

This booklet has been produced as part of Improving Gender Balance, a Department for Education funded project led by the Institute of Physics and evaluated by UCL Institute of Education.

At the IOP, we know that many other groups are also under-represented in physics and are similarly affected by stereotypes. We encourage staff and students to consider other factors which can influence subject choice, such as ethnicity, socio-economic background, disability and sexual identity.









This guide highlights where gender expectations can creep into careers guidance and suggests ways to reduce these inequalities.

Gender inclusive careers guidance and the Gatsby Benchmarks

- Statutory guidance from the government's Careers
 Strategy (2018) sets out that all schools should deliver
 the Gatsby Benchmarks to fulfill their legal duties.
- Further information on the benchmarks can be found at goodcareerguidance.org.uk.

THE GATSBY BENCHMARKS GOOD CAREER GUIDANCE

 Aligned to these benchmarks, this guide supports schools in delivering gender inclusive careers guidance. You may want to review alongside The Gatsby Benchmark Toolkit, available at careersandenterprise.co.uk/gatsby-benchmarks.



Why does gender stereotyping matter?

- Gender stereotyping is a widely held belief or generalisation about the behaviours, characteristics and roles performed by men and women.
- These beliefs can place limits on the acceptable choices and actions of young people and can affect self-perception, wellbeing, attitudes and participation in a wide range of settings.
- From an early age, young people absorb societal stereotypes about suitable jobs for men and women.
 Research shows more than half of young women feel their career options are limited by their gender¹.
- Careers guidance, free from gender bias, is one way schools can start to tackle these views and overcome barriers resulting from unconscious bias.



How will this guide help?

- For each Gatsby Benchmark the guide highlights where gender inequality can creep in and suggests ways of working to eliminate stereotyping and bias.
- All schools will have different ways of tackling this. The guide includes example actions taken by Careers Leaders which may help you decide strategies relevant to your setting.
- By reviewing what you do now, and identifying where changes should be made, you will be playing your part in driving gender equality and diversity.
- It may be impossible to make all the changes you'd like to right now. If this is the case, plan to filter them into your school's careers strategy over time.
- Engaging every young person in your school with effective careers guidance free from bias will ensure they are not limited by gender stereotypes.



1. A stable careers programme

Every school and college should have an embedded programme of careers education and guidance that is known and understood by pupils, parents, teachers and employers.



Be aware:

- An embedded programme actively involves students, parents/carers and staff. Opportunities for everyone to learn about gender bias will reduce the risk of reinforcing gender stereotypes during formal and informal careers-related activities and discussions.
- Nationally, post-16 the uptake of A-levels, vocational courses and apprenticeships is equally split by gender, however, there is a clear gender divide in subjects chosen.

In 2017:

- Over 80% of apprenticeship starters in construction were male.
- Over **80**% of apprenticeship starters in health and social work were female.²

In 2019:

- Over **70%** of physics and computing A-levels entrants were male.
- Over **70%** of psychology and English A-levels entrants were female.³



Aim for:

- A programme that informs students, parents and staff (on multiple occasions) about the potential impact of gender bias, outlining suitable strategies to address this building on the tips in this guide.
- A review of whole-school data to identify gender imbalances. If required, areas of concern could be addressed by additional departmental time, and include reviewing opportunities for parental engagement etc.





Top tips:

- Progression data from previous years can help to identify trends in gender gaps in your school.
- Student voice and parental surveys can be used to highlight/unpick the issue of gender stereotyping whilst raising the profile of the CEIAG programme.
- Use multiple opportunities to share the message that gender bias is not acceptable or inevitable, and can be reduced using suitable strategies.

Schools with a sixth form are more likely to have gender imbalances lower than national averages in A-level subject choices than schools without a sixth form where students move on to other establishments to complete their A-levels.⁴

²Apprenticeships in England by Industry Characteristics 2017/17 Academic Year, Department for Education (2018) ³ICO (2019)

⁴Closing Doors: Exploring gender and subject choice in schools, Institute of Physics (2013)

2. Learning from career and labour market information

Every pupil, and their parents, should have access to good quality information about future study options and labour market opportunities. They will need the support of an informed adviser to make best use of available information.



Be aware:

- Every pupil and their family should have access to good quality information about future study and employment choices to reduce the risk of making decisions based on gender stereotypes.
- Families/carers are influential but may have gender stereotypical expectations of children due to their own experiences.
- A child's aspirations, and how they plan to achieve these, will be influenced by their beliefs and experiences.
- Families/carers may lack accurate knowledge about changing job markets and higher education which could make gender biased advice more likely.

A PISA OECD study shows **50%** of parents expect their sons to work in STEM careers, but less than **20%** expect the same of their daughters.⁵



Aim for:

- Multiple opportunities to share unbiased, ageappropriate information about future study and jobs.
 For example, parents/carers of students in Y9 and Y11 need to know the impact of subject choices on next steps to help their child make informed decisions.
- Positive action to overcome barriers around low parental engagement using different communication methods and opportunities to engage all carers responsible for young people.
- Use of data to display gender inequality. Make it relevant by relating it to students' lives and their future opportunities.





Top tips:

- Use multiple opportunities to direct families to careers information they can access at home e.g. nationalcareers.service.gov.uk and Imiforall.org.uk.
- Try sharing information using channels such as newsletters, the school website, Twitter and Facebook as well as in-school events, to include as many parents/carers as possible.
- Check CEIAG resources for gender stereotypes in images and examples before sharing. Also check that the language is suitable for non-specialists.
- Raise the profile of CEIAG whenever families are in school e.g. CEIAG display. Audit this to ensure stereotypes aren't being reinforced.

Recent research with parents and carers highlighted:

- **80**% felt confident giving advice on learning and careers to their children.
- 40% didn't use information sources and
 46% didn't ask anyone about careers before advising their children.
- 61% of parents with girls hadn't discussed Modern Apprenticeships (compared to 48% of parents with boys).⁶



3. Addressing the needs of each pupil

Pupils have different career guidance needs at different stages. Opportunities for advice and support need to be tailored to the needs of each pupil. A school's careers programme should embed equality and diversity considerations throughout.



Be aware:

- Some students feel they should conform more with gender stereotypes as they get older. They are increasingly exposed to gender stereotypes through different channels including their peers, personal encounters and media coverage.
- There is an ongoing risk that gender stereotypes can have a significant impact on students' expectations and aspirations and can ultimately constrain career choices.

51% of people say gender stereotyping in childhood constrained their career choices.⁷



Aim for:

- A gender inclusive CEIAG programme that starts
 when students join the school and provides multiple
 opportunities to explore information about gender
 bias, impartial information about career choices and
 support with the process of decision making.
- Opportunities to educate students about unconscious bias and gender stereotypes and their impact on further education and career choices.





Top tips:

- Use opportunities in form-time, PSHE, lessons and CEIAG meetings to help students understand gender stereotyping and its impact on them. A good place to start is iop.org/IGBgenderstereotypes and the animation at tinyurl.com/y6gpsozr.
- Students may be more familiar with stereotypical jobs and routes through education; a responsive CEIAG programme will ensure all students understand different routes using feedback from student voice and surveys.
- Use Compass+ (careersandenterprise.co.uk/ schools-colleges/compass-plus) to break down your cohort. Use the tool to track pupil progress, identify the needs of each young person and target relevant careers interventions.

Surveying 15-year-old students in 72 countries the 2015 PISA OECD study showed girls outperformed boys in reading in all countries; boys significantly outperformed girls in maths and science in a third of the countries. Different factors lead to this, but individual students have specific strengths and weaknesses, which should guide their choices.⁸

4. Linking curriculum learning to careers

All teachers should link curriculum learning with careers. STEM subject teachers should highlight the relevance of STEM subjects for a wide range of future career paths.



Be aware:

- All teachers should link curriculum learning with careers, but may lack up-to-date knowledge about changing routes through education and the evolving job market.
- Teachers may hold and unconsciously share gender stereotypical views about subject difficulty, jobs and employability skills.
- Teachers' unconscious bias may lead to unreliable exam predictions and gender stereotypical advice.



Aim for:

- A departmental approach to CEIAG, with clear expectations on how to cover gender stereotypes within schemes of work and subject lessons.
- A school policy of subject equity to present subjects equally in terms of relative difficulty, with consistent entry criteria. This removes personal opinion and confirms the school's commitment to ensuring gender doesn't limit aspirations.
- Routine audits of teacher predictions vs actual results, and student proposed vs actual destinations to identify and take steps to reduce gender imbalances.



Top tips:

- Save CEIAG co-planning time by using departmental approaches to identify and reduce gender stereotyping.
- Share suitable resources and websites with subject teachers to help them improve their knowledge of CEIAG and gender bias.
 See the back page of this guide for a few suggestions.
- Audit CEIAG references and images used in lessons, curriculum resources and options booklets for gender stereotyping.
 Try using personal pronouns (e.g. you or yours) and avoid gendered pronouns (s/he or his/hers) or impersonal pronouns (e.g. they, theirs).
- Choose images related to the job rather than the person doing the job.
- Show non-typical gender job roles in lessons using video clips from the likes of icould.com.

Teachers' beliefs about a student's ability and interests can create unreliable A-Level predictions (16% accurate) especially for disadvantaged and state school students where teachers are more likely to underpredict.8

A survey by Accenture in 2017 found **52%** of parents and **57%** of teachers admitted they held subconscious gender stereotypes about boys and girls in relation to STEM subjects.⁹

In 2014 an Improving Gender Balance survey showed:

46% of students felt that girls are often steered towards art and humanities. **50**% of students felt boys and girls made different choices post-16 because of different influences on them.¹⁰

An analysis of GCSE papers in 2018 for one exam board showed the physics papers contained **9 more** questions mentioning men compared to women. For biology, women were mentioned slightly more often than men.¹¹

No woman's name appears in the national curriculum for GCSE science. 12

Predicted grades: accuracy and impact - A report for University and College Union, UCL Institute of Education (2016)

⁹newsroom.accenture.com/news/accenture-finds-girls-take-up-of-stem-subjects-is-held-back-by-stereotypes-negative-perceptions-and-poor-understanding-of-career-options.htm

¹⁰Improving Gender Balance, Institute of Physics (2014)

¹¹IGB Coach Audit (2019)

¹² teachfirst.org.uk/steminism, referencing Department for Education, Biology, Chemistry and Physics: GCSE subject content, 2015 (updated 2019) and Department for Education, Combined science: GCSE subject content, 2015 (updated 2019)





5. Encounters with employers and employees

Every pupil should have multiple opportunities to learn from employers about work, employment and the skills that are valued in the workplace. This can be through a range of enrichment activities including visiting speakers, mentoring and enterprise schemes.



Be aware:

- Heavily gendered environments exist in some industries which can put students off.
- Employees and employers may unconsciously reinforce gender stereotypes through conversations or recruitment materials.

In **57%** of occupations, image searches indicate the jobs are more male dominated than they actually are. Men dominate Google image searches for most jobs — even for bartender, probation officer and medical scientist, roles in which women outnumber men in the US.¹³

There are huge variations in pay levels between apprenticeships in different sectors. The average weekly rate of basic pay for Level 2 and 3 apprentices in hairdressing and childcare (female dominated) is £163 and £232 respectively, compared to £306 for engineering and £337 for electrotechnical apprenticeships (male dominated).¹⁴



Aim for:

- Gender balance in attendance and participation in CEIAG activities, and an explicit focus on skills required for roles, rather than gendered assumptions.
- An active attempt to overcome gender imbalance
 e.g. inviting speakers that do not conform to gender
 stereotypes to assemblies and "speed-dating"
 events, organising visits that involve a whole class or
 year group instead of relying on volunteers.
- Information about the impact of gender bias to be shared with employers in advance of visits.
- Student feedback to be collected and analysed for gender bias at the time of an encounter. This can highlight barriers and misconceptions that can be addressed before future encounters e.g. limited access to toilet facilities, not being aware of appropriate footwear for site visits, peer pressure etc.



- Avoid using gender biased names for jobs e.g. use firefighter not fireman.
- Audit the gender balance of speakers and visitors; take positive action to redress gender imbalances.
- Use targeted invitations or opportunities to overcome gender bias.
- Past pupils can be very powerful role models when it comes to challenging stereotypical roles; look for opportunities to invite them in to engage with students, tap into programmes such inspiringthefuture.org, inspiringwomencampaign.org, Future First futurefirst.org.uk and/or reach out to your local Enterprise Adviser via careersandenterprise.co.uk/ about-us/our-network.
- Employers often have gender networks aimed at increasing diversity. Try to link into these when working with employers.

¹³washingtonpost.com/business/2019/01/03/searching-images-ceos-or-managers-results-almost-always-show-men/

¹⁴Department for Business, Energy and Industrial Strategy, Apprenticeship Pay Survey 2018/19 (2020)

6. Experiences of workplaces

Every pupil should have first-hand experiences of the workplace through work visits, work shadowing and/or work experience to help their exploration of career opportunities, and expand their networks.



Be aware:

- Unconscious bias from students, teachers and families can affect who gets offered certain opportunities, and which opportunities are subsequently taken up by students.
- Family connections with the workplace vary greatly. Using a student's own connections to secure work experience can reinforce existing gender stereotypes.
- Gender stereotypes may be perpetuated during encounters.

98% of early years educators are female, despite the benefits of having a diverse workforce in the industry. Men in the early years sector and working with young children are part of a tiny minority and may face discrimination and suspicion as a result.15



Aim for:

- Experiences of the world of work that challenge students' stereotypical beliefs. Focus on attributes needed to do the job rather than gender stereotypes when inviting students.
- Relevant information about the impact of gender bias shared in advance - you could ask about the employer's gender pay gap or proportion of men and women in positions of responsibility and discuss with students.
- An active effort to overcome gender imbalance by identifying barriers to participation. Student feedback can uncover barriers that can then be addressed before future encounters.





- Prepare students so they can use the visit to ask about gender bias e.g. raising questions about the gender pay gap and gender split at different levels of seniority, and performing different roles.
- Raise awareness by sharing information and invitations with whole year groups. One group should not receive preferential treatment compared to other groups, however, positive discrimination, for example personal invitations, can be used to target underrepresented groups.
- Some workplaces organise girls-only or boys-only events to target under-representation. To reduce the risk of staff seeing these visits as discriminatory and to ensure overall roughly equal access to opportunities, it may help to monitor data on participation by gender, and discuss why these approaches may be beneficial sometimes.
- Experiences of the world of work can be achieved in lots of ways - each and every opportunity has the potential of making or breaking stereotypes.

7. Encounters with further and higher education

All pupils should understand the full range of learning opportunities that are available to them. This includes both academic and vocational routes and learning in schools, colleges, universities and in the workplace.



Be aware:

- All students should understand the full range of learning opportunities available to them, but they often seek out or are guided towards courses that match the 'norm' for their gender.
- Families often have gendered expectations for their child's choice of courses, even if this is unconscious.
 This may also vary by socio-economic and cultural background.
- Gender stereotypes may be perpetuated during encounters, either because students seek out courses they feel familiar with or because providers use resources, displays and examples that reinforce gender bias.



Aim for:

- Balanced attendance and participation; monitor outcomes by gender to identify barriers to participation as students may reject an option or subject choice that doesn't conform to their own expectations.
- Well informed students that are aware of their individual strengths and interests, and the impact of gender stereotypes, before encounters.
- Use of accurate information about routes through education and skills needed for different subjects.
 An A-Level matching tool such as sacu-student.com can guide a discussion about possible options in sixth form.



- Collect and analyse student feedback for gender bias after an encounter. If you do visit open events, look out for and give feedback if you see or hear examples of gender bias, or good practice.
- Audit prospectuses beforehand for gender bias; if you have concerns, consider raising the issue directly with the provider.
- Share information about courses and invitations to events with whole year groups to avoid gender stereotyping; use personal invitations based on skill sets to target underrepresented groups.



8. Personal guidance

Every pupil should have opportunities for guidance interviews with a career adviser, who could be internal (a member of school staff) or external, provided they are trained to an appropriate level. These should be available whenever significant study or careers choices are being made. They should be expected for all pupils but should be timed to meet their individual needs.



Be aware:

- All pupils should have a guidance interview with a careers adviser, based on their individual needs and free from gender stereotyping.
- There is a risk that unconscious bias in the adviser or the student could mean that stereotypical assumptions about their interests and abilities affect what is discussed.
- Students will have different levels of existing knowledge because of gender bias affecting their conversations about subject choices and careers e.g. nursing may be discussed more frequently with girls, and engineering with boys.
- As well as CEIAG interviews, students often talk informally to families and teachers about subject choices and jobs. The student often selects who to approach and what to ask, so informal discussions may unconsciously reinforce their own gender stereotypes.



Aim for:

- Careers advice that is consistent. Using a template for interviews can help reduce assumptions made about students and ensure questions are impartial.
- Feedback from students after their interview to identify occasions they experienced gender bias during the CEIAG process, and plan how to act on these findings.
- Continual improvement of the CEIAG programme

 review resources, encounters, activities and interviews for gender bias in images, examples and expectations.
- Audit of post-16 choices in terms of gender to identify trends or hidden barriers. If you are an 11-16 school, ask your sixth form providers to share subject choices by gender.



- Use a tick list to identify if gender is mentioned when talking about jobs by you or the student.
- As well as questions based around the student's abilities, interests and achievements, consider their personal qualities, motivation and employability skills free from gender bias. Employability skills include communication, problem solving, teamworking and decision-making and may be developed in lessons, hobbies and part-time jobs.
- Ensure questions and statements avoid gender bias and focus on skills and attributes, for example "I recommend this course because of your interests/ achievements...", rather than "I recommend this course because other girls who've taken it have enjoyed it...".
- Challenge statements from students, teachers and families like "Nursing is a good choice for girls" or "Physics is for boys".
- Make careers booklets available online and adjust to match the level of learner. This ensures they can be accessed freely, in and out of school. The booklets can also act as lesson resources and a record of activities and discussions.¹⁶



Where do gender stereotypes come from?

Share this short animation with students, and pass on the curriculum-aligned PSHE activities to explore how stereotypes affect us daily. **tinyurl.com/y6gpsozr**

What's an effective way to challenge gender stereotypes?

A whole-school approach can deliver results. Explore this diagram to unpick some of the interconnected issues.

bit.ly/3gknJa7

Where does gender imbalance show itself in choices?

Look at GCSE and A Level exam results by gender at jcq.org.uk/examination-results

Want more resources?

Head to iop.org/genderbalance

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