsellors in facilitating college access and degree attainment among African American and Latino students
24	Stephens *et al.* (2012)		US	academic performance of first-generation college students
25	Strayhorn (2018)		US	Cultural capital has also been shown to foster a sense of belonging among students from different socio-economic backgrounds which ultimately affects their attainment

Source(s): Table by author

Table 2.

To address potential limitations inherent in a single-reviewer model, such as increased risk of bias, several mitigative strategies were employed. These include adopting a transparent and rigorous methodological framework, consulting with experts or peers, and utilising specialised software tools to enhance the review's rigour. Although the involvement of multiple reviewers is recommended to augment reliability and minimise bias, a single-reviewer approach, when executed with methodological diligence and transparency, can still yield credible and valuable insights, especially in situations where resources are limited. This underscores the importance of adaptability in research methodologies, ensuring that systematic reviews can proceed effectively even under constraints.

5. Findings and discussion
The main factors that arise from institutional culture and individuals, mediating the connection between contextual indicators and educational outcomes, ultimately resulting in disparities in degree awards, are summarised below:

5.1 Unconscious bias

Unconscious bias refers to the attitudes, stereotypes, and prejudices that individuals hold towards certain groups of people, which can influence their decisions and actions without their awareness. These biases can be formed from a variety of factors, including cultural, societal, and personal experiences, and can be deeply ingrained. Unconscious bias can affect many aspects of our lives, including our interactions with others, our decision-making, and our perceptions of the world around us. For example, it may influence who we choose to hire for a job, how we evaluate someone's performance, or how we interact with people from different backgrounds.

There are many different types of unconscious bias, including:

(1) *Affinity bias*: the tendency to favour people, who are like us,

(2) *Confirmation bias:* the tendency to look for information that confirms our existing beliefs and ignore information that contradicts them,

(3) *Halo effect:* the tendency to assume that someone who is good at one thing is good at everything,

(4) *Stereotyping:* the tendency to make assumptions about people based on their membership in a particular group.

Unconscious bias can have various effects on the degree awarding gap (Miller, 2016). For example, it can influence how staff members assess and provide feedback to students, resulting in certain groups receiving more critical or harsher feedback than others. Unconscious bias can also impact the assumptions made by staff about students' abilities and potential, leading to lower expectations and reduced support for specific student groups. Furthermore, unconscious bias in student feedback can contribute to the gender gap in degree attainment. Similarly, unconscious bias based on cultural differences and language proficiency can affect the evaluation of international students, further contributing to the degree awarding gaps. Therefore, it is essential to foster a greater awareness of cultural diversity and promote effective communication to ensure fairness in degree awarding.

Mountford-Zimdars *et al.* (2015) examined the influence of unconscious bias on degree attainment for students with disabilities in higher education. The study revealed that unconscious biases, such as stereotyping and assumptions about the capabilities of students with disabilities, can lead to lower degree attainment rates for these students. The report emphasizes the importance of raising awareness among staff regarding unconscious bias and implementing policies and practices that promote equity and inclusivity for students with disabilities. The study also underscores the need for ongoing evaluation and monitoring of these policies and practices to ensure their effectiveness in reducing degree attainment gaps.

Unconscious bias refers to the rapid formation of judgements and evaluations by our brains without conscious awareness. These biases are influenced by factors such as background, cultural environment, and personal experiences and we may not be fully conscious of their influence, impact, and implications. However, Tate and Page (2018) challenge the notion that bias is solely unconscious, arguing that it is (un)conscious and intertwined with Charles Mills' concept of the "Racial Contract" and its associated "epistemologies of ignorance." These epistemologies arise from our backgrounds, cultural environments, and personal experiences, as described by the Equality Challenge Unit (ECU). Tate and Page (2018) assert that attributing racism to "unconscious bias" downplays the significance of white supremacy and perpetuates white innocence, enabling the wilful ignorance of institutional racism. In the realm of equality and diversity training, the concept of "unconscious bias" has become performative, aiming to transcend racism by training individuals to embrace a constructed notion of a "post-racial" reality. Tate and Page (2018)

propose that decolonizing our understanding of "unconscious bias," addressing "white fragility," and fostering "self-forgiveness" can uncover the hidden institutional whiteness underlying both conscious and unconscious biases.

Biases frequently stem from race, gender, and socio-economic status, significantly impacting student outcomes. Furthermore, as shown by the theoretical framework institutional cultures reinforce biases or perpetuate inequities which in turn contribute to widening degree awarding gaps. Addressing these biases necessitates a shift in both individual and institutional mindsets, and a more comprehensive approach is required to establish a fairer and more equitable system (Mahmud and Gagnon, 2023). Measures such as unconscious bias training for staff and students, curriculum development that embraces diverse perspectives and the creation of an inclusive learning environment are just a few ways to address these issues. Universities need to adopt a proactive stance to establish a more equitable and inclusive learning environment.

5.2 Limited opportunities for engagement with academic staff

Students have limited opportunities to engage with academic staff due to several factors such as the large student-to-staff ratio, a lack of personalised support and guidance, and limited access to academic resources or ignorance about available resources. Furthermore, students from underrepresented backgrounds may face additional barriers in engaging with academic staff. Consequently, such students may be less likely to receive the necessary academic support, feedback, and mentorship, resulting in lower academic achievement and a wider degree awarding gap.

Staff-student engagement can be linked to degree awarding gaps in several ways. When staff and students have limited interaction, staff members may be less aware of the challenges that students face and may be less likely to provide the support and resources that students need to succeed. This can result in lower retention rates and lower degree attainment rates for underrepresented groups, who may face additional barriers to success in higher education. On the other hand, increased engagement between staff and students can help to reduce degree awarding gaps by providing students with the support and resources they need to succeed. This can include academic support, mentoring, and guidance on career and professional development. When staff members have more opportunities to engage with students, they are better able to understand their needs and provide tailored support to help them overcome barriers to success.

Additionally, increased engagement can help to create a sense of community on campus, which can be particularly important for underrepresented groups. When students feel connected to their institution and have a sense of belonging, they are more likely to persist and complete their degrees (Wong et al., 2021). This can help to reduce degree awarding gaps and improve outcomes for all students. Thomas (2012) summarises the findings from the "What Works? Student Retention & Success programme", which was a five-year research project involving thirteen universities in the UK The research involved a range of methods, including surveys, interviews, focus groups, and case studies, and focused on understanding what works in terms of improving student engagement, belonging, and success in higher education. The report highlights the importance of student engagement and belonging for student success and degree completion. It identifies several key factors that contribute to student engagement, including effective teaching, supportive learning environments, opportunities for active engagement, and strong links between academic and social aspects of university life. The report also highlights the role of belonging in supporting student success and suggests that universities need to work to create inclusive and supportive environments for all students, particularly those from underrepresented groups.

5.3 Assisting students in cultivating a positive outlook

There is a growing body of literature and empirical research examining the relationship between views of future possible selves and degree attainment gap. Research has shown that a student's belief in their ability to succeed in college is a critical factor in their degree attainment. Students who have a positive view of their future possible selves as successful college graduates are more likely to persist in college and ultimately earn a degree. However, the social identity of a student, such as their race, ethnicity, gender, and socio-economic status, can also influence their views of their future possible selves. Research has found that students who identify with groups that are traditionally underrepresented in higher education may have lower expectations for their future educational and career outcomes, which can negatively impact their degree attainment. Empirical research identifies some confounding factors which may be helpful in reducing the degree attainment gap.

Stevenson (2012) examined the relationship between minority ethnic and white students' degree attainment and their views of their future possible selves. The study found that minority ethnic students were less likely than their white peers to have a clear vision of their future possible selves and concluded this can impact their degree attainment. The author argues that this is due to a variety of factors, including experiences of racism and discrimination, lack of representation in academia, and cultural expectations. The paper highlights the importance of supporting minority ethnic students to develop a strong sense of their future selves to improve their degree outcomes and ensure greater equity in higher education.

Goal setting is an important factor in determining students' future possible selves. Students who set clear goals for their education and career are more likely to persist in college and earn a degree. However, the goals that students set for themselves must be realistic and aligned with their interests and abilities. Keyser (2016) investigated the theory that self-regulated learning (SRL) and time perspectives significantly influence academic performance in second-year Economics studies. The conceptualisation of self-regulated learning and time perspectives are elucidated and examined in connection with academic performance within the theoretical framework of the study. A combination of descriptive analysis, correlation analysis, and hierarchical regression were utilised to examine the data. The correlation matrix and hierarchical regression displayed a relationship between various facets of SRL, future time perspective, and academic performance. Consequently, the study concluded with the recommendation that pedagogical strategies should be implemented to empower students to apply self-regulated learning techniques and to maintain a future-oriented focus, which could significantly boost their academic performance. Students with a learning goal orientation and a positive view of their future possible selves were more likely to engage in SRL than those with a performance goal orientation. Thus, nurturing a positive view of future possible selves may be an effective way to promote SRL, especially for students with a learning goal orientation.

At the same time students, who have a positive academic self-concept, meaning they see themselves as capable and competent learners, are more likely to persist in college and earn a degree. This is closely related to students' views of their future possible selves, as students with a positive academic self-concept are more likely to see themselves as successful college graduates. By helping students develop positive beliefs about their ability to succeed, setting realistic goals, and cultivating a positive academic self-concept, educators can help reduce the degree attainment gap and improve outcomes for all students. Students' academic achievement is influenced by their expectancy-value and motivational beliefs (Ferguson, 2019). Improving their perceptions regarding the value of education and their own capabilities to succeed in their courses can potentially result in higher academic performance. Assisting students in cultivating a positive outlook towards their future potential and possible future selves can therefore greatly contribute to their academic success.

5.4 Institutional racism

Institutional racism refers to the policies, practices, and structures within institutions that perpetuate racial inequalities and discrimination. Empirical research has consistently found that institutional racism plays a significant role in the degree attainment gap. Studies have shown that racial and ethnic minorities are disproportionately affected by institutional policies and practices that perpetuate racial inequalities and discrimination. For example, research has found that students of colour are more likely to attend under-resourced schools, which may have fewer opportunities for academic and social support (Jones *et al.*, 2015). Moreover, they are more likely to encounter biased academic and disciplinary policies and practices, which may hinder their academic progress (Mckown and Weinstein, 2008).

Strayhorn (2018) examined the impact of institutional racism on Black students' experiences in higher education. The study found that Black students face various forms of institutional racism, including negative stereotypes, bias, and discrimination in academic and social settings. These experiences can result in lower academic performance and reduced motivation to persist and complete their degrees. In response to these findings, some researchers have proposed various interventions to address institutional racism and promote greater equity in higher education. For example, interventions may involve increasing financial aid for underrepresented students, providing additional academic and social support, and implementing bias training for faculty and staff. Empirical research provides strong evidence that institutional racism is a significant contributor to the degree attainment gap. The literature highlights the importance of understanding and addressing the structural factors that perpetuate racial inequalities in higher education.

Another study conducted by Warikoo and Carter (2009) examined how institutional racism affects academic outcomes among Asian American students. The study found that Asian American students experience subtle forms of discrimination, such as stereotypes about their academic abilities and cultural identity, which can negatively impact their academic performance and degree attainment. Warikoo and Carter also examined the impact of racial diversity on undergraduate student retention in science majors. The study was conducted at a large, public, research-intensive university in the United States and involved 1,820 students who had declared a science major. The researchers collected data on students' race and ethnicity, gender, academic preparation, academic performance, and social and academic experiences.

The findings of the study showed that racial diversity had a positive impact on the retention of students of colour in science majors. Specifically, the study found that Black and Hispanic students were more likely to persist in science majors when they were exposed to greater racial diversity in their academic environments. The study also found that gender and academic preparation had significant effects on student retention, with women and students who had taken more advanced science courses being more likely to persist in science majors. The authors suggest that increasing racial diversity in science majors can promote greater equity and inclusion in higher education and may help to address the underrepresentation of students of colour in STEM fields. The findings of the study suggest that creating more diverse academic environments can have positive effects on the retention and success of underrepresented students in science majors.

Zewolde (2022) investigated the relationship between race and academic performance among Black African students in the UK's higher education system. The study finds that Black African students are more likely to achieve lower grades and fail to complete their degree programs than their White counterparts. The author identifies several factors that contribute to these disparities, including institutional racism, cultural differences, and inadequate support systems. The paper argues that efforts to address these disparities must be rooted in a recognition of the historical and structural factors that underpin them and must involve a range of interventions such as targeted support, changes to assessment practices,

and increased diversity in academic staff. Overall, the paper highlights the need for greater attention to the experiences of Black African students in UK higher education and calls for urgent action to address the racial disparities in academic outcomes.

5.5 Inadequate support systems

The study by Jang *et al*. (2010) investigated the effects of autonomy support and structure on student engagement in learning activities. The study used a correlational research design and collected data from 252 undergraduate students enrolled in a psychology course at a large public university in the United States. Participants completed surveys assessing their perceptions of autonomy support, structure, and engagement in learning activities. Autonomy support was defined as the extent to which students perceived that their instructors provided choice, relevance, and meaningful rationale for learning activities. Structure was defined as the extent to which students perceived that the learning activities were well-organised and clear. The results showed that both autonomy support and structure were positively related to student engagement in learning activities. However, the relationship was stronger when both autonomy support and structure were present, rather than when either factor was present alone. This finding suggests that autonomy support and structure may interact in a synergistic manner to promote student engagement in learning activities. Contributing to the literature on motivational factors the study provides insights for educators to design interventions to promote student engagement in the classroom.

5.6 Lack of social and cultural capital

Social capital refers to the resources that individuals and groups possess because of their social networks and social relationships. Perna's (2006) proposed a conceptual model for studying college access and choice includes social capital as a key factor that influences students' decisions and outcomes in higher education. She argues that students with higher levels of social capital, such as those who have parents or family members with college experience, are more likely to attend and complete college. Social capital, including parental involvement and support, peer networks, and community resources, are positively associated with academic achievement (Mishra, 2020).

In the realm of higher education, a body of evidence indicates the existence of an educational attainment disparity at the degree level between Black and Minority Ethnic (BME) students and their White counterparts. Interestingly, this disparity persists despite BME students and their counterparts possessing nearly identical entry grades, suggesting equal preparedness at the point of entry. The underperformance of BME students in comparison to White students carries significant implications for both the higher education sector and society. To gain a deeper understanding of the rationale behind this degree attainment gap, Sekhon (2015) conducted quantitative research that demonstrated the existence of this gap. Additionally, 20 qualitative research interviews were conducted with first- and second-generation university attendees. A case-based study was also carried out at Coventry University to provide further insight into the specific reasons for this disparity.

The research findings reveal that multiple factors influence the degree attainment gap. External factors encompass previous experiences in school and the pathway taken to enter higher education, as well as specific aspects related to the chosen course and the teaching staff. Internal factors revolve around attitudes and aspirations, the influence of peers, and individuals' knowledge of higher education. Another significant aspect that emerged is the institutional image and its ability to foster a welcoming environment for students. Sekhon (2015) emphasises that educationalists have limited influence over external factors. However, institutions have a responsibility to act by implementing curricular changes, revising course materials, and fostering supportive attitudes among tutors to minimize the negative impact of

these external factors on student attainment. While statistics demonstrate a reduction in the attainment gap, it is crucial to continue addressing this issue further, as degree attainment has a profound impact on individuals' lives and employment opportunities. Institutional actions have the potential to enhance the attainment of all higher education students.

Yeager *et al.* (2014) examine the role of purpose in fostering academic self-regulation among students. They find that students who have a self-transcendent purpose for learning, such as a desire to contribute to their communities or make a positive impact on the world, are more likely to persist in their academic goals. This sense of purpose is linked to social capital, as students who have supportive social networks and connections are more likely to see the value in their academic pursuits. Pascarella and Terenzini's (2005) extensive review of empirical research on college student outcomes includes a discussion of the role of social capital in degree attainment. They find that social capital, including both familial and peer networks, has a positive impact on students' academic performance and persistence in college. Overall, these studies show that social capital plays an important role in the degree attainment gap, as students with greater social capital may have greater access to resources and support that enable them to succeed in college.

Cultural capital on the other hand refers to the knowledge, skills, and cultural resources that individuals can use to navigate and succeed in educational and social systems. The concept of cultural capital has been used to explain the degree attainment gap, particularly in terms of how students from different socio-economic backgrounds may have varying levels of access to cultural capital. For example, DiMaggio's (1982) study examines the relationship between cultural capital and academic success in American high schools. The author found that cultural capital, as measured by students' participation in cultural activities such as reading literature, attending museums, and listening to classical music, had a significant positive effect on students' grades.

Reay *et al.* (2010) study investigated the experiences of working-class students in UK higher education, particularly their strategies for "fitting in" or "standing out" in a middle-class dominated environment. To collect data, the researchers conducted focus group discussions with 44 working-class students from four UK universities. They analysed the transcripts of these discussions using thematic analysis to identify patterns and themes. The findings of the study revealed that working-class students often felt a sense of "cultural mismatch" between their own backgrounds and the middle-class culture of higher education. To navigate this cultural mismatch, many students adopted either a strategy of "fitting in" by trying to conform to middle-class norms and values, or a strategy of "standing out" by embracing their working-class identity and challenging middle-class assumptions. The study also found that working-class students faced various challenges in higher education, such as financial difficulties, social isolation, and a lack of cultural capital. These challenges often had negative effects on their academic performance and their overall university experience.

The researchers recommended that universities should do more to support working-class students, such as providing financial assistance, creating a more inclusive environment, and acknowledging and valuing diverse cultural backgrounds. They also recommended that policymakers should address broader issues of social inequality and class-based disadvantage to reduce the cultural mismatch between working-class students and higher education. The authors found that cultural capital played a significant role in students' experiences, with middle-class students often possessing greater cultural capital and thus greater access to social and academic resources.

Cultural capital does not only affect students but also affects staff members. For example, Harris and Tienda's (2019) study investigated the role of high school counsellors in facilitating college access and degree attainment among African American and Latino students. The authors found that high school counsellors who possessed greater cultural

capital, such as knowledge of college application processes and financial aid resources, were more effective in helping students navigate the college application process and ultimately achieve their educational goals.

Stephens *et al*. (2012) investigated how the focus on independence in American universities can negatively affect the academic performance of first-generation college students. To collect data, the researchers conducted three experiments involving first-generation and continuing-generation college students. They used measures such as academic performance, self-esteem, and psychological well-being to assess the effects of the independence-focused university culture on the two groups of students. The findings of the study revealed that first-generation college students were more likely to experience feelings of loneliness, self-doubt, and anxiety due to the independence-focused university culture. These negative feelings had a direct impact on their academic performance, leading to lower grades and decreased motivation to persist in college.

In contrast, continuing-generation college students performed better academically due to their familiarity with the independence-focused culture of American universities. The authors found that first-generation college students often possess less cultural capital than their peers and are thus at a disadvantage in navigating the academic and social demands of university life. The researchers recommended that universities should do more to support first-generation college students by providing resources such as mentoring, academic support, and social networks. They also suggested that universities should take steps to modify the independence-focused culture by promoting interdependence, social connectedness, and a sense of belonging among all students. By doing so, universities can help to reduce the hidden disadvantage that first-generation college students often face. Cultural capital has also been shown to foster a sense of belonging among students from different socio-economic backgrounds which ultimately affects their attainment (Strayhorn, 2018).

6. Recommendations and conclusion

In addressing the complex issue of degree awarding gaps in UK higher education, it is crucial to integrate the findings of the review with a theoretical framework that encompasses contextual indicators, institutional culture, and the various factors contributing to these disparities. The review has illuminated how unconscious bias, limited opportunities for student-faculty engagement, institutional racism, inadequate support systems, and a lack of social and cultural capital significantly influence student outcomes. These factors, as viewed through the lenses of Systems Theory, Institutional Theory, organisational culture theory, intersectionality theory, and social reproduction theory, provide a multifaceted understanding of the issue.

Firstly, the curriculum and pedagogical practices in higher education institutions need to be inclusive and reflective of diverse perspectives, as advocated by theories of intersectionality and social reproduction. Such an inclusive curriculum validates different forms of knowledge and experiences, creating an environment that is welcoming to all student groups. This approach would not only enhance learning experiences for all students but also play a critical role in addressing biases and institutional racism. Furthermore, the review underscores the importance of robust support systems in mitigating the effects of external challenges, and other hardships linked to their background or individual circumstances, as highlighted by policy and governance theories. Universities must, therefore, develop and implement academic, financial, and pastoral care support, particularly focusing on students facing difficulties. This comprehensive support is essential in creating an equitable educational landscape where all students, regardless of their background, can succeed.

Another critical aspect is the diversification of academic staffing. In line with organisational culture theory, a more diverse academic staff can positively influence the institutional culture, providing role models for underrepresented student groups and bringing in a range of perspectives into teaching and institutional policies. This change is crucial for creating a learning environment where students from all backgrounds feel represented and valued. Addressing unconscious bias and institutional racism requires a concerted effort in training both staff and students. Comprehensive training in recognising and mitigating unconscious biases aligns with the Institutional Theory's emphasis on the role of organisational norms and values in shaping behaviours. This training is vital in fostering an inclusive and respectful academic environment. Additionally, enhancing student engagement and fostering a sense of belonging are paramount. Strategies such as peer mentoring and support networks, which align with Systems Theory, are effective in creating a community atmosphere that supports the academic success of students from diverse backgrounds. These initiatives are essential in building a cohesive and supportive student body.

Finally, reforming assessment practices to include more formative feedback and innovative methods can reduce the impact of bias and better accommodate diverse learning styles, as advocated by organisational culture theory. This shift in assessment practices is crucial for providing a fair and supportive evaluation system that caters to the needs of all students. In conclusion, addressing degree awarding gaps in UK higher education requires a holistic and multifaceted approach that considers the interplay between various factors and theoretical perspectives. By implementing these recommendations, universities can create a more equitable and supportive educational environment. This effort will not only contribute to reducing degree awarding gaps but also enhance the overall quality of higher education, benefiting society at large through the development of a diverse and inclusive generation of graduates.

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