



Literature Review

General higher education information, advice and guidance (HE IAG)

Pre-access Mentoring

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Literature Review: General higher education information, advice and guidance (HE IAG)

1. Introduction

This literature review summarises published evidence on the effectiveness of widening participation activities that can be classified as ‘general’ information, advice and guidance (IAG). General IAG activities may include information on HE fees and finance, on the UCAS or general application process, on personal statements, admissions support, course and provider choice, student life, the support available in HE, and on HE preparation. They can be distinguished from subject-level HE insight activities, which typically entail the provision of information about specific courses or programmes, often in the form of a subject taster or masterclass. General IAG activities can be situated within the broader context and professional practice of careers guidance.

Schools have a duty to provide careers education, information, advice and guidance (CEIAG), including IAG on higher education options/pathways. The framework to support this – the Gatsby benchmarks – sets out, as benchmark 7, an expectation that all pupils should experience encounters with further and higher education providers as part of their careers education. Higher education providers are also expected to deliver IAG to prospective students via their widening access and participation commitments (funded through higher-fee income) as well as through recruitment activities. Advice provision or guidance may also feature within other widening participation interventions, such as mentoring, counselling and summer schools.

IAG is a core feature of the government’s flagship collaborative outreach scheme, the Uni Connect programme, which aims to equip young and adult learners from underrepresented groups to make an informed choice about their options in relation to the full range of routes into and through higher education. It also forms a component part of HE widening participation programmes run by nationwide social mobility charities, such as the Sutton Trust’s Pathways Programmes and the Brilliant Club’s Scholars Programme. In all of these cases, however, IAG activities sit alongside or are even integrated into on-campus activities, attainment raising activities and other interventions (on this point see Moore, Sanders and Higham, 2013). This highlights a challenge for understanding the effectiveness of IAG specifically, which is that it is often delivered as part of ‘black box’ interventions or occurs during what are, nominally, different types of outreach and is therefore harder to isolate in evaluation findings.

Nonetheless, the case for providing IAG, and especially for targeting it towards students who are underrepresented in post-compulsory education, is widely accepted. Research has shown that students considering post-secondary education, training and employment options stand to benefit from guidance on these options, whether that is through progressing to HE (Purcell et al, 2008) or improving long-term employment outcomes (Thomas and Jones, 2007). A counterpoint to this is provided by McCoy et al (2014), utilizing data from a longitudinal study of 1251 school leavers in Ireland who were tracked into a range of post-secondary pathways. The data looks amongst other things at the relationship between advice received whilst in school on post-secondary options and outcomes in HE (namely non-completion rates). It does not find an association between how satisfied school leavers were with advice received and how likely they were to drop out (p.147). Section 3 of this literature review, below, will look in more detail at the effectiveness of IAG especially on HE progression.

Much widening participation work proceeds from the basic but reasoned assumption that students from backgrounds that are underrepresented in higher education have less access to this guidance and/or less awareness of where to find it (Moore, Sanders and Higham, 2013: 30). One explanation for these gaps is socio-economic status: individuals whose immediate family have not pursued higher education study may not, for instance, be able to draw on advice at home (see Reay, David and Ball, 2005). Social class – that is, parental occupational status – also appears to determine HE aspirations (see Anders & Micklewright, 2015; Berrington, Roberts & Tammes, 2016).

School type, too, may play a role in determining the level and quality of IAG accessed by students, with teachers in non-selective state schools generally less equipped with the knowledge and expertise to advise (Sutton Trust, 2008). Qualitative research into how young people receive IAG at school or seek out information on post-secondary choices (see Smyth and Banks, 2012) indicates that, more broadly, the institutional habitus of the school in question is significant in determining the level and quality of information/guidance provided. The same study does, however, also underscore the determining role of young people's own agency.

Ultimately, the processes through which students access IAG is complex and mediated through different social frames of reference such as school, family and peer groups (see Thompson, 2020). There is no consensus in the existing research on any single decisive factor shaping access to IAG. What has been shown, however, is that different groups of students value different forms of advice and guidance – an insight that has helped to shed light on the preferences of students from widening participation backgrounds.

Slack et al (2012) have identified a preference amongst HE applicants for 'hot' information – that is, information from those within their 'social grapevine' – complemented by 'warm' information received from those they fleetingly engage with, in the context of university open days. This stands in contrast to 'cold' information provided by universities themselves, which is often distrusted. Other research has directly posited a preference on the part of students from low socio-economic status (low-SES) groups for 'hot', informal sources of information (Shaw, 2012).

A more fine-grained picture of the discrete information sources that students from different widening participation backgrounds value is presented in a study by Oakleigh Consulting and Staffordshire University (2010). This uses self-reported data from a nationwide sample of nearly 2000 students, who were presented with a list of 51 information items relevant to making their decisions about going on to HE. It is clear from the study's findings that student users of IAG are not a homogenous group. Of relevance to the regional picture of access to IAG is research from Boffey and Dixon (2021) that draws on large-scale polling of over 500 prospective HE students in London specifically. Importantly, it considers pandemic-related changes to how young people access HEIAG and identifies statistically significant intra-group differences within the young Londoner cohort, finding first generation HE applicants to be more reliant on schools and HE providers as sources of IAG.

In summary, research has generated a nuanced picture of how prospective students receive or obtain information on post-secondary pathways including HE, as well as identifying patterns of engagement with IAG that are specific to certain widening participation student groups. As this literature review will show, much less is known about the effectiveness of IAG in increasing access to, success in and progression from HE. There is a paucity of evidence, too, on the relative effectiveness of different types

of IAG, with little research systematically considering the differences between, for instance, school-led and HE-led IAG. Some research does however focus on financial IAG specifically, such as information on the costs of HE and/or expected earnings post-graduation.

Section 3 of the review will review existing evidence of impact, before considering the impact of IAG by activity type (3.1) and by student characteristic (3.2).

2. Methodology

The sources discussed in this review were identified via keyword searches and abstract reviews using the following databases: ScienceDirect; Jstor; the Education Resources Information Centre (ERIC); and Google Scholar. This was complemented by snowball searches and searches of the literature in other relevant evidence reviews such as the Centre for Transforming Access and Student Outcomes in Higher Education's (TASO's) *Rapid review to support the development of the Equality of Opportunity Risk Register* (TASO, 2023) and the Education Policy Institute's evidence review *The impact of interventions for widening access to higher education* (Robinson and Salvestrini, 2020).

The review considers narrative, empirical and causal-type evidence but screens studies published more than ten years ago – that is, prior to 2013. Likewise, studies that assessed the effectiveness of IAG on outcomes other than access to, success in or progression from HE (or intentions/behaviours relating to HE) were excluded.

The search process identified a total of eight sources (and one synthesis of evidence from other studies). Of these:

- 4 presented causal evidence; 3 were empirical enquiries; 1 was based on narrative evidence
- 4 assessed impact on the basis of HE enrolment; 1 considered impact on both enrolment and completion rates; 2 looked at impact on the basis of self-reported student data (intention to progress to HE)
- 3 were UK studies; 3 were US studies; 1 was an Australian study; 1 was a Finnish study
- 5 evaluated the specific impact of IAG interventions on students from widening participation backgrounds; 3 evaluated impact on all students and did not distinguish by background

3. Findings

3.1 Impact of General IAG

Overall, the studies reviewed here indicate that IAG activities have some effect on aspirations to progress to HE and on actual enrolment. This effect is limited however, and it is not possible to draw conclusions from these studies about the wider impact of IAG interventions for students from underrepresented backgrounds specifically (see 3.2, below, for a fuller discussion of this). It appears that IAG interventions are more likely to be effective if integrated into other forms of outreach and student support.

Five of the studies present evidence on general IAG – that is, the interventions they evaluate involve either guidance talks or advice on a range of general issues such as the application process and the costs of HE study. Hoxby and Turner (2013) examined the effects of providing low-income, high-achieving high

school seniors in the US with college application guidance and information about the costs of college. The application guidance included information about deadlines and requirements for college applications at nearby institutions, at the state's flagship institution, and at in- and out-of-state selective colleges. This was an RCT (12,000 students) and the treatment group was significantly more likely to apply to and enrol in more selective institutions.

Tomaszewski, Perales and Xiang (2016) also found general careers guidance interventions in Australia to have an effect on enrolment rates, though they did not find evidence of differential impact for what they term 'equity' groups – in this case, low-SES students, Aboriginal and Torres Strait Islander students, and non-native speakers of English. Their research shows a strong association between low-SES status and school factors such as receiving careers guidance in determining HE progression. This research is based on a longitudinal study of 10,027 individuals between 2003-2013, all of whom were surveyed annually and aged 15 at the start of the study. The survey asks specific questions around careers guidance received in school including questions about listening to a talk by 'someone from a TAFE [technical and further education institute] or University' and in this case, the data indicates that the experience affects university enrolment positively. It even has a stronger reported effect than other forms of careers guidance, though not stronger for low-SES students than for non-equity group students.

Herbaut and Geven (2020) conducted a systematic review of 71 (quasi-)experimental studies into the effectiveness of outreach programmes and financial aid. Though this is mainly focused on North American programmes, it has the advantage of concentrating specifically on the effect of the interventions on disadvantaged student groups and using HE enrolment and successful graduation as its two impact criteria, as opposed to looking at intermediate outcomes.

The authors look specifically at projects that address information barriers faced by high school students – these form 26 of the 71 studies reviewed in the article. The projects are grouped into three intervention types: 'low-intensity interventions that address information barriers', 'interventions [...] designed to complement information with personalized assistance and aim[ing] to guide students during the steps of the enrolment procedures' and 'outreach programmes offer[ing] academic tutoring during upper secondary education, in addition to information and counselling.'

The eight projects falling into the 'information-only' category showed very little causal evidence of leading to improvements in enrolment or graduation, whilst the other interventions showed slightly more promising evidence of impact. This echoes the findings of Robinson and Salvestrini with respect to IAG interventions, who conclude that the 'more promising [IAG] interventions are those that are tailored to the students, start early and are integrated into other forms of support, such as career advice and guidance' (2020, p. 6).

The findings of Burgess et al (2021) are somewhat more positive regarding the effectiveness of IAG whilst reaching a broadly similar conclusion about the most effective mechanisms for delivering it. The authors analysed a sample of 1386 participants in the Aimhigher West Midlands Uni Connect programme who entered the 2017-18 or 2018-19 UCAS cycle and whose UCAS results were known. A logistic regression was undertaken to determine the relative impact on application success of engagement with different types of Uni Connect activity – either in isolation or in combination.

IAG activities were considered as part of the evaluation and were shown to be slightly more likely to positively impact HE progression than activities such as mentoring and tutoring. However, the study also concludes that participants who engaged with multiple activity types were more likely to be successful in their UCAS application than individuals who engaged with only one activity type. Furthermore, whilst information-based activities do feature amongst the most effective activity combinations, to the extent that there is a common denominator in activity combinations, it appears to be summer schools, and in any case the research does not calculate the effect for each discrete activity types within combinations.

As this is a study based on schools and colleges in the West Midlands, the population surveyed is different in its ethnic make-up from London's population (nearly 60% of learners in this study were White British, vs 21.5% identifying as being from a BAME background).

A final study looking at general IAG delivered by a higher education provider (Pickering, 2021), found limited evidence of impact though on account of low levels of participation in the intervention. The evaluation was also a qualitative design. It explored the Progress Support Initiative, which was a programme delivered by a northern post-1992 university to students from underrepresented backgrounds. It comprised four advice and guidance sessions, designed to support participants with making informed decisions about their future. The theory of change underpinning the programme was grounded in a 'realist, small steps' approach (see Harrison and Waller, 2017) and the evaluation was therefore focused around understanding why the interventions were successful (or not) against their stated aim of increasing knowledge and confidence in decision-making.

As is clear from the above, the interventions evaluated in these studies, although all forms of general IAG, vary in format, length and intensity (not to mention in how they complement information provision with other forms of outreach). This presents a challenge for robustly evaluating the impact of different sub-categories of general IAG. A similar point is made in the systematic review of evidence undertaken by Ní Chorcóra, Bray and Banks (2023). This discusses eight 'guidance interventions' as part of a wider review of 19 widening participation programmes. It finds some positive impact associated with these but notes a lack of consistency not only in the intervention types but in the outcomes they measure.

Two of the studies explore the effectiveness of financial advice specifically. McGuigan, McNally and Wyness (2016) conducted a randomized control trial in London, in which a website presenting basic information on the costs and benefits of post-compulsory study was offered to a randomized half of a group of London schools. Website users were aged 14-15. The authors find that: 'the information campaign (via the website) is shown to strongly influence the intention to pursue postcompulsory education. Furthermore, we show that this effect is stronger for groups less likely to access the website and more likely to drop out early from full-time education' (2016, p.484). These groups include low-SES students and boys. However, if as the study points out, these groups are less likely to visit the website in the first place, for this intervention to be effective, strategies for successfully signposting them towards the resource must be developed.

Kerr et al (2020) also conducted an RCT, in this case across 97 schools in Finland that were offered an information campaign for graduating students on the labor market prospects associated with different post-secondary programmes. The study found limited evidence of impact on application patterns – in this case applying to programmes associated with higher earnings potential – but not enough to be counted as significant.

A final study, by Bird et al (2017), looks at the impact of targeted application guidance on college application rates. The authors' large-scale RCT investigated the impact of three different behavioural nudges on college applicant behaviour in the US. Messages that provided concrete planning prompts on completing the Free Application for Federal Student Aid (FAFSA) increased enrolment rates by 1.1 pp overall and 1.7 pp for first generation college students.

3.2 Impact of IAG by activity type

More causal-type evidence is needed to be able to make meaningful comparisons between different activity types falling within the general IAG category. It can also be difficult to isolate the effect of IAG provision specifically within 'black box' interventions, which are out of scope for this review, though the findings of Burgess et al (2021 – see above) suggest that programmes of outreach combining IAG with other activities such as summer schools may be more effective than IAG provision alone. This finding should be subjected to further and more rigorous testing.

The studies above are interested primarily in the thematic content being provided to prospective students and to the extent that the site of IAG provision is considered at all, it is through judgements on the effectiveness of online content. As such, it is not possible to assess whether in-school or in-college IAG activities are more effective than on-campus activities.

Some research has considered the role of facilitators of IAG activities, looking at teachers and at student role models. Raven (2021) argues that the role of teachers in the provision of IAG in the classroom may be more significant than expected, but this claim rests on a small comparative study looking at pupil ambitions.

In the same vein, Gartland (2014) finds evidence that role model-centred IAG can, in certain scenarios, positively impact student aspirations. The research considers impact on all pupils however, not on those from WP backgrounds specifically, and it concentrates on STEM disciplines.

3.3 Impact of IAG by student characteristic(s)

Some of the studies cited above do consider the impact of IAG interventions of low-SES students specifically, though low-SES is not consistently defined, with some studies using first generation HE as a proxy for socio-economic status and others using income-based metrics. There is much less evidence available on the effectiveness of IAG in supporting other student groups to progress to/from HE.

With respect to widening access to HE for disadvantaged minority ethnic groups, See, Gorard and Torgerson (2012) argue that 'payment upon results' and adult mentoring interventions should be prioritized as these hold the most promise, based on existing evidence, for increasing participation and retention in post-compulsory education. Whilst they do not explicitly state that IAG is less effective, this is implied in their argument that other interventions besides the two named above should be deprioritized in future widening participation efforts.

McGuigan et al (2016 – see above) find that specific forms of IAG – in this case a website with information on the costs and benefits of post-compulsory study pathways – may have greater impact on boys. The outcomes measured relate however to the intention to progress to HE. Less evidence is available on whether the gender differences seen here carry forward into HE enrolments. Furthermore,

the study notes that boys are less likely to engage with the resources to begin with, calling into question their effectiveness.

An important area for further research is (quasi-)experimental studies into the effectiveness of general IAG for widening access to HE for specific groups such as care experienced and estranged students, disabled students, vocational learners, mature and part-time students, refugees/unaccompanied asylum seeker children, and Gypsy, Roma, Traveler (GRT) communities. No studies into these populations were identified in this literature review.

4. Conclusion

Key findings & trends

- The overall strength of evidence on the effectiveness of general IAG interventions is mixed, and there is no conclusive evidence that the interventions support students from underrepresented backgrounds specifically to progress to, or succeed in/post, HE.
- Some studies have however indicated that the effectiveness of these interventions increases if they are integrated into other forms of outreach. This warrants further exploration.

Gaps/further research

- Causal evidence of the impact of IAG on low-SES students is available, but in general, little data has been produced on the specific impact of these activities on students from different backgrounds.
- The role of 'site' in delivering IAG (school, HE campus, home etc) is underexplored in existing literature. Most studies reviewed here evaluate classroom based or online IAG but do not address the role of these spaces in the effectiveness of the interventions.
- Similarly, more nuance is needed in understanding the impact of different sub-categories of IAG within each of these settings. For instance, no studies were identified in this literature review that considered the impact of HEI-led (as opposed to school-led) in-school IAG.

Recommendations for practitioners

- When developing theories of change for interventions that involve IAG provision, reflect on the specific type of IAG to be delivered and whether existing evidence posits a clear causal link between that activity (sub-)type and the intended intervention outcomes.
- If utilizing general IAG as part of 'black box' interventions, evaluate with the goal of isolating the specific effect of IAG activities on HE progression outcomes.
- Pursue randomized or quasi-experimental evaluation of IAG activities to maximise the strength and robustness of impact data generated.
- Evaluate IAG interventions targeted towards specific WP student groups, as the current evidence base in this area is weak.

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Literature Review: Pre-access Mentoring

1. Introduction

Higher education (HE) is closely associated with creating possibilities of social ascent and transformation for individuals. Social mobility indicators, articulated in terms of outcomes such as income, wealth, occupation, and education, measure improvement or deterioration in one's social status in relation to other groups, i.e. relative social mobility, and one's parents, i.e. absolute social mobility. Since the 1970s, England has witnessed a decline in absolute income mobility, falling from well over 70% for those born in the mid-1970s to slightly less than 70% for those born a decade later in the mid-1980s. Similarly, occupational mobility, which ascertains advancement in occupational status, remains a concern for policymakers. Individuals born to lower-working-class parents are three times more likely to work in similar professions than those born to parents in higher-professional roles. Inequalities in access to HE are also prevalent: only 18% of individuals whose parents did not hold university qualifications go on to attend universities themselves, compared to 64% for those with parents with university degrees.¹

Following two impressive decades of gains in HE participation, the last decade saw a plateauing in the proportion of graduates from non-graduate homes (with neither of the parents holding a university degree). While 9% of 28–37-year-olds from non-graduate homes graduated from HE in 1991, followed by 19% in 2001 and 35% in 2011, recent research by the Social Mobility Commission noted, using the UK Household Longitudinal Survey (UKHLS) 2020 data, that the proportion is now at 33%.²³

The flattening in access to university education is disconcerting since HE is known to play a crucial mediating role in narrowing social mobility gaps between groups and generations. For instance, graduates between the mid-20s and early 50s are more likely to be employed and earn higher than non-graduates.⁴ The return of education on social mobility indicators, however, varies depending on the institutions, subject, and courses one undertakes. Many elite institutions, such as Oxford and Cambridge, while offering high returns for their students, are inaccessible to those from low-income backgrounds. Those who opted for free school meals are 100 times less likely to attend Oxford or Cambridge than students at private secondary schools.⁵ The differences in access to universities, especially selective universities, are not entirely explained by academic attainment. Even when students from disadvantaged backgrounds have as high A-level attainment scores as students from affluent backgrounds, they are still less likely to opt for selective universities than their affluent peers.⁶

Within this context of gaps in access to HE and persistent lags in social mobility for sections of society, the UK government, in partnership with higher education institutions (HEIs), has for several years supported widening participation (WP) initiatives to create more inclusive universities by improving the take-up and progression from higher education amongst under-represented groups. For instance, any university that wishes to charge over and above the minimum tuition fee must have an access and participation plan (APP) to improve outcomes across the student lifecycle for those at risk. In 2019-20, providers invested a sum of £376 million toward improving access and sustaining participation for underrepresented groups.⁷ Interventions to increase enrolment in HE typically combines activities such as summer schools, campus visits, mentoring and tutoring, among others, to reduce gaps in student's knowledge and skills while providing information and guidance to assist and influence their decision-making processes.

Despite the sizeable sum of funds invested in widening access for underrepresented groups, the evidence of the impact of pre-entry initiatives in the UK remains limited. There are multiple reasons for this, and we will state a few to provide an overview. First, some works assess the impact of widening access activities on students, but they do not always isolate the effect of singular activities within the multi-intervention approaches. These, while helpful, make it hard for practitioners to establish which of the many interventions' students participated in had a considerable impact on studied outcomes.

Second, even when studies consider singular activities, like mentoring, they fail to isolate the specific attributes of the performed activity that correlate with or cause the outcome. For example, mentoring can take many forms: it can be formal or informal; it can have pre-defined goals or be unstructured; its duration can vary; the mentor might be ethnically, socio-economically matched to the mentee or be from a background.⁸ In what form and intensity is a particular activity effective? This question remains under-explored in the literature.

Third, most studies do not establish a causal relation between the action and the impact. Demonstrating a causal link between two events requires isolating the contribution of a studied action from other factors that might have contributed to the results. Students targeted by one university might simultaneously be targeted by others, making isolating effects challenging to establish. Similarly, if students self-enrol in WP programmes, which is often the case, they might have higher motivation levels, which might influence their outcomes. Moreover, conducting randomised controlled trials – although its status as the gold standard of research is increasingly contested⁹ – is an option to find what works. Still, it is a financially and resource-demanding research method. Due to these complexities involved in examining WP processes, the literature on the subject from the UK, while expanding gradually, is still in the early stages of ascertaining what works and why it works.

In consideration of these gaps, this article reviews literature published between 2013 and 2023 on one type of intervention, i.e., mentoring, executed at the stage of pre-access, i.e., before enrolment in HEIs, to understand the breadth and depth of research from the UK that attempts to detangle the circumstances under which mentoring reduces the risk of non-participation for under-represented communities. We follow the definition of mentoring offered by Transforming Access and Student Outcomes in Higher Education (TASO): mentoring is a two-person relationship between a mentor and a mentee designed to provide psychological, career or academic advice and support over a sustained period. This definition includes related processes such as role-modelling and counselling; however, it excludes tutoring, which is understood as an intervention explicitly targeted toward academic outcomes. Besides literature on mentoring, the review also includes studies assessing the relative effectiveness of pre-access activities, where it concerns itself with mentoring in contrast to other WP activities.¹⁰

It is worthwhile to locate mentoring within the context of reforms which have impacted WP activities in the last few years. With the flattening of public expenditure on education since the 2010s and the introduction of market-related concerns with the Browne Review, the emphasis on widening access programmes shifted from broad widening access outcomes to narrower outcomes around 'effectiveness' such as 'narrowing the social class gap' and 'fair access'.¹¹ These reforms have changed the landscape of widening access activities as they have become more focused on the individual students who are envisioned as potential consumers of education.¹² This reconceptualization of the student as a consumer and the emphasis on measurable progress in terms of social mobility and access

might sometimes come at the cost of ignoring the more deep-rooted structural, social and systematic barriers that individuals face in accessing higher education.¹³ These tensions between the individual and the social and the measurable and the immeasurable require that the evidence we present is qualitative and quantitative. The Office for Students (OfS) has laid out three types of acceptable evidence which are 'distinct but not hierarchical': narrative (explaining why specific actions were performed as opposed to others), empirical (offering association between measures undertaken and observed benefits) and causal (proving through control groups that demonstrated benefits are caused by the activities). In this review, we have considered all three types as they complement each other in developing the sector's understanding of when, how, for whom and why mentoring works.

The following section summarises the findings from the literature, reflecting, in particular, on the recipients mentoring, appropriate delivery formats, and the attributes of the relationship and the ambassadors which contribute to successful outcomes. A conclusion follows the findings section.

2. Findings

Who seeks and stands to benefit from mentoring?

This section highlights some interventions targeted at socio-economically disadvantaged students, identified through metrics available on whether the student signed up for free school meals or whether their parents have university degrees, aimed at increasing HE progression. While disadvantaged in one way, some of the discussed research concerns high-performing students, implying that they might be more motivated and driven to enrol in universities than others. Therefore, the interventions can often be light touch, encouraging them to specifically consider selective universities through information on options and costs, with role models acting as inspiration. In other studies, mentoring is associated with low attainment scores and progression to HE. As the discussion will highlight, this does not mean mentoring is less valuable than other activities but might point us toward the more complex needs of some student groups.

An example on the lighter side of interventions is the randomised controlled trial conducted by Sanders and others in 2013. The intervention encouraged high-performing students from low-income backgrounds to apply to selective universities by posting letters addressed to them at their schools and homes.

The enquiry was grounded in an understanding of the UK HE landscape. All HEIs in the country charge the same fee for programmes and applications, and universities are bound to widen access under WP agreements; thus, students with suitable grades have a good chance of being selected and enrolling at such universities if they apply and accept the offer. Behavioural theorists suggest that we are likely to choose default options readily available to us – 'the power of defaults' – even when information is available on better opportunities. Further, students from disadvantaged backgrounds often lack social and familial encouragement to lead them to selective universities or examples of others who have attended elite universities to serve as inspiration. This subconsciously influences them to believe that they will not succeed if they try since no one in their surroundings did. There are also practical and financial concerns about the university's distance from where they live. While cold sources of information are available, the authors asked how information can be made available in a manner that is relevant to them and addresses their concerns.

With this background, the intervention involved sending letters to students providing information on available resources and factors they should consider when shortlisting HEIs. The letters were crafted using natural, personalised language by individuals who were once in similar positions and were now attending selective universities. This aimed at emphasising the similarities of circumstances between the role model and the student, nudging them away from default options and asking them to consider selective universities. The argument was that these options would yield better returns in the long-term, and they should thus carefully review all their options.

A group of 11,104 students in 300 schools were selected and distributed in four groups:

1. Participants who received no letters.
2. Participants received one letter from the school in November 2013.
3. Participants who received one letter at home in April 2014.
4. Participants received two letters: one via the school in November 2013 and another at home in April 2014.

They found that students who received both the letters, at home and through the school, were more likely to apply to Russell Group universities and accept their offers. There was no statistically significant impact of either of the one letter on the rate of application, offers made, or student acceptance of the offer. Moreover, the intervention did not affect general university application rates, highlighting that such an intervention might only be relevant for students who intend to apply and need only be nudged to apply to selective universities.

A second consideration of the study was to understand the type of schools where the intervention was most effective. There were statistically significant and positive effects for lower-performing schools concerning application to Russell Group universities rather than universities in general. The authors hypothesise that the teacher and the role model in lower-performing schools complement each other, with the role model serving to raise aspirations where there is a gap in teacher investment in developing high aspirations.¹⁴

The impact, however, of more intensive role-modelling and mentoring activities relative to other widening access elements is inconclusive. For example, in 2021, Burgess and others undertook a quasi-experimental assessment of a multi-intervention program, UniConnect, to understand whether participation in WP activities contributed to access to HE. While they found that participating in WP activities was better than not participating in any, some ways of involvement were better than others. In this instance, mentoring involved multiple one-hour meetings with students spanning 40 weeks. The impact of mentoring, despite being a relatively time- and cost-intensive activity, was significantly lower than the impact of summer schools and campus visits; the latter was strongly linked to Universities and Colleges Admissions Service (UCAS) acceptance. While the findings are helpful in underlining which activities are more effective than others, caution must be taken since students were enrolled in the program based on a combination of self-, school- or UniConnect selection. Further information on student, ambassador, school, or program attributes is not available, making it difficult to understand why mentoring or tutoring might not have contributed to improving chances of HE enrolment.¹⁵

Similarly, in another study in 2021, TASO compared mentoring to other activities and found mixed results regarding its impact on HE access and progression. However, they offer plausible explanations

that might clarify the results and inform mentoring activities. Through the Higher Education Access Tracker (HEAT), which boasts over 100 member providers, TASO scrutinized the relationship between outreach participation activities and indicators such as key stage 4 attainment, and progression to HE and selective HEIs. The inclusion of other indicators in the dataset, such as enrolment in free meals and the family's educational history, facilitated exploration of students' socio-economic status and its connection to the studied indicators. The diversity of widening participation packages, with over 3000 combinations, in the dataset significantly complicates the task of delineating impact. Nevertheless, the results were mixed for mentorin0067: those who participated in mentoring activities alongside other activities scored lower on key stage 4 assessments and exhibited poorer HE and top HE progression compared to those who did not. When examining the effect of mentoring by looking at groups of students who participated in a single activity, the students who engaged in mentoring activities performed as well as other cohorts who participated in other single activities. Due to these contradictory results, the findings are considered inconclusive.

The authors provide two reasons to explain why mentoring might be associated with lower attainment and HE progression. First, attendance in mentoring activities was positively correlated with eligibility for free school meals and lower key stage 4 attainment. Therefore, the association between mentoring and the observed negative results might indicate the challenges and needs of those who attend mentoring activities rather than demonstrating the efficacy of mentoring. Second, mentoring programs differ significantly across universities, and the results might have amalgamated very diverse activities under the umbrella of mentoring. It is thus not clear which attributes of the mentoring program might or might not have been effective.¹⁶

These findings are corroborated by the latest review of Uni Connect, a national outreach programme with 29 university partners, in 2022, which states that mentoring is linked to improvements in short-term outcomes related to knowledge of the HE sector, the application process, student life, and students' ability to apply and make decisions. However, it yielded mixed results for medium- and long-term outcomes, such as the intention to apply and the number of applications made. The authors affirmed that the impact of mentoring on longer-term effects depends on the 'starting position of the learner'.¹⁷

We can conclude from the findings of these various investigative reports that less intensive mentoring programmes, such as light touch role-modelling interventions and personalised one-on-one communication, might work better for high-performing students. While motivated, these students still require decision-making support to choose suitable institutes, subjects, and courses. The task in these instances is to encourage students to attend selective universities by providing information and guidance in a way relevant to them.

On the other hand, those who select more intensive one-on-one mentoring assistance might face more constraints to access than others, as evidenced by the links between mentoring and key stage 4 attainment and free school meal eligibility. These differences, owing to the varying needs of the student groups, require that universities think through their theory of change, the assumptions, and reasons for modalities of mentoring programmes, ensuring that the support offered through any such activity is suited to the requirements of the student groups they are targeting. Notably, more research is required to understand why mentoring activities fail to improve outcomes in the instances that they do.

2.1 Which delivery format works best?

This section offers insights into the delivery models that work best to deliver mentoring programmes, summarising evidence on different formats, including online, in-person and blended approaches to delivery. While the disruptions caused by COVID-19 partly influence the surge in available evidence on online mentoring, fresh evidence on the subject is particularly welcome owing to its implications on cost.

Harding and Bowes' review of the latest evidence on UniConnect enables an understanding of mentoring in its various delivery formats and its impact on short-, medium-, and long-term access outcomes. The findings are based on synthesised evidence of impact submitted by individual partners in the calls for evidence from April 2019 to August 2021.

As such, the evidence on face-to-face mentoring is in line with the findings discussed above. In-person mentoring is positively associated with short-term outcomes such as knowledge of the benefits of HE, knowledge of HE student life, an understanding of the application process, students' confidence in their ability to make informed decisions, and their interpersonal skills. However, its links with medium-term outcomes, such as intention to apply, are mixed, with one study suggesting a positive impact and another, a more robust empirical study suggesting an adverse change in intentions.

Like in-person mentoring, online mentoring is associated with positive impacts on short-term outcomes such as knowledge of HE and interpersonal attributes. Crucially, one substantial empirical study showed online mentoring increased participants' understanding of how to apply from 0 to 91%. Evidence on the medium-term outcome of intention to apply is mixed, with one empirically solid study indicating an increase, whereas another substantial empirical study suggests no impact. Students reported that they were going to apply anyway, which explains why the results might be mixed. Once again, this is in line with the evidence discussed above, which highlights that mentoring might be less effective in influencing intentions to apply when students already wish to enrol in HE to begin with.

Fresh evidence has become available on blended learning due to the impact of COVID-19 on mentoring and multi-intervention programmes in general. However, the available evidence is still quite limited. In general, blended learning has a positive effect on outcomes such as interpersonal skills and attributes, the capacity to make informed decisions and academic attainment. Provisional evidence on long-term indicators suggests a positive effect on intention to apply and successful applications, primarily if support is targeted to the specific needs of year 12 and 13 students who are in the process of considering their post-18 options.¹⁸

In 2023, TASO provided provisional insights into the desirability of online versus face-to-face mentoring based on interim results from a study of WP programmes at three universities: the University of Birmingham's Forward-Thinking programme, King's College London's K+ widening participation programme, and Aston University's Pathway to Healthcare and Pathway to STEM programmes. While mentoring under the University of Birmingham's Forward-Thinking programme is typically conducted face-to-face, others are delivered online. Preliminary insights suggest a preference for face-to-face mentoring among students and parents, as it provides students with an opportunity to engage in both structured and unstructured conversations with individuals like them. Some students, reflecting on their experience with the Forward-Thinking programme, noted that online delivery was indeed acceptable for

shorter engagements. It allowed them to maintain their focus on academic commitments, especially when A-level assessments were approaching.¹⁹

More detailed data, albeit still preliminary, is offered by the comparison between the online mentoring programmes of King's College London and Aston University, providing useful insights into student engagement. Both universities use Brightside online mentoring services which facilitates the delivery of asynchronous mentoring through its online platform.²⁰ Mentoring in this instance is delivered through e-mail like messages between the mentor-mentee, allowing both parties to take the time to respond. It frees time for the mentors, allowing them to mentor more people and thus enabling better matching between mentors and mentees. From the perspective of research, asynchronous text-based mentoring allows for reviewing of the conversation content, thus providing insights for the development of the future programmes.

The programmes at the two universities had some similarities but differed on other parameters. For instance, mentors in both programmes were current students, consistent throughout the programme. At the same time, the Aston University programme offered group chat discussions, whereas the King's College programme did not. Moreover, while both programmes were asynchronous, Aston University's programme was structured, and King's College was not.

Since the mentors were more frequently the first ones to reach out to the mentees, structured programmes, where the mentor is required to reach out at prescribed periods, might be more effective for developing engagement. As such, mentoring was not associated with students' sense of belonging, possibly because students already had a high sense of belonging. Key themes of discussion between the mentor and mentee included 'UCAS applications, personal statements, and subject choices', with the number of messages reaching its peak around the January deadline for UCAS applications.²¹ Further, for research purposes, the study cautions against the use of only the number of days as a measure of engagement. Since the number of messages tends to cluster on certain days, asynchronous mentoring engagement should be measured through the combination of the number of messages and the number of days on which students engaged.

These findings, none of which are based on controlled experiments and should therefore be read with caution, suggest that online mentoring, whether synchronous or asynchronous, can indeed be considered a cost-effective supplement to in-person activities. Such approaches are positively associated with short and medium-term outcomes, whereas evidence on long-term effects, consistent with previous research, is mixed. While further research is required to establish the specific purposes for which online mentoring is most suitable, the discussed themes in conversations, such as UCAS applications and personal statements, should offer providers valuable information to base their assumptions for programme development.

2.2 What factors influence the quality of mentor-mentee relationships?

Several factors influence the quality of mentor-mentee relationships, with who delivers it being one of the more important ones. Matching mentor and mentees' backgrounds is an essential practice in mentoring programmes. These works discussed here suggest that in addition to matching based on socio-economic and ethnic attributes, it is crucial to consider the professional and intellectual interests of mentees so that these interests might be suitably advanced through the interactions between the

mentor and the mentee. Further, research suggests how mentorship programmes can be sensitive to processes of identity formation and transmission of cultural capital.

Gartland, in 2015, investigates interview and observational data from two mentoring programs reflecting on how factors such as the background of ambassadors and degrees of formality in the 'process, location and setting, purposes and content' impact student experience.²² Both students and ambassadors shared socio-economic attributes: they belonged to deprived areas in London with low HE enrolment rates, had working-class parents, were first generation learners. While the group was ethnically diverse, Black African was the dominant group.

The evidence suggests that placing ambassadors in formal and authoritative roles, such as tutors or supervisors, hinders role modelling as it emphasises the differences between the students and ambassadors. Moreover, ambassadors are often not trained for these authority positions, negatively impacting the relationship. In contrast, when ambassadors and pupils work together in an informal and experiential learning environment without a rigid learning structure, without the intention of achieving narrowly defined outcomes related to attainment, but instead focus on achieving broader results, such as raising awareness and enthusiasm for the subject, it creates a more favourable environment for learning. Such collaborative relationships encourage the discovery of knowledge, for instance, through activity-based workshops, which students perceive more positively than prescriptive activities.

Gartland's nudge toward 'informal' attributes of process, setting, aims and content might at first seem to conflict with the preliminary findings by TASO on online mentoring, where the suggestion is to have 'structured' relationships. However, of course, the programmes at King's College and Aston University discussed above are forms of asynchronous online mentoring, which are less suitable to promote emotional closeness than in-person mentoring and might thus require pre-established prompts by the mentor to the mentee to stir conversations.²³ The evidence Gartland presents, on the other hand, contrasts a Maths workshop, more formal in its delivery, setup, content and aims, with a Train Tracks workshop, which leaned in the direction of informal exercises and objectives. While both workshops were somewhat structured, the latter had casual attributes.

Several factors influence the establishment of relatability between the mentor and mentee. Gartland argues that matching mentors and mentees based on socioeconomic status, ethnicity, or gender is insufficient. Shared subject interests facilitate the pupil's identification with the ambassador. Exposure to others in similar fields as one aspires to be, in a setup where the learner and the ambassador solve problems as equals, opens the possibility of new ways of being for students. For instance, in the research, one pupil reflecting on the process remarked how the workshop made her 'look up to' the ambassador.

Similarly, others found the co-learning experience comfortable. Creating a collaborative environment between the students and the ambassadors around shared interests in an informal setup allows new processes to be triggered in the students, generating a shift in their aspiration toward HE. The ethnographic study does not offer quantitative data on the association between the activities and final indicators. Nevertheless, the findings on various aspects of the mentor-mentee relation can inform the theory of change in mentoring programmes. It also questions where the WP team should be situated within a university. Suppose it is located within the marketing department. In that case, it might further the discourse that perceives students simply through the lens of quantitative identity markers and as

consumers. In contrast, subject-based interventions allow deeper identity formation processes to be considered.²⁴

Hunter, Wilson, and McArthur, in 2018, offered additional insights for informing the relationship between the mentor and mentee. Instead of understanding the low enrolment in HE by certain groups as an indicator of aspiration deficit in individuals, they conceptualised it in terms of structural and systemic constraints students face in accessing universities. Their premise was that young people from poorer backgrounds lack knowledge of the higher education sector and practices, not because there is a deficit of aspiration but because there aren't enough examples of people familiar with HE and professional routes in their surroundings. Unlike students with parents from affluent backgrounds in higher-skilled occupations who have ready access to information on various institutes and socio-cultural practices constituting such circles, students with working-class parents might not have internalised the norms and ways of being particular to specific institutions and employment opportunities.

In this context, the authors found that intergenerational mentors could draw on their professional, emotional, and intellectual experiences, sharing their experiences of being first-generation learners with students, to assist them in entering these newer environments. Mature mentors had industry experience and a network they could call on when necessary to help shape the young individual's orientation and enhance their opportunities. This nuanced support could only be offered through the close one-to-one association of the mentor-mentee, which evolved dynamically to suit the student's changing needs. Their findings prompt university leaders and policymakers to reflect on the gaps in the students' social and cultural capital and how it can be operationalised and introduced into students' lives.²⁵

3. Conclusion

The review considers literature on mentoring, as one amongst many widening access initiatives, aimed at mitigating pre-university risks to accessing and enrolling in HE. Three themes are considered: the needs and characteristics of those opting for mentoring, the various delivery formats, and aspects of mentor-mentee relationships that foster comfort, relatability, and inspiration. These are elaborated with the support of studies that elaborate why, when, how, where and for whom mentoring works drawing from narrative, empirical and causal evidence published in the context of UK HE landscape between 2013 and 2023.

Our findings indicate that mentoring is effective for positively influencing short- and medium-term indicators such as students' knowledge and interpersonal skills. However, the evidence regarding longer-term outcomes is mixed. Tentative hypotheses suggest that this may be attributed to specific traits of mentoring programmes or the targeted students – rather than being indicative of all mentoring programmes for all students. There is also concern that these programmes might be reaching out to individuals who already intend to enrol in HE. Further research is necessary to ascertain the attributes of mentoring that yield positive outcomes in progression to HE and selective HEIs.

Partly due to disruptions from COVID-19, there is now more research available on effectiveness of various delivery modalities: online, in-person and blended. While causal evidence is limited, existing empirical studies suggest that online and blended approaches positively impact students' knowledge related to HE, their sense of agency and confidence and intentions to apply. There is evidence that

blended approaches are particularly effective for year 12 and 13 students. Student feedback indicates that online activities are especially beneficial when they have other pressing commitments. Some have suggested that shorter programmes are more suited to online delivery than longer ones. Research to understand the optimal combination of online and face-to-face, and the purposes for which each is suited could lead to cost savings for stakeholders.

Finally, studies reflecting on mentor-mentee relations have underscored the significance of socio-cultural constraints that hinder students, such as the presence of experienced individuals with the know-how and familiarity with cultural and professional codes necessary for entry into higher education. Data derived from interviews and observations suggests that identity formation processes between the mentor and mentee occur in environments that are non-formal, subject-based, and comfortable for the mentees. Intergenerational mentorship is also an under-considered option: the lived experiences of mature mentors can significantly alleviate the complex environmental deficits through the sharing of knowledge and contacts. Therefore, mentoring programs should contemplate how bottom-up environments of mutual learning and exchange can be facilitated, with a nuanced understanding of the social circumstances that have shaped the mentee's aspirations.

It is worth emphasising that the existing literature is predominantly empirical and narrative. Further causal research sensitive to the non-linear and complex ways in which interactions between the mentor and mentee trigger transformation in the desires and aspirations of the mentee, leading to outcomes, is necessary.

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