



mind the
STEM gap



Decoding Underemployment of BAME Graduates

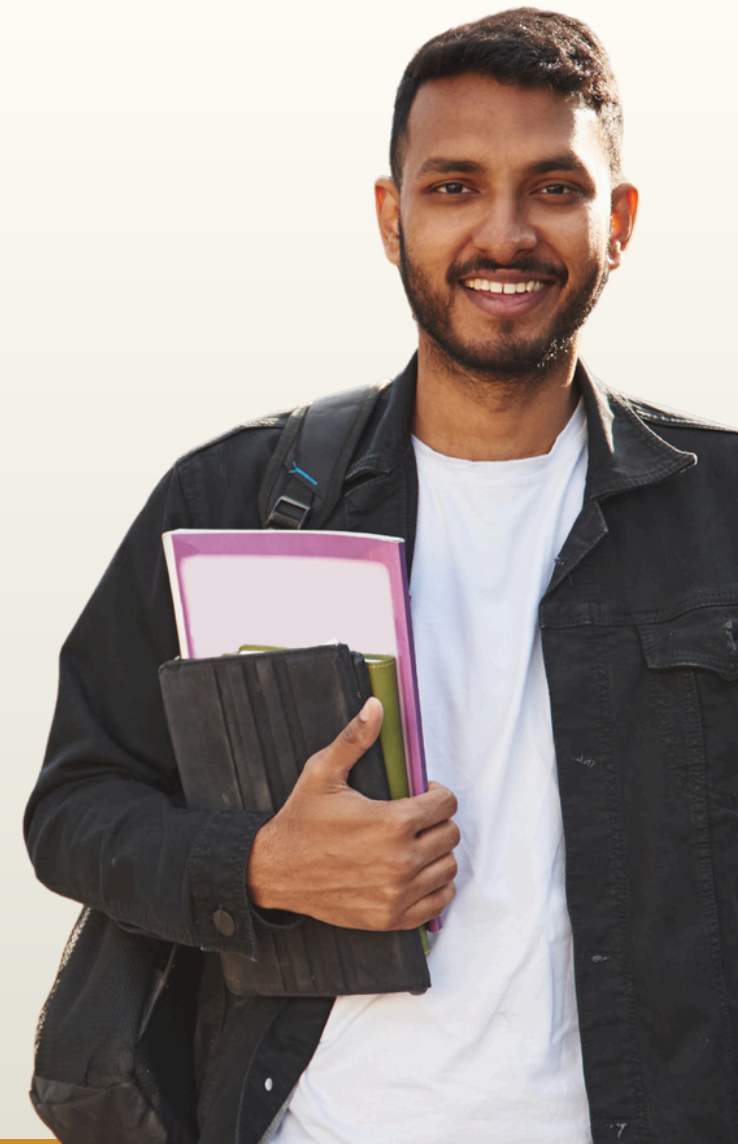
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A PDF copy of the report will be sent directly to the email address you used to register for the event. However, if you require the report in an alternative format or would like to request an additional copy in the future, please feel free to email us at

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MEET OUR TEAM



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Sterling joined the University of Greenwich in September 2017. He has taught undergraduate courses at the University of Southampton while pursuing his PhD during 2014–2018. He has also taught at Birkbeck University as an Associate Lecturer. Before pursuing an academic career, Sterling held senior managerial roles in administration and finance mostly in the Third Sector. He is a qualified Life Coach and setup and ran The Mood Magician a life and professional coaching company. He also co-founded Beyond Engagement, a consultancy delivery services in the areas of citizen engagement and empowerment in public policy.



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Dr Andrew Hansen-Addy joined the University of Greenwich in October 2021 and is currently a Senior Lecturer in Business Management. He gained his PhD in Management from Bournemouth University in 2021. He is a Fellow of Advance HE and a full member of the Association for Project Management. Dr Hansen-Addy currently teaches Project Management and other business and management courses at the University of Greenwich. He also supervises dissertations and is a personal tutor for students at the university.



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Originally from Sibiu, a historic city in Romania, Raluca Marinciu brings an international perspective and a student-centred approach to her role as Senior Teaching Fellow and Deputy Programme Leader for the BA Business Management programme at the University of Greenwich. As one of the first Generation Z academics in the School of Business, she combines contemporary teaching methods with a commitment to ensuring education remains relevant, engaging, and inclusive.



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Dr Kunle Oguntegbe teaches Logistics Technologies, Operations and Resource Management, International Entrepreneurship, Business Ethics, Small Business Development, and Business Process & Planning, amongst other Modules. He is also involved in project supervision for International Business and Logistics & Supply Chain Management postgraduate students. He holds a Ph.D. in Management with specialisation in Supply Chain Management. He is interested in applying digital technologies to enhance businesses and supply chain management.

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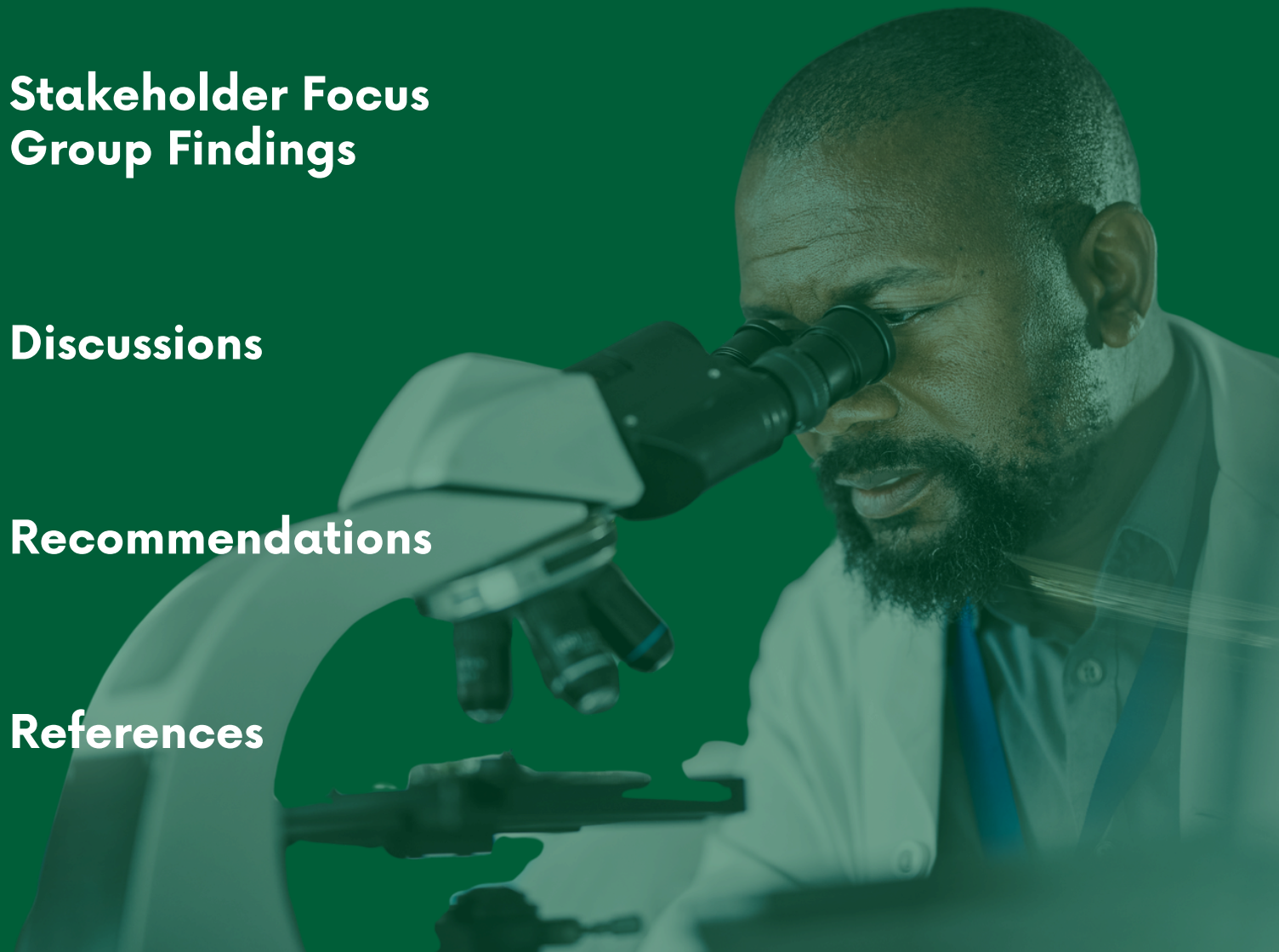
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Introduction

OUR MISSION

The transition from higher education to the professional workforce is often framed as a linear journey of meritocracy. For BAME (Black, Asian and Minority Ethnic) graduates in STEM (Science, Technology, Engineering and Mathematics), the journey into the workforce is frequently obstructed by systemic barriers. Seeking to analyse these inequities and amplify the perspectives of those affected, researchers at the University of Greenwich conducted a two-year, British Academy-funded study. The **Mind the STEM Gap** report serves as the culmination of this work—a critical effort to document and provide more focused awareness to the persistent graduate employment gap.

Our approach is rooted in the belief that systemic change begins with a shared understanding of the problem. By conducting in-depth interviews with BAME STEM graduates from diverse universities across the UK, we captured the lived realities of those navigating the transition to work. These conversations were paired with extensive focus groups involving industry employers, STEM charities, and university staff dedicated to student success.

Traditional employability models often place the burden of change on the individual student, suggesting that more "grit" or a better CV will solve the problem. Mind the STEM Gap shifts this paradigm. We acknowledge that no amount of individual effort can single-handedly overcome hiring discrimination, the inherent lack of inherited social capital, or the historical exclusion from high-value professional networks. Our mission is to provide the institutional and industrial interventions necessary to level the playing field, ensuring that talent is the only metric of success.

Our objective is not to offer a definitive set of solutions, but to provide a strategic framework for action grounded in the lived experiences of those navigating these challenges daily.

Literature

Conceptualising employability in context

Graduate employability is often presented as a reflection of individual talent, effort, and skill.

However, contemporary literature suggests that this view is too narrow because employability is shaped by wider institutional and structural conditions, not simply by graduate capability alone (Tomlinson, 2023; Yorke and Knight, 2006).

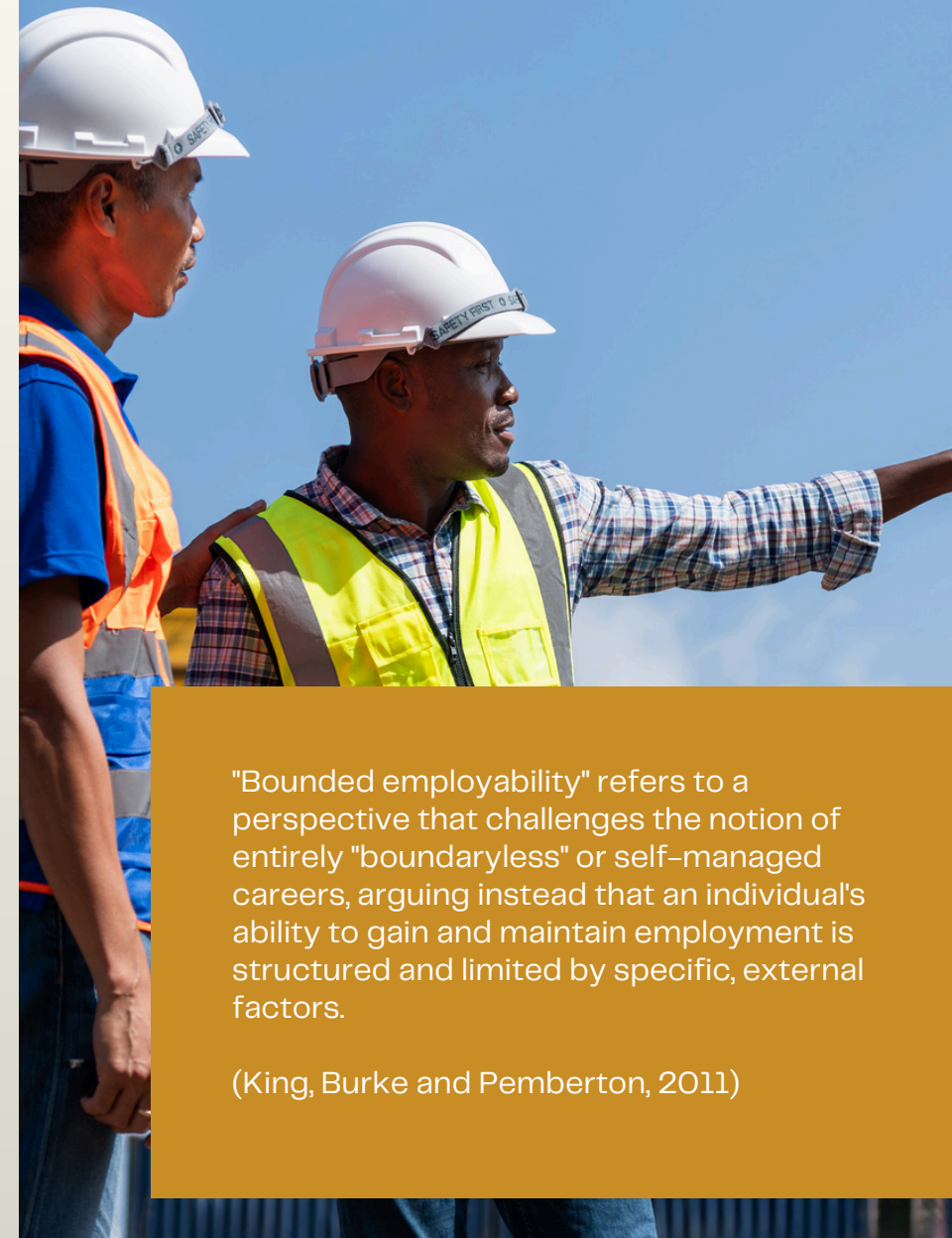
This is especially important in relation to BAME STEM graduates, whose transition into work is often affected by race, unequal access to networks, professional norms, and recruitment opportunities.

A contextual approach therefore allows employability to be understood as bounded rather than unlimited, meaning that graduates may be well qualified but still face constrained pathways into suitable employment (King, Burke and Pemberton, 2011; Tomlinson, 2023).

The idea of bounded employability is particularly useful for this report because it captures the gap between formal qualification and real labour-market opportunity. Rather than assuming that a degree guarantees progression into graduate-level work, bounded employability highlights how opportunity is filtered through social background, employer expectations, and structural inequality.

This perspective is consistent with critical graduate employability literature, which argues that employability should be understood as relational and context dependent rather than purely individualised (Tomlinson, 2023). It also aligns with broader work on employability in higher education, which stresses that employability is not simply synonymous with employment, but refers to the interaction between preparation, opportunity, and recognition in the labour market (Advance HE, 2006).

One limitation of this body of literature is that many of these papers fail to adequately acknowledge race, even when they discuss inequality or differential outcomes. As a result, the analysis can become too generic and may overlook how racialised structures shape experiences, opportunities, and progression in higher education and employment.



"Bounded employability" refers to a perspective that challenges the notion of entirely "boundaryless" or self-managed careers, arguing instead that an individual's ability to gain and maintain employment is structured and limited by specific, external factors.

(King, Burke and Pemberton, 2011)



Inequality in STEM transitions

The transition from higher education into STEM employment is not experienced equally across ethnic groups. Fry, Kennedy and Funk (2021) show that progress in gender, racial and ethnic diversity in STEM jobs has been uneven, indicating that long-standing inequalities remain embedded in access to these sectors. This is particularly relevant for BAME graduates, because STEM fields are often treated as meritocratic spaces where qualifications alone should determine entry.

In practice, however, the evidence suggests that professional pathways continue to be structured by inequality, with some groups facing greater barriers to entry and progression than others (Fry, Kennedy and Funk, 2021). One limitation of this paper is that it can soften or sanitise the language of inequality, which risks downplaying the severity and structural nature of the barriers being discussed. While the paper identifies unequal outcomes, it may not fully name how deeply embedded these inequalities are in higher education and labour-market systems, and this can make the problem appear less urgent than it is.

UK graduate outcomes data reinforces this picture. HESA's Graduate Outcomes data indicates that graduates from science subjects have stronger early labour-market outcomes on average than graduates from non-science subjects, with 82 per cent of UK graduates in work who studied science subjects in high-skilled employment compared with 73 per cent of those from non-science subjects (HESA, 2021).

However, these overall STEM advantages do not apply evenly across ethnic groups. The same data shows that 63 per cent of UK White graduates were in full-time employment, a higher proportion than any other ethnic group, while Black UK graduates were more likely to be in part-time employment than any other ethnic group (HESA, 2021). Luminate (2022) similarly reports that in 2019/20, 59.3 per cent of White graduates were in full-time employment 15 months after graduation compared with 51.3 per cent of BAME graduates. This suggests that ethnic inequality does not disappear at graduation, but can continue to shape early career trajectories.





Underemployment and career limits

A further issue in the literature is underemployment. Hanson et al. (2024) argue that many graduates are unable to secure work that matches their qualifications, demonstrating that higher education does not automatically produce graduate-level employment. This is an important point for bounded employability because it shows that even highly educated individuals may experience constrained labour-market outcomes. In STEM, where degree holders are often assumed to move directly into professional roles, underemployment exposes the limits of meritocratic narratives and highlights the importance of labour-market demand, occupational gatekeeping, and unequal access to opportunity.

The notion of a bounded career is also relevant here. King, Burke and Pemberton (2011) argue that careers are shaped by structural constraints and are not entirely open to individual choice or effort. This helps explain why graduates from minoritised backgrounds may find themselves diverted into lower-paid, less secure, or less relevant roles, even when they have strong academic credentials. The literature therefore suggests that graduate labour-market outcomes are not simply the result of personal employability, but are shaped by the interaction between graduates' resources and the opportunities available to them.



Institutional support and student success

While structural inequalities remain central, higher education institutions still have a role in supporting more equitable outcomes. Dunbar–Morris (2025) argues that personal tutoring and development frameworks can contribute to student success by improving guidance, belonging, and progression support. This is important because many employability inequalities begin before students enter the labour market.

If students do not receive consistent academic and pastoral support, their attainment and confidence may be affected, which in turn can influence later employment outcomes.

Research by Gabi et al. (2024) supports this connection by showing that personal tutors may help reduce the undergraduate degree–awarding gap for racially minoritised students. Similarly, Nweke and Sulu (2023) identify weaknesses in personal tutoring provision and suggest that inconsistencies in support can contribute to attainment gaps.

These studies indicate that institutional practices within universities matter because they shape both student experience and graduate readiness.

However, they also suggest that support interventions alone cannot fully overcome wider structural barriers in employment. Personal tutoring may help improve attainment and progression, but it does not remove the labour–market inequalities that graduates encounter after university.

Employability services have an important role in shaping graduate expectations and providing individualised support, particularly for BAME students who may arrive at university with less social capital and fewer informal connections to professional networks. Careers teams and employability offices can help bridge this gap by making expectations explicit, demystifying recruitment processes, and offering tailored guidance on applications, interviews, and networking.

The literature suggests that students from minoritised and disadvantaged backgrounds often require more structured support because they may have less access to the social and cultural capital that advantages more privileged students in the graduate labour market (HEPI, 2020; HE Professional, 2023).

However, it is also important to recognise that reduced social capital is not unique to BAME students, as white working–class students may face similar barriers in accessing informal knowledge, workplace networks, and career–enhancing opportunities (UCL, 2023).

For this reason, employability support should be both targeted and inclusive, combining tailored interventions for BAME students with a broader recognition of disadvantage across different social groups (TASO, 2022; UCL, 2023).





Skills, capital and employer expectations

Some literature emphasises the importance of transferable and noncognitive skills in shaping workforce outcomes. Orrell (2018) argues that noncognitive skills such as resilience, communication, and teamwork are valuable for employment success. This perspective is useful because it reminds us that employability is not only about technical knowledge, especially in STEM fields where collaboration and adaptability are important. However, a skills-based model becomes limited if it ignores the unequal conditions under which graduates attempt to convert skills into jobs.

For BAME STEM graduates, access to employment is shaped not only by what they know or can do, but also by how employers interpret their credentials, how recruitment processes operate, and whether professional networks are open to them. The literature on employability in context therefore suggests that skills should be understood alongside social and structural capital, rather than treated as a universal solution. This is why bounded employability is a useful concept: it preserves the importance of agency while recognising the constraints that shape labour-market outcomes (Tomlinson, 2023; King, Burke and Pemberton, 2011).

The ISE Student Development Survey 2025 highlights a growing "skills gap" where employers are prioritizing "human-centric" or "soft" skills that complement AI tools, such as resilience, adaptability, critical thinking, and emotional intelligence.

Institute of Student Employers (2025)



The Gap

A limitation of the literature is that it can show broad patterns in graduate employment, but it often cannot fully capture the lived experiences behind those patterns. Much of the existing evidence is quantitative, so it tells us what the outcomes are, but not how graduates experience the transition into work, how they interpret the barriers they face, or how race, identity, and institutional support shape those experiences in practice.

This is a significant gap in the literature, and it is one that this report addresses through the interviews and focus groups we conducted with BAME STEM graduates, employers, STEM charities, and university staff.

Another gap in the literature is the limited acknowledgement of race and, more specifically, intersectionality.

Many studies discuss inequality in broad terms, but in doing so they can miss how race interacts with other factors such as class, gender, and institutional context. That lack of depth can flatten the analysis, when in practice it is often these intersecting experiences that shape how graduates move through higher education and into employment.

Including these voices allows the report to move beyond statistics and policy statements to explore the realities of the transition to work in a more detailed and grounded way.

It also ensures that the analysis reflects both graduate experience and the perspectives of the wider stakeholders involved in shaping employability outcomes. In this sense, the report helps address a key limitation in the literature by combining lived experience with stakeholder insight.

Summary

Overall, the literature shows that the transition from university into STEM employment is structured by inequality, not simply individual merit. Evidence on STEM diversity, graduate underemployment, and ethnic inequalities in employment outcomes all point to the persistence of barriers for BAME graduates (Fry, Kennedy and Funk, 2021; Hanson et al., 2024; HESA, 2021;). In addition, only 34.1% of Black graduates move into "high-skilled" jobs shortly after graduation, compared to a general graduate high-skilled employment rate of 67.9%. (Graduate Labour Market, 2025) and while 31% of engineering and technology undergraduate entrants are from minority ethnic backgrounds, they represent only 12.4% of the engineering workforce. (Engineering UK Report, 2025)

At the same time, research on tutoring and student support shows that universities can help reduce some inequalities before students reach the labour market (Dunbar-Morris, 2025; Gabi et al., 2024; Nweke and Sulu, 2023).

Taken together, these studies support a bounded employability framework, in which graduate outcomes are seen as shaped by both individual capability and structural constraint.



Methodology

40
Interviews

2
Focus Groups

Research Design and Theoretical Framework

This study adopted a qualitative research design to investigate the experiences of BAME STEM graduates transitioning from higher education into employment, alongside the perspectives of key stakeholders. Qualitative methods were selected as they enable an in-depth exploration of participants' lived realities, subjective interpretations, and contextual influences on career trajectories (Creswell and Poth, 2018).

This approach aligns with the interpretive paradigm, which prioritises understanding social phenomena from the perspectives of those involved, rather than testing hypotheses through quantitative measures (Bryman, 2016). The design was participatory in nature, incorporating both individual narratives and group discussions to capture personal agency alongside collective structural insights.

The research was underpinned by the concept of bounded employability (Pemberton, Burke and King, 2011), which posits that graduate career progression is constrained by labour-market structures, social capital deficits, and institutional barriers, rather than determined solely by individual merit. This framework informed the development of semi-structured interview schedules and focus group guides, ensuring questions probed decision-making processes, perceived obstacles, and support mechanisms within real-world contexts (Silverman, 2020).





Sampling and Participants

Participants were purposively sampled to represent diversity in ethnicity, career stage, and professional sector, following principles of maximum variation sampling to illuminate common patterns across heterogeneous cases (Patton, 2015). Forty semi-structured interviews were conducted with BAME STEM graduates, including recent graduates (within 3 years of completion) and more mature students (5+ years post-graduation).

This mix allowed comparison of early-career challenges with longer-term reflections on progression. Interviews spanned multiple UK locations, including Birmingham, York, Bristol, London, and Manchester, to reflect regional variations in labour-market opportunities and institutional support. Two focus groups were held with employers from engineering, science, and construction clusters, involving representatives from 12 organisations in total.

These groups provided employer-side insights into recruitment practices and diversity barriers. An additional focus group informed a student employability session, integrating graduate voices to bridge experiential gaps.

Participants were recruited via university networks, professional associations, and snowball sampling, ensuring ethical considerations such as informed consent and anonymity were prioritised from the outset (Cohen, Manion and Morrison, 2018).



Data Collection

Data collection combined semi-structured interviews and focus groups, a multi-method strategy recommended for triangulation and enhanced validity in qualitative inquiry (Denzin, 2017). Interviews, lasting 45–90 minutes, used a flexible topic guide covering university experiences, job search strategies, encountered barriers, and support received. This format allowed probing while maintaining consistency (Kvale and Brinkmann, 2015).

Focus groups (n=2, 6–8 participants each, 90 minutes) facilitated interactive discussion on systemic issues, leveraging group dynamics to generate shared insights unavailable in individual settings (Krueger and Casey, 2015).

All sessions were audio-recorded with consent, transcribed verbatim, and anonymised. Field notes captured contextual observations, such as non-verbal cues in in-person meetings. Data collection occurred between August 2024 to December 2025, following institutional ethics approval from the University of Greenwich, which ensured compliance with GDPR, participant welfare, and right to withdraw (British Educational Research Association, 2018).





Data Analysis

Analysis followed a reflexive thematic approach, as outlined by Braun and Clarke (2006; 2021), involving six iterative phases: familiarisation with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. NVivo software facilitated systematic coding of transcripts, with two researchers independently coding a subset for reliability (Nowell et al., 2017).

An inductive–deductive process began with open coding to identify emergent patterns (e.g., ‘network exclusion’, ‘attainment gaps’), followed by grouping into higher–order themes (e.g., ‘structural constraints’, ‘institutional interventions’) aligned with bounded employability.

Themes were iteratively refined through team discussions, member–checking with select participants, and constant comparison against the dataset (Charmaz, 2014). This abductive strategy linked empirical findings to theoretical concepts, informing praxis–oriented recommendations. Rigour was ensured via audit trails, thick description, and reflexivity statements addressing researcher positionality (Tracy, 2010).



Ethical Considerations

Ethics approval was secured from the University of Greenwich prior to commencement. Participants received detailed information sheets and provided written consent. Data was stored securely on encrypted university servers, with pseudonyms used in reporting.

Furthermore, to effectively contextualise the qualitative findings, anonymised participant profiles (or pseudonym) were constructed. These profiles deliberately synthesise key background variables extracted from the interview transcripts—such as the participant’s age, specific STEM degree, and current employment role.

The methodological purpose of these profiles is to vividly and accurately illustrate the stark contrast between the participants’ advanced academic training and their current state of underemployment. By utilising these profiles, the research humanises the complex systemic barriers discussed in the thematic analysis.



Limitations

The sample, while diverse, was predominantly urban (Birmingham, York, Bristol etc.), limiting insights into rural or peripheral UK experiences.

A broader geographical spread could test urban-rural variations. Ethnicity representation favoured certain groups (e.g., South Asian, Black African); greater inclusion of underrepresented minorities, plus deeper intersectional analysis of gender-ethnicity dynamics, would enhance nuance. Sample size (n=40 interviews) achieved saturation for core themes but precluded exhaustive subgroup comparisons.

Future work could expand quantitatively to validate qualitative patterns. Despite these constraints, the study's depth provides robust evidence on bounded employability for BAME STEM graduates.



Pseudonyms

| ID | Pseudonym | Age | Degree | Current Job |
|----|-----------|-----|--|----------------------------------|
| 1 | Laura | 26 | BSc Biomedical Science | Healthcare Assistant |
| 2 | Aaron | 25 | BEng Electrical Electronic Engineering | Unemployed (Former FinTech) |
| 3 | Abigail | 29 | MSc Administrator Health Sector | NHS Administrator |
| 4 | Olivia | 32 | MSc Healthcare Management / Biochem | Support Worker |
| 5 | Robert | 30 | Master's Degree Biomedical | Support Worker |
| 6 | Samuel | 28 | MSc Public Health / Biomedical | Secondary School Teacher |
| | Valerie | 31 | BSc Biomedical Science | Care and Support Worker |
| 8 | Esther | 35 | MBBS (Medical Doctor) | Support Worker |
| 9 | Ophelia | 30 | MSc Human Resources / Cell Biology | HR Advisor |
| 10 | Marcus | 32 | MTech Applied Parasitology | Support Worker |
| 11 | Precious | 43 | BSc Pharmacy | Clinical Pharmacist |
| 12 | Kiara | 25 | BSc Agriculture / Mech Engineering | Hatchery Supervisor |
| 13 | Daniel | 30 | BSc Computer Engineering | RAF Chinook Crewman |
| 14 | Jacob | 29 | BSc Mechanical Engineering Design | Systems Engineer |
| 15 | Aisha | 41 | BSc Pharmacy / Advanced Prescribing | Portfolio Pharmacist |
| 16 | David | 27 | BSc Computer Technology | Freelance IT Support |
| 17 | Harry | 26 | BSc Biology | Community Health Worker |
| 18 | Florence | 29 | BSc Nursing | Care Assistant |
| 19 | Jonathan | 28 | BSc Medical Science | Social Care Worker |
| 20 | Caleb | 27 | BSc Geology | Office Secretary |
| 21 | Nathan | 26 | BSc Computer Technology | Freelance Tech / Social Worker |
| 22 | Anna | 25 | MSc Computer Science | Hotel Receptionist |
| 23 | Abdul | 28 | BSc Computer Science and Engineering | Fast-Food Restaurant Manager |
| 24 | Charles | 56 | BSc Mechanical Engineering Design | Manual Machinist |
| 25 | William | 34 | MSc Cancer and Molecular Biology | Carer Support Worker |
| 26 | Rika | 31 | BSc Pharmacy / Clinical Diploma | Clinical Pharmacist |
| 27 | Iman | 30 | BSc Pharmacy / Postgrad Prescribing | Clinical Pharmacist |
| 28 | Diana | 29 | BSc Biomedical Science | Care Worker |
| 29 | Isabella | 28 | BSc Pharmacology / MSc Psychology | Trainee Clinical Psychologist |
| 30 | Olu | 45 | MSc Computer Technology | Part-Time Cleaner / Event Server |
| 31 | Fatima | 27 | BSc Biomedical Science | Medical Student |
| 32 | Michael | 25 | BSc Physics | Logistics Coordinator |
| 33 | Chloe | 24 | BSc Mathematics | Retail Assistant |
| 34 | Jamal | 25 | BSc Computer Science | Warehouse Operative |
| 35 | Priya | 28 | MEng Civil Engineering | Administrative Assistant |
| 36 | Tariq | 26 | BSc Physics | Delivery Driver |
| 37 | Amira | 29 | MSc Data Science | Supermarket Supervisor |
| 38 | Kwame | 31 | BEng Aerospace Engineering | Logistics Coordinator |
| 39 | Fatima | 23 | BSc Biomedical Science | Receptionist |
| 40 | Rahul | 34 | MSc Pharmacology | Care Worker |



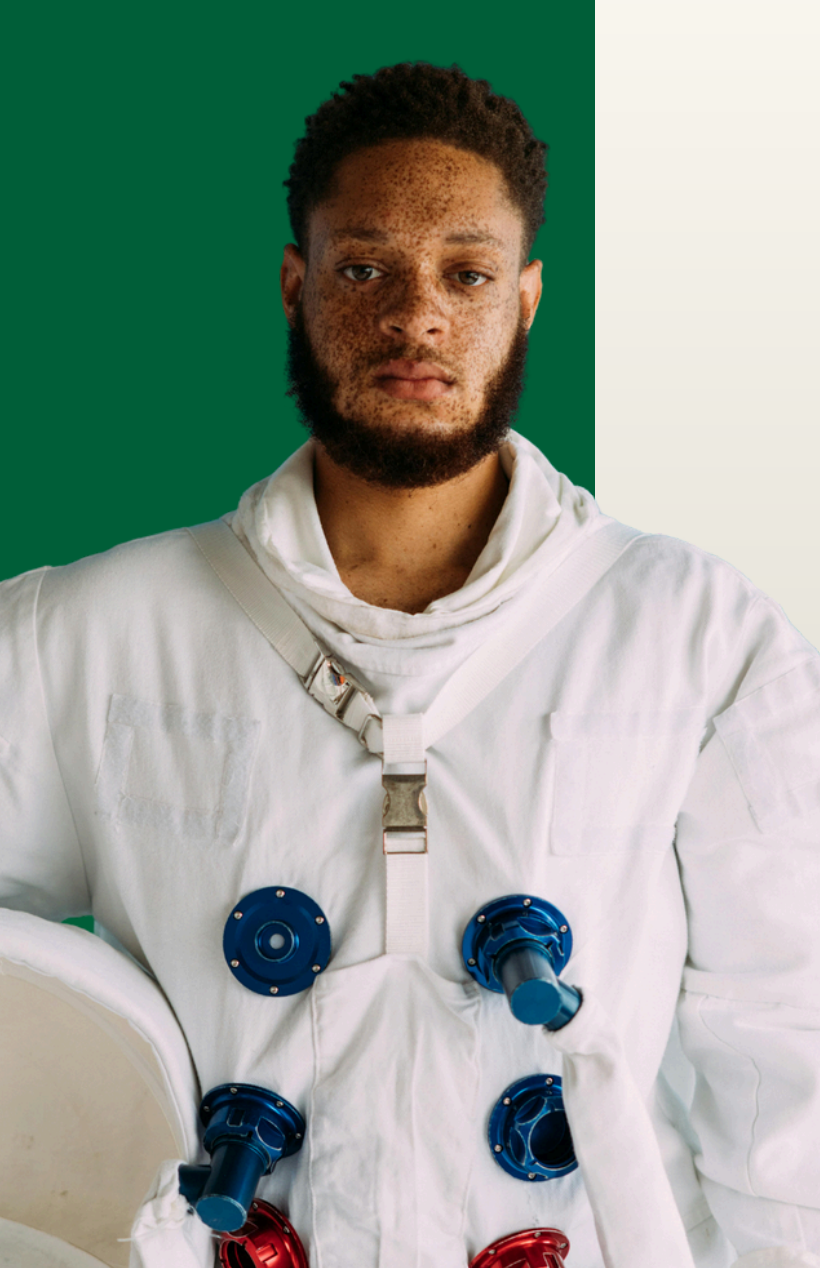


Graduate Interviews

A Thematic Analysis of Underemployment Among Domestic BAME STEM Graduates in the UK

This report provides a comprehensive, anonymised thematic analysis of the lived experiences of Black, Asian, and Minority Ethnic (BAME) graduates possessing degrees in Science, Technology, Engineering, and Mathematics (STEM). The primary objective of this analysis is to dissect the deeply entrenched structural, cultural, and psychological barriers that drive underemployment within the United Kingdom's domestic job market. Following the analysis of the domestic experience, a separate, distinct section is dedicated to the unique legislative vulnerabilities experienced by international BAME STEM graduates.

Theme 1: The Illusion of Meritocracy and the "Hidden" Job Market



1.1. Generational Privilege and the Lack of Networking Capital:

For many domestic BAME graduates, the professional landscape operates as a **"hidden market"** powered by generational networking—social capital that minority graduates frequently lack. Iman (a British-Asian pharmacist) articulated how navigating corporate environments without established ties places minorities at an immediate disadvantage, stating, **"because I was one of the first... to actually go into university... you have to work hard yourself and make those connections yourself outside of your family."**

She contrasted this with white peers whose **"parents were a pharmacist... they've already come from a place and where they have some privilege and they have connections."** This systemic exclusion is echoed by William (a British Black African biomedical graduate), who observed that recruitment frequently relies on nepotism, noting that **"where families know each other... they can just make you join."**

Furthermore, Aaron (a British Black African engineering graduate) emphasised that securing elite roles often bypasses merit entirely, occurring merely **"because they knew somebody who knew somebody,"** leaving unconnected BAME talent completely excluded.

because I was one of the first... to actually go into university... you have to work hard yourself and make those connections yourself outside of your family.

because they knew somebody who knew somebody
hidden market

”

If you look at their favourites, they are all white... myself and my colleague who's black, we've both felt like we had to work harder and tick more boxes to get the same outcome

“

”

because they knew somebody who knew somebody

hidden market

“

1.2. The Burden of Over-Performance and Tokenism:

This systemic exclusion forces domestic BAME graduates to exert disproportionate effort merely to achieve a baseline level of professional recognition. Iman highlighted this exhaustion, summarising that BAME staff must **"excel in order to be recognised. Mediocre is not going to cut it."** Rika (a British-Asian clinical pharmacist) recounted being denied career progression despite possessing advanced clinical diplomas.

She attributed this directly to racial favouritism by white management panels, observing: **"If you look at their favourites, they are all white... myself and my colleague who's black, we've both felt like we had to work harder and tick more boxes to get the same outcome."** Similarly, Precious (a British Black African pharmacist) noted that top leadership roles remain heavily skewed towards non-BAME candidates.

She observed that minority staff are frequently bypassed for promotions in favour of less-experienced white peers, who then ironically continue to rely on the passed-over BAME staff for **"advice and support"** reinforcing a tokenistic hierarchy.



Theme 2: Systemic Bias, Racial Profiling, and the "Application Void"



.1. Opaque Assessment Centres and the Denial of Feedback:

Modern graduate scheme assessment centres act as invisible barriers for minority students lacking specific corporate coaching. Aaron recounted the bewilderment of facing these obscure assessment structures alone: **"some of the other behavioural tests... psychometrics tests and these weird games... it was quite strange for me to initially do as it's not something that you can really prep for."**

Crucially, when BAME candidates are rejected following rigorous interviews, they are routinely met with silence. Aisha (British Asian Portfolio Pharmacist) recalled applying for a prestigious paediatric role and being rejected without actionable insight: **"they never responded to how I could have improved my answers... I could never improve."**

Similarly, Marcus (British Black Caribbean Parasitology Graduate), despite holding a Master's degree, repeatedly applied to hospital laboratories only to receive generic rejections. He noted, **"It'll be better if you get any feedback and you'd understand... what's wrong,"** suspecting that the complete lack of transparency masks systemic bias and racial favouritism.

some of the other behavioural tests... psychometrics tests and these weird games... it was quite strange for me to initially do as it's not something that you can really prep for

they never responded to how I could have improved my answers... I could never improve

“
somewhere isolated in the
business away from my
team... eating lunch alone
”

“
out of place
”

.2. Racial Profiling in National Security and Defence:

The data reveals that systemic exclusion operates visibly even within highly regulated STEM sectors, where domestic BAME individuals face intense suspicion and profiling. Jacob (a British-born mechanical engineer of Mixed English and Chinese heritage) reported severe barriers to his career progression due to explicit racial profiling regarding his geopolitical ancestry within the defence sector.

Subjected to extreme delays in obtaining security clearance, he noted: **"Why English people were passing the clearance much faster than I was... I could only assume it was that because my life isn't very interesting and I don't do drugs."** He was subsequently structurally isolated, placed **"somewhere isolated in the business away from my team... eating lunch alone."**

This alienation is a shared experience; Aaron noted that in the financial technology sector, the distinct lack of diversity left him feeling fundamentally **"out of place"** compounding the psychological toll of navigating white-dominated corporate environments as a minority professional.



Theme 3: Intersectional Disadvantage: The Compounding Effects of Race, Gender, and Religion



3.1. The "Double Whammy" of Gender Bias and Islamophobia:

Underemployment and marginalisation are profoundly exacerbated for domestic graduates navigating multiple, intersecting minority identities. BAME women in STEM face compounded discrimination that weaponises their gender, race, and religious expressions. Fatima (a visibly Muslim, Asian academic) detailed how her professional authority is inherently questioned by colleagues: **"If you're telling someone to do something. But it's coming from a woman. It's not very well received... It's like you've got the short end of the stick both times."** Furthermore, she shared harrowing experiences of religious abuse from the public while delivering clinical care: **"I had direct Islamophobia come from one of the patients... because I'm visibly Muslim."** This intersectional disrespect is echoed by Aisha who, despite functioning at an advanced prescribing level, has her vast clinical skill set actively demeaned by management. She recalled her deputy practice manager casually exploiting her capabilities while referring to her derogatorily as the **"discount GP."**

If you're telling someone to do something. But it's coming from a woman. It's not very well received... It's like you've got the short end of the stick both times.

discount GP

Only women are offered to go on leave for a whole year... that puts me back a year to everyone else... I do wonder how much of that will play on people's mind when I'm being interviewed... Like, oh, she's a mum.

motherhood penalty

3.2. The Motherhood Penalty in STEM Progression:

The data also reveals a profound **"motherhood penalty"** that disproportionately stalls the careers of female BAME STEM professionals compared to their male counterparts, keeping them trapped in lower-tier roles. Priya (a British Asian administrative assistant) articulated how taking statutory maternity leave actively damages employer perceptions of a woman's commitment and long-term viability: **"Only women are offered to go on leave for a whole year... that puts me back a year to everyone else... I do wonder how much of that will play on people's mind when I'm being interviewed... Like, oh, she's a mum."**

Florence (A British Black Caribbean Nursing Graduate) similarly highlighted this systemic bias, noting that taking career breaks for childcare allowed her male and non-BAME peers to swiftly overtake her into senior management bands. Even Ophelia (a Black African HR Advisor) recognised that within healthcare systems, policies meant to protect maternity appointments are frequently ignored, leaving minority mothers feeling completely unsupported and structurally disadvantaged in their career progression.



Theme 4: Professional Deskilling, Stagnation, and Salary Suppression



4.1. The "Discount" Minority Professional and Pay Inequality:

The financial consequences of systemic discrimination manifest as severe ethnic and gender pay gaps, effectively rendering BAME staff as **"discount labour"**. Aisha recounted the devastating realisation that she was vastly underpaid compared to a white peer performing the exact same clinical duties: **"doing the same job as a colleague... male... white... By chance I found out like six months later he was literally on like 15 K more than I was... Why?"**

This deliberate salary suppression is widespread across STEM fields. Kwame (Black Caribbean Aerospace Engineering) reported that despite taking on significant project leadership responsibilities in systems engineering, his employer suppressed his salary: **"people who are starting the graduate scheme here... are on the same salary that I'm on. So I'm quite far behind."**

Furthermore, Daniel (a Black African computer engineering graduate) noted a complete lack of transparency in corporate tech pay structures, where **"every single person in that room was paid something different"** severely disadvantaging minorities who lack negotiation leverage.

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discount labour

Which could be done by a non pharmacist. It could be done by anyone... trolling through notes and just like clock and just like auditing almost

"I've been stuck on Band 7... they don't really want me using my skill because the minute I start prescribing... you need to increase the remuneration

4.2. Infrastructure Resistance and Deliberate Underutilization:

Beyond salary suppression, domestic BAME graduates are actively deskilled by corporate and clinical infrastructures that refuse to utilise their advanced qualifications. Rika reported that despite holding postgraduate clinical diplomas, structural resistance within the NHS forces her to perform menial, administrative tasks far below her expertise: **"Which could be done by a non pharmacist. It could be done by anyone... trolling through notes and just like clock and just like auditing almost."** Similarly, Aisha is deliberately blocked from advancing because hospital management refuses to pay the corresponding salary for her independent prescribing qualifications: **"I've been stuck on Band 7... they don't really want me using my skill because the minute I start prescribing... you need to increase the remuneration."** This forced stagnation traps talented individuals. Isabella (a Black African trainee clinical psychologist) experienced severe underutilisation, enduring gruelling 12-hour night shifts as a low-paid support worker just to survive while navigating severe bottlenecks in clinical progression.



Theme 5: The Institutional Disconnect: Inadequacies in University Career Support



5.1. The Gap Between Academic Theory and Corporate Reality:

A recurring grievance among domestic BAME participants is the profound failure of UK Higher Education to bridge the gap between academic theory and the discriminatory realities of the STEM job market. Tariq (A British Asian Physics Graduate) succinctly summarised this deficit, noting that universities provide scientific knowledge **"but not the everything else that comes with it... The emotional awareness, the sort of interpersonal skills. The confidence you'd need."**

Graduates argued that generic university offerings are severely inadequate. Charles (A Mature Black Caribbean Mechanical Engineering Design Graduate) recalled an unhelpful CV workshop, noting, **"If I was going for design engineering, it definitely needs to be different to what was being taught."** Consequently, minority students are left holding a false sense of security.

Daniel admitted that leaving university, his expectations were heavily mismatched with corporate realities, pointing out that students lacking corporate exposure struggle because **"there's not enough weight on the qualification itself,"** and universities fail to teach BAME candidates how to navigate opaque corporate structures.

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there's not enough weight on the qualification itself

I don't think universities prepare people for careers progression at all... I felt like I had to even my placement... find that myself

an accurate representation of what you're getting yourself into

5.2. A Total Lack of Placement Facilitation and Alumni Networking:

A critical institutional failure highlighted across the transcripts is the severe lack of mandatory, university-facilitated industry placements and alumni networking. Unlike well-connected white peers, BAME students rely heavily on institutions to provide industrial exposure, yet are frequently abandoned.

Isabella expressed deep frustration at this lack of support, noting: "**I don't think universities prepare people for careers progression at all... I felt like I had to even my placement... find that myself**" by physically walking into hospitals to beg for opportunities. Jacob echoed this, stating that summer engineering placements were never formally facilitated, leaving students to blindly seek them out.

Furthermore, universities fail to provide robust BAME mentorship. Jamal (A British Black Caribbean computer science graduate) pointed out the urgent need for realistic guidance, stating that universities fail to give "**an accurate representation of what you're getting yourself into,**" leaving minority graduates completely isolated when transitioning from academia into hostile STEM labour markets.



Separate Contextual Insight: The Distinct Vulnerabilities of International STEM Graduates



The Weaponisation of Immigration Policy and the "UK Experience" Paradox:

For international BAME STEM graduates, underemployment is a forced legislative requirement for survival. Abdul (A Bangladeshi Computer Science and Engineering Graduate) was forced to accept a minimum-wage fast food role simply to maintain his legal residency, noting the job was purely **"as a means of sustenance, and the remaining here in the United Kingdom."**

Valerie (a Kenyan biomedical scientist working as a care worker) similarly summarised this structural trap: **"the government rules mostly because it's very harsh on us immigrants... we have to get the sponsorship and for us to get sponsorship, it's only these underpaying jobs."** Furthermore, highly experienced international professionals face the impossible **"UK experience"** paradox

. Diana (A Caribbean biomedical science graduate working in care sector) articulated the immense frustration of being rejected by the NHS: **"they will ask for UK experience and I can't have the experience until I get a job."** Finally, Olivia (A Sri Lankan MSc Healthcare Management graduate working in the care sector) noted that employers actively weaponise this desperation, paying international graduates significantly less because **"they think because we need visa sponsorship, then they could pay us less."**



Stakeholder Focus Groups

The systemic underemployment of Black, Asian, and Minority Ethnic (BAME) graduates in Science, Technology, Engineering, and Mathematics (STEM) represents a critical failure within the contemporary education-to-employment pipeline. Despite the high-level technical qualifications attained by these individuals, empirical evidence and stakeholder testimonies suggest that they consistently encounter delayed or disrupted transitions into the professional workforce.

Through an analysis of perspectives from various stakeholders—including recent STEM graduates, university academics, employability specialists, and representatives from the construction, the charity, and transport infrastructure sectors—a multifaceted picture emerges. This analysis identifies four primary themes driving this underemployment: the "work-readiness" gap stemming from higher education deficits, systemic biases inherent in recruitment frameworks, the stagnation associated with corporate tokenism, and the compounding effects of intersectional socioeconomic disadvantage.

Theme 1: Higher Education Deficits and the "Work-Readiness" Gap



A recurring academic and industry consensus suggests that traditional higher education paradigms are fundamentally ill-equipped to provide BAME STEM graduates with the practical, transferable skills demanded by modern employers. University curricula often prioritise theoretical rigour over professional adaptability. STEM subjects, in particular, suffer from an overly abstract pedagogical approach. As a university academic observed, **"Subjects in CMS tend to be quite logic based and prior attainment is a major influence on success"**.

This logic-heavy focus frequently leaves little room for the integration of essential professional development or practice-based application. Consequently, a significant disparity exists between academic brilliance and professional application. An employability specialist from a charity context asserted that **"technically they're brilliant... but they don't know how to transfer that into real world settings"**. The result is a cohort of graduates who may possess top-tier degrees but lack the collaborative and communicative skills expected in a corporate environment, with experts noting that many graduates **"have had first, two ones and have done nothing else in their entire university life, so they have no experience, very little group participation"**.

A fundamental complexity driving this work-readiness gap is that many students rely solely on their degree to secure a job. This reliance is heavily exacerbated by the diminished social capital that many BAME students possess compared to their white colleagues. Employability stakeholders point directly to a **"lack of career knowledge... lack of professional networks... and lack of professional level experience"** as primary barriers for these demographics. Because these students are less likely to have familial links to professional STEM networks, they operate under the assumption that a degree is enough, completely unaware of the unwritten rules of corporate recruitment. Unfortunately, this reality is not adequately emphasised by programme and employability staff.

To effectively bridge this gap, the effort to get students ready for the workforce cannot be treated as a last-minute addition in their final year of study. Currently, universities frequently wait too long to intervene. An employability specialist warned that **"we can't just wait until the [Year 3] when they're ready, because at that point a student, particularly being student from a low associate background, is solely focused on their degree... they just want to get the grade"**. Instead, comprehensive advising must begin from Year 1, with stakeholders questioning **"how do we do it through early intervention like first year, even foundation years"**. Because voluntary employability talks often see attendance that is **"very poor"**, programme staff must proactively provide industry insights and act as the professional network the students lack from the moment they arrive on campus.

However, early advising and reality checks are insufficient if they are not paired with enforced, practical exposure. To truly dismantle the reliance on academic degrees, universities must make industry placements and internships a mandatory component of the core curriculum to ensure that absolutely all students leave the university with tangible work experience. The success of structured placement programmes is well-documented; a university academic noted that when students complete a placement year, **"they seem to be much happier because they get most of the rough edges"** smoothed out before graduation, and "in many cases the actual get employment from the same companies".





Making placements mandatory forces both the university and the student to prioritise employability. Yet, stakeholders acknowledge that "The traditional year long placement path isn't accessible for everyone", particularly for BAME students balancing caregiving or part-time jobs. Therefore, universities and employers must collaborate to mandate "innovative ways, whether that's through entrepreneurship modules, whether that's through micro placements, whether that's through part-time placements".

Employers must actively facilitate this structural shift. A representative from a transport infrastructure employer suggested that organisations must "partner the employer with academia so that research projects or big assignments... could be done as part of a team" within the corporate environment, allowing students to be "delivering it in the real world".

By combining Year 1 advising with universally mandatory, accessible work placements, universities can ensure that BAME STEM graduates do not enter the labor market relying solely on theoretical knowledge, but rather armed with the practical experience and socio-cultural capital required to succeed.

delivering in the real world

Theme 2: Systemic Biases and Cultural Disconnects in Recruitment



The transition from higher education to the workforce is further obstructed by recruitment practices that inherently favour candidates possessing specific forms of social capital. Employability experts emphasize that BAME graduates often face a trifecta of barriers, specifically a **"lack of career knowledge... lack of professional networks... and lack of professional level experience"**.

Modern recruitment technologies, rather than democratising the hiring process, can sometimes encode new layers of cultural and behavioural bias. For instance, the increasing reliance on digital assessment tools has been criticized by an employability stakeholder, who argued that **"video interviews in themselves, have their own biases because they suit an extrovert candidate"**. This preference for extroversion can be culturally alienating for demographics that value different interpersonal dynamics.



The profound impact of these cultural disconnects was powerfully articulated by a STEM graduate in the construction cluster, who noted how cultural expressions of respect can be easily misinterpreted by Western recruiters as a lack of capability or assurance. The graduate observed that **"If I walk up to a recruiter right now as a white person... I already know how to relate"**.

In contrast, their own cultural background necessitated a different professional posture: **"But as a Nigerian, I have a different approach. I'm like more 'good afternoon, Sir'. And that humility may make me not seem like I'm confident"**. These subtle, culturally coded misinterpretations during the recruitment phase frequently result in highly qualified BAME candidates being filtered out before their technical competencies can even be adequately assessed.

And that humility may
make me not seem like I'm
confident

Theme 3: organisational Tokenism and the Progression Bottleneck



Gaining entry into a STEM profession does not equate to overcoming underemployment; frequently, BAME graduates find themselves trapped in entry-level roles characterized by stagnation and performative tokenism. Testimonies from the construction cluster reveal deeply problematic business practices where diversity metrics are prioritised over genuine employee development. One graduate recounted a deeply demoralising start to their career, stating, **"I was like an inconvenience. Like they just needed to fill a certain quota"**. Instead of receiving the foundational training necessary for a junior engineer, the graduate was left entirely unoccupied, lamenting, **"I was literally just watching YouTube videos every day"**.

This performative approach to diversity creates a hostile environment that severely impacts the psychological well-being and career trajectory of young professionals. Another graduate pointed out that **"business practises in terms of businesses having to want to be have a diverse group"** often backfire when the company culture is unsupportive. They further argued that **"forcing companies or these policies where companies have to be diverse... is actually just making them employ and that's just not my experience"**. The psychological toll of this neglect is profound, with the graduate confessing, **"I was so depressed... I'd lost my confidence like I couldn't do anything right"**.

Crucially, this structural stagnation is not an isolated incident but a systemic flaw widely recognised by major employers themselves. Employers admit that their sectors historically exclude minorities; an employer in the construction cluster acknowledged that their field is heavily perceived as a **"male and white industry,"** emphasising that without active integration, **"we're missing out on really diverse talent, which means that we're missing out on innovation"**. Similarly, a representative from the technology sector noted that while businesses are quick to publicly praise the value of diversity, **"only like 1/4 of them have strategies to remove bias in their hiring process"**, leading directly to the performative environments graduates experience.

Employability specialists and charity stakeholders point out that this surface-level diversity naturally results in severe tokenism, particularly at the top of organisations. As one stakeholder observed regarding corporate leadership, **"If people don't see people that look like them at the level at senior levels, etcetera, it's going to be off putting and then you've got a level of tokenism on some websites, except you know the one, the one black male, one asian woman"**. This creates a profound progression gap. The same stakeholder cited alarming industry statistics to prove that career stagnation is systemic rather than performance-based, noting that **"if you're a black male, you progress 32% slower, but there's no links to performance"**. Instead of technical ability, career advancement is unfairly gated by subjective cultural fit, **"unwritten rules,"** and the ability to access informal **"water cooler moments"**.

A representative from a transport infrastructure employer identified this as a widespread progression bottleneck, arguing that corporate structures fail to look beyond initial hiring metrics. They stated, **"When you look at social mobility... the employer's primary focus is always on the input. Get them in, get in. And I'm always saying, well, yeah, but you get them in, you don't move them on and then you haven't really enabled anything at all"**. This employer added that there is a **"total bottleneck because they're all being pushed to bring people in and nobody's thinking further down the system"**. Even when diversity numbers appear to increase on paper, the reality of underemployment persists. Reflecting on their own sector's diversity statistics post-COVID, the infrastructure employer admitted, **"if you look at the distribution of those roles, I suspect it it doesn't show that they've gone into the roles that that would match with their degree or their background"**.





Consequently, there is a severe lack of BAME representation in senior leadership and management roles. To overcome this, employers and stakeholders emphasize that basic support is no longer sufficient. As an employability expert argued, **"Mentoring is great in the early years, but I think it's sponsorship as well."**

Once you you need, you need those allies to really talk to **really be your spokesperson as well once you're in".** Without a clear path for upward mobility, or adequate advocacy and allyship from senior colleagues, BAME graduates are left disillusioned, ultimately leading to high attrition rates within these vital STEM industries.

Mentoring is great in the early years, but I think it's sponsorship as well.

Theme 4: Socioeconomic Barriers and Intersectionality



Even when universities provide students with a good degree, excellent employability support, and strong early advising, it cannot be forgotten that many BAME STEM graduates find it incredibly difficult to actually take advantage of these opportunities. This disconnect is heavily driven by complex socioeconomic barriers that exist entirely outside of the classroom.

First, students are often unable to take advantage of placement opportunities because they carry significant familial and caring responsibilities, alongside the need to maintain long-term part-time jobs to survive financially. A university academic stressed that institutions must consider **"what students are dealing with outside of university that prohibits full engagement"**, pointing out that **"many students have children or siblings to "support"** or may be **"working"** when extracurricular opportunities are scheduled. Because of these intense pressures, stakeholders acknowledge that the **"traditional year long placement path isn't accessible for everyone"**. Students simply cannot afford to give up their steady income or abandon their dependents for a short-term placement or internship. As one employability expert observed, students from less advantaged backgrounds often **"have to go home and has caring responsibilities, you can't just stop"**, making participation in additional professional development an impossible luxury.



Going even further, employability representatives suggest that because students with familial responsibilities are consumed by these immediate pressures, they are unable to take advantage of opportunities and fail to start their career preparation early enough.

One representative vividly illustrated this, noting that students carrying heavy family responsibilities miss crucial early career milestones: **"they didn't get the train at the age that I did"**. Because they miss this initial window for career preparation, **"it's very hard for them now to jump back on that train and catch up"** with more privileged peers. This early deficit actively contributes to a stunted career trajectory, with the long-term consequence being that **"they stay for their whole life, unemployed, underemployed"**.

A further connected consideration is that students feel very apprehensive about pursuing short-term potentially career enhancing internships and placement opportunities due to the financial instability they present, and so tend to stick with their part-time jobs. These roles are usually based in low-level positions within hospitality or retail. An employability coach noted that students often **"don't really see that employment that they do have, whether it's, you know, working part time at a coffee shop or whatever it is retail as a as a transferable into that"** professional sphere. The desperation of this situation was echoed by a STEM graduate who, after struggling with underemployment, admitted, **"I was ready to just go into hospitality, you know, being a wait waiter... To start looking for hospitality jobs"** just to survive. Ultimately, while these low-level jobs provide necessary income, they do not necessarily provide graduates with the targeted professional experience and collaborative skills that are required by employers for them to successfully enter into graduate-level STEM jobs.

hey stay for their whole life, unemployed, underemployed

Conclusion of Analysis



This thematic analysis of graduate surveys and stakeholder perspectives illuminates the pervasive underemployment of Black, Asian, and Minority Ethnic (BAME) STEM graduates in the UK, revealing a confluence of structural, cultural, and institutional barriers that systematically undermine their career trajectories. Despite possessing advanced qualifications in high-demand fields such as biomedical science, engineering, and pharmacology, participants consistently described a labour market operating as an illusion of meritocracy, where generational networking capital—predominantly held by white peers—acts as a gatekeeper to access professional roles. Graduates reported exerting disproportionate effort to secure baseline recognition, only to encounter tokenism, deskilling, and salary suppression, often relegated to support worker or administrative positions incongruent with their expertise.

Stakeholder insights corroborated these experiences, attributing underemployment to higher education deficits, including curricula overly focused on theoretical rigour at the expense of practical placements and socio-cultural skills. Recruitment processes embed biases through opaque assessments and cultural misalignments, while organisational practices foster progression bottlenecks via performative diversity without genuine sponsorship. Intersectional vulnerabilities—race intersected with gender, religion, and socioeconomic pressures—amplify these inequities, particularly for female caregivers and international graduates navigating immigration paradoxes.

Collectively, the findings expose a critical fracture in the education-to-employment pipeline, squandering diverse talent and perpetuating ethnic labour market disparities. This not only exacts a profound psychological toll on individuals but also erodes national innovation capacity in STEM sectors. Addressing this crisis necessitates a paradigm shift: universities must mandate early interventions and inclusive placements, employers dismantle biased structures, and policymakers enforce accountability for equitable outcomes. By bridging these gaps, the UK can transform underemployed potential into a driver of inclusive growth.

The policy implications are equally important. If hidden networks, biased recruitment, weak institutional support, and limited progression opportunities are what drive underemployment among BAME STEM graduates, then policy responses need to address all of these levels rather than focusing only on the individual graduate. Universities need to begin employability support earlier, make placements easier to access, and ensure that support is designed for students who cannot rely on informal networks or unpaid time. Employers need to examine how their recruitment, promotion, and sponsorship practices reproduce inequality. Policymakers also need to recognise that graduate underemployment is not only a question of labour-market efficiency, but also one of fairness, social mobility, and the loss of public investment in talent. The findings therefore support a move away from broad participation strategies towards interventions that are more targeted and more aware of structural inequality. The study adds to the literature by not only showing that inequality exists but also by explaining how it is reproduced and where intervention would be most effective.

Overall, the discussion shows that while the employability literature is useful, it still does not fully capture how racialised and institutional forms of power shape labour-market outcomes. The findings address that gap directly by showing that BAME STEM graduates face not only barriers but also a system that values their labour unevenly, recognises their ability inconsistently, and often channels them into roles below their level of training. That does not mean agency is absent; it means agency operates within tight limits. The value of the study is that it makes those limits visible, shows where they come from, and argues that genuine improvement will require more than resilience or better careers advice. It will require changes to the systems that decide whose skills are trusted, recognised, and promoted (King, Burke and Pemberton, 2011; Tomlinson, 2023; HESA, 2021;)





Discussion

The results from stakeholders and graduates make a substantial contribution to the discourse on employability, illustrating that labor–market outcomes cannot be solely attributed to factors such as motivation, talent, or effort. Rather, they demonstrate that the transition into STEM careers is influenced by a complex network of interconnected barriers that determine who is perceived as employable, who has access to opportunities, and who can advance once within the workplace.

This supports the broader literature on contextual employability, which argues that graduate outcomes have to be understood in relation to the institutional and structural environments that produce them (Tomlinson, 2023; Yorke and Knight, 2006). Yet the findings go further by showing that those structures are not abstract or evenly felt. They are racialised in practice. The literature review is right to present bounded employability as a useful framework for explaining why a degree does not automatically lead to graduate–level work, but the evidence here shows that the boundaries are drawn unevenly. They are shaped by unequal access to social capital, recruitment practices that reward cultural familiarity, and workplace cultures that can turn inclusion into stagnation rather than progression (King, Burke and Pemberton, 2011; Tomlinson, 2023).

One of the most important theoretical implications is the way these findings unsettle meritocratic assumptions that still sit close to the centre of employability discourse. STEM is often imagined as a space where qualifications should speak for themselves, yet the evidence suggests that the relationship between merit and reward is much less straightforward than that (Fry, Kennedy and Funk, 2021). Graduates with strong academic backgrounds described how opportunities often depended less on formal achievement than on tacit knowledge, networks, and the confidence employers expected them to display. This matters because it shows that employability is not only about having capital but also about having the right forms of capital in the right settings.

Bourdieu’s concept is useful here, but the findings show that social capital in STEM labour markets is not just unevenly distributed; it is inherited, normalised, and often racialised. White graduates with family links in professional spaces appear to benefit from informal mentoring, insider knowledge, and easier access to opportunities, while BAME graduates often have to build that same access from scratch.

As a result, supposedly neutral systems can end up reproducing inequality by treating familiarity with dominant professional norms as a sign of ability. In that sense, the findings support the literature’s claim that graduate employability is relational, but they also show that this relationality is structured by hierarchy rather than openness (Tomlinson, 2023).

The findings also sharpen the understanding of underemployment by moving beyond the simple idea of “not working in a graduate job”. The literature review draws on Hanson et al. (2024) to show that many graduates struggle to secure work that matches their qualifications, but the empirical evidence suggests that for BAME STEM graduates underemployment is better understood as a process of devaluation. A biomedical scientist working in a support role, or a chemist carrying out administrative or auditing tasks, is not simply experiencing a mismatch between education and occupation.

They are also facing a failure of recognition. Their knowledge is not being valued in a way that translates into authority, pay, or progression. This extends the idea of bounded careers developed by King, Burke and Pemberton (2011). Careers are bounded not only by labour-market conditions, but also by internal organisational logics that determine who gets to use their expertise and who is pushed into repetitive or low-status work. The findings therefore suggest that underemployment should be understood as a form of underuse, where the labour of BAME graduates is needed but also constrained. That is a more critical reading than the literature often offers, and it helps explain why highly trained STEM professionals can still end up underemployed.

The study also shows that recruitment is not simply a route into work but a place where inequality is reproduced. The research recognises that BAME students often face barriers in accessing professional networks and navigating recruitment, but the findings suggest that these barriers are embedded in the way recruitment itself is designed and interpreted (HEPI, 2020; HE Professional, 2023). Assessment centres, psychometric tests, and video interviews may appear objective and standardised, yet participants experienced them as culturally narrow and difficult to decode. This matters because it reveals a tension at the heart of modern hiring: the more organisations claim to use fair and standard procedures, the more they may obscure the cultural assumptions sitting behind those procedures.

A candidate who speaks with humility, or whose style reflects a different cultural norm, may be read as lacking confidence rather than showing respect or professionalism. The findings therefore strengthen the literature on employer expectations by showing that bias is not always visible or openly discriminatory. It can be built into the very criteria used to judge competence. Recruitment is therefore both a site of assessment and a site of cultural translation, and BAME graduates often have to manage that translation without support from either university or employer. The stakeholder evidence also pushes back against more optimistic claims in the literature about employability support and institutional intervention.





The review points to studies suggesting that personal tutoring, development frameworks, and careers support can improve outcomes, and this is clearly possible (Dunbar–Morris, 2025; Gabi et al., 2024; Nweke and Sulu, 2023). But the findings show that this kind of support is often too late, too generic, or too far removed from labour–market realities to make a real difference on its own. That is not an argument against university support; it is an argument against the assumption that support delivered in the final year can make up for years of unequal access to networks, experience, and confidence.

Stakeholders repeatedly stressed the need for early intervention from the first year of study, or even before, because students without family or professional links often do not know what they are missing. That is a key theoretical point. It means employability is not something that suddenly appears at graduation; it is built over time through exposure, guidance, and access to opportunity. Universities that treat employability as an optional extra rather than a core part of the curriculum may unintentionally deepen inequality, even when their intentions are positive.

The findings also strengthen the literature on skills by showing that the issue is not whether BAME graduates have transferable skills, but whether employers are willing to recognise and reward those skills fairly. Orrell (2018) rightly highlights the value of communication, resilience, and teamwork, but the evidence here suggests that these abilities are often judged through dominant cultural norms.

In other words, the problem is not usually that people cannot communicate or work well with others; it is that communication styles, professional behaviour, and even expressions of respect are measured against standards that favour whiteness and classed familiarity. This means the employability literature needs to be more careful about treating skills as something that can move smoothly into labour–market success. Skills matter, but their value depends on context, recognition, and institutional interpretation. The findings therefore support the broader contextual approach in the literature, while also showing the need for a more explicit discussion of race and power.

The study also makes a major contribution to the discussion of intersectionality. The literature review rightly notes that much employability research is too broad and does not fully explore how race interacts with gender, class, religion, and migration status. The findings show why that matters. For BAME women, sexism and, in some cases, Islamophobia make the route into work and promotion harder. For mothers, assumptions about commitment and availability limit progression.

For international graduates, immigration policy forces them to accept lower–paid work in order to stay in the UK. These are not separate issues; they are connected mechanisms shaping the same labour–market journey. This is important both theoretically and practically because it shows that employability cannot be understood through a single–axis model of disadvantage. The labour market does not simply sort people by qualification; it sorts them through overlapping hierarchies of race, gender, class, and nationality. That insight is central to the current study and fills a major gap in the literature.

RECOMMENDATIONS



UNIVERSITY OF
GREENWICH



The
British
Academy

mind the
STEM gap

UNIVERSITIES

01

Introduce the BRIDGE framework from day one

Universities should recognise the significant pressures faced by BAME students, particularly those who are the first in their families to enter higher education. For many of these students, the priority is simply to remain academically engaged and complete their degree, which means that career support introduced only in the final year is often too late. Rather than functioning simply as a careers model, the BRIDGE framework should give tutors and academic staff a structured space to recognise that barriers exist and to have open, honest conversations with students about the realities of the labour market. In this sense, the framework is less about abstract guidance and more about creating a setting where students can receive a realistic “reality check” in a supportive environment. It also allows staff to acknowledge that the job market is not always a pure meritocracy, while helping students understand that academic achievement alone may not be enough to secure employment. By opening up these conversations earlier, universities can help students feel less isolated and better prepared to navigate future opportunities.



02

Make work experience a core part of study

Universities should recognise that finding work experience is often difficult for students, especially those without professional family connections or established networks. For this reason, they should ring-fence more budget for dedicated teams or services that specialise in organising direct opportunities for students. Wherever possible, universities should bring employers onto campus through recruitment events, placement fairs, and structured engagement activities so that opportunities are made more visible and accessible. This approach would reduce the burden on students to find placements independently and would make access to experience more equitable. Universities could also ring-fence opportunities for specific demographics where appropriate, ensuring that support is targeted towards students who may otherwise be overlooked. In doing so, institutions would help to create a more inclusive and practical system of career preparation.



03

Provide more tailored careers support

Universities should move away from generic, one-size-fits-all careers guidance. Many BAME students enter higher education with less access to professional networks than their peers, which can place them at a disadvantage in labour markets where informal connections still matter a great deal. Standard CV workshops alone are unlikely to address this gap. Career services should therefore offer more targeted support that helps students understand professional expectations, navigate recruitment processes, and build confidence in corporate settings. This could include mentoring, networking opportunities, and more direct guidance on how to access hidden opportunities. By taking this approach, universities would be better placed to support students into the STEM workforce in a way that feels both practical and fair.



EMPLOYERS

01 Acknowledge that race remains a barrier

Employers need to be honest about the fact that workplaces are not always as inclusive as they claim to be. Diversity initiatives can be valuable, but they are not enough on their own if employees are not given meaningful support once they are hired. Some graduates describe feeling isolated or underused in the workplace, which can damage both confidence and wellbeing. In addition, ignoring race can allow pay gaps and inequalities in promotion to continue unchecked. Employers should therefore move beyond colour-blind approaches and recognise that race still shapes workplace experiences in important ways. This means taking active steps to challenge discrimination, improve support, and create environments where minority staff can progress on equal terms.



02

Reform recruitment processes

Employers should also examine how recruitment practices may reflect cultural bias. Ideas such as “confidence” and “cultural fit” are often based on Western norms, which can disadvantage candidates whose communication styles or behaviour differ from what recruiters expect. In some cases, humility or restraint may reflect respect and professionalism, yet it may be misread as a lack of confidence or ability. Minority applicants may also face additional barriers such as racial profiling or delays in security clearance. Employers should train hiring teams to recognise different cultural expressions of professionalism and review recruitment tools that may unintentionally disadvantage some groups. A more transparent and culturally aware recruitment process would make access to employment fairer.



03

Connect study with real-world experience

Many students face a difficult balance between career development and financial survival. They may not be able to leave retail or hospitality work in order to take up unpaid internships or short-term placements. In some cases, this can mean staying in low-paid work for longer than they would like, simply because they need to pay rent and meet basic living costs. Employers should work with universities to embed live projects and practical assignments into degree programmes. This would allow students to gain meaningful experience while remaining within the structure of their studies. It would also help employers access a wider and more diverse pool of future talent.



GOVERNMENT

01

Provide funding to employers to expand paid work experience

The government should provide targeted financial support to employers to help them recruit larger cohorts into paid internships and work experience schemes. At present, the cost of supervising, training, and appropriately compensating a high number of placements can make it difficult for employers to offer opportunities at scale. A dedicated funding stream would reduce this barrier and encourage more organisations to create internship places, particularly in sectors where capacity is otherwise limited. This would allow employers to widen access to structured work experience without placing the full financial burden on individual organisations, while also making it more realistic to offer opportunities across larger intakes.



02

Improve transparency in recruitment

Applying for graduate jobs can often feel like an opaque and discouraging process. Candidates may go through several stages of assessment and interview, only to receive no explanation if they are unsuccessful. This lack of feedback is frustrating for applicants, but it also makes it harder to identify where discrimination or bias may be taking place. The government should therefore strengthen employment guidance so that employers are encouraged, and where appropriate required, to provide constructive feedback to candidates who reach the interview stage. More transparent recruitment would help applicants learn from the process, while also increasing accountability for employers. It would make it harder for bias to remain hidden behind vague or unexplained decisions.



03

Develop social capital earlier in education

The gap in social capital doesn't start at university; it begins much earlier in life. Employability experts point out that disadvantaged students often miss crucial early development milestones—they essentially "miss the train" at the age when their more privileged peers are already moving forward. Because of this early disadvantage, it becomes incredibly difficult for them to jump back on track, and they risk spending their entire lives playing catch-up, leading to a lifelong trajectory of being unemployed or underemployed. The government needs to actively address this gap by reforming primary and secondary curricula. By formally embedding the unwritten rules of professional networking, communication, and social capital directly into these curricula from a young age, the education system can ensure that disadvantaged students aren't left behind before their careers have even truly begun.



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