

Briefing: The Challenges for Women in Business and in STEM

Becky Lodge

August 2026

Executive Summary

Women's participation in business and STEM (Science, Technology, Engineering and Mathematics) remains disproportionately low despite clear evidence that diversity contributes to innovation, economic growth and societal resilience. This white paper draws on lived experience, current research and policy considerations to examine the structural barriers women face from education through to employment, entrepreneurship and senior leadership.

These include educational pathways that do not adequately recognise different learning needs, workplace cultures that contribute to attrition, limited representation in technology and AI, and unequal access to investment and business support. The paper considers how more inclusive and personalised approaches to education, stronger pathways into STEM, improved workplace cultures, greater participation in AI and fairer access to finance could help address these challenges. Meaningful change requires action across the entire pipeline; from early education and skills development through to employment, entrepreneurship, investment and leadership.

Introduction: A Personal and Systemic Journey

My own experience has shaped my understanding of the barriers women can face in education, technology and business. From a young age, my intellectual potential was recognised, but as a neurodiverse student, I found that traditional schooling often failed to recognise how I learned best. I was described as gifted in the arts, but my wider potential and creativity were not necessarily connected to future opportunities in technology.

In the 1980s, careers guidance was often highly conventional. When I was described as academically capable, the choices presented to me were essentially 'teacher' or 'secretary'. Although I achieved good grades in Biology and had an interest in science, I was not actively encouraged towards a scientific or technical career. I was subsequently streamed towards arts subjects. With hindsight, this experience also demonstrates why the boundaries between STEM and the creative disciplines are increasingly unhelpful. The modern technology economy relies not only on technical capability but also on creativity, communication, design, critical thinking and problem-solving. These are not valued in our education system, but they need to be.

The emergence of 'STEAM' incorporating the arts alongside STEM; recognises the importance of these skills, particularly in areas such as gaming, digital design, user experience and creative technology. My experience is personal, but it is not unique. It illustrates how early expectations and educational structures can influence the opportunities available to girls and young women long before they enter the workplace. Education should identify and develop potential rather than narrow it.

Systemic Barriers in STEM and Business

Educational Pipeline and Cultural Norms

The STEM gender gap begins early. Although girls can perform strongly academically, their participation in some STEM subjects declines at key transition points in secondary education and beyond. Subject choices at GCSE and A-Level can influence access to STEM degrees, apprenticeships and ultimately technical careers. This creates a pipeline in which fewer women enter some STEM disciplines, and fewer progress into senior technical and leadership roles.

Gender expectations can play an important role. Girls may be influenced, consciously or unconsciously, by assumptions about which subjects, careers and behaviours are appropriate for them. My own experience demonstrates the consequences of this. Being regarded as 'bright' was not necessarily enough to overcome the assumptions built into the system.

We should also recognise the contribution of creativity and the arts to technology. The growth of gaming, user experience, digital design, creative technology and human-centred AI demonstrates that innovation requires a combination of technical and creative skills and if I consider my own journey in tech; having primarily a 'creative brain' has allowed me to create opportunities and products and services in business over my lifetime, in a way that other people cannot see or understand - and that builds a strong competitive advantage in business.

Toxic Cultures and Attrition

Entering technology is only part of the challenge. Retaining women and enabling them to progress is equally important. Research has identified a range of factors contributing to women leaving technology, including exclusionary workplace cultures, lack of progression, limited access to mentorship and environments in which women do not feel supported or valued.

I have experienced marginalisation and exclusion throughout my career, including instances of overt misogyny. I have been told that I was 'not technical enough', that I was 'not a coder' and, in one particularly stark example, that I was 'there to make the tea'. These experiences are not simply individual grievances. They demonstrate how assumptions about who belongs in technology can become barriers to participation.

I am still frequently the only woman in the room. Creating more visible female role models at local, regional and national levels is therefore important. Women and girls need to see people like themselves succeeding in technology, entrepreneurship and leadership. Visibility alone is not enough, but it can help challenge the perception that technology is a career reserved for a particular type of person.

Underrepresentation in AI and Decision-Making

Artificial intelligence represents one of the most significant technological developments of our time, yet women remain underrepresented across AI, data and technical roles, particularly at senior levels. This matters because the people who design, develop, deploy and govern technology influence the systems that increasingly shape our lives.

Technology designed without sufficient consideration of different lived experiences risks reproducing existing inequalities or creating new ones. My experience in AI and technology has reinforced this point. It can still be difficult to get into the room in the first place, and once there, women can face assumptions about their technical credibility or expertise. If those rooms are only in London, then that's another barrier for a regional founder that can be innovating in the UK and from anywhere.

Increasing women's participation in AI is therefore not simply a question of representation. It is a question of better technology, better decision-making and better outcomes. A critical mass of diverse voices should be present not only in technical development but also in investment, procurement, governance and policymaking.

Personalisation and Learner-Centred Education

Emerging personalised education models are beginning to combine adaptive learning, learner profiling and wellbeing considerations to create more individualised pathways.

The policy question is not whether every learner requires a completely bespoke education system. It is whether technology can be used more effectively to identify where individuals need additional support, different approaches or alternative routes to achievement. The education system is over 100 years old and is not fit for purpose. The children going through the school system cannot necessarily be prepared for the working world, as we don't know what it will look like yet! What is certain though is that we are in the fastest period of technological advancement for 100 years and we need to respond to this immediately rather than being passive passengers.

My research into personalised and adaptive learning approaches suggests that appropriately designed interventions can improve engagement and learning outcomes. Continued research and evaluation are important to establish which approaches are most effective and for whom. Personalisation should complement, rather than replace, teachers and human support and children should be supported behaviourally and psychologically to ensure that their wellbeing and mental health are prioritised.

Regulation and Accountability in Technology

AI regulation must reflect diverse stakeholder voices. Without sufficient consideration of gender and wider diversity, AI governance risks perpetuating existing inequalities or failing to identify unintended consequences by 'big tech' - such as the exploitation of women and children through unauthorised use and sexualisation of both video and photographic images online for nefarious, exploitative and criminal means – this is just one example as to why regulation needs to happen as 'big tech' is not capable of self-regulation and we need to be mindful of what AI can do.

The UK should continue to draw on the work of parliamentary committees, industry experts, civil society and international best practice when developing frameworks for responsible technology and AI. Diversity should be considered across the full technology lifecycle from research and development through to procurement, deployment and governance. Regional voices from all four corners of the nation should be represented.

Supporting Women-Led Innovation

Women-led businesses continue to face significant barriers to accessing investment. Government programmes, investors and business support organisations should examine where these barriers arise and consider how access to capital, mentorship and business growth support can be improved. Support should not be concentrated disproportionately among the most visible businesses or within London and the South East.

A broader and more devolved funding approach is needed to ensure that women-led businesses across the UK have access to appropriate support at different stages of growth.

Regional universities, Mayoral Combined Authorities and local business ecosystems could play a greater role in identifying and supporting emerging technology businesses within their communities, this would allow the UK economy to recover more quickly and tech companies to be more quickly identified. Funding needs to be deployed faster, and we need to take more risks in our funding attitude in the UK if we want to be at the forefront of tech, we are too risk averse.

Recommendations

1. Strengthen the STEM Pipeline and Increase Women's Participation

Encourage girls and young women to explore STEM and technology from an early age through stronger careers guidance, role models, practical opportunities and greater exposure to the range of careers available. Women should have greater representation across AI research, development, investment, procurement, governance and policymaking.

How: Design systems for schools that concentrate on encouraging and rewarding critical thinking skills first and not just passing exams.

2. Improve Access to Finance for Women-Led Businesses

Government and the investment community should address structural barriers to finance and ensure that women-led businesses have access to appropriate capital and support at different stages of growth.

How: Quotas and tax breaks for angel investors and VCs to encourage investment in female led and founded businesses. Reward changing the societal funding norms.

3. Devolve Innovation and Growth Support – Fund Faster and Equitably

Regional universities, Mayoral Combined Authorities and local business ecosystems should play a greater role in identifying and supporting emerging women-led businesses and technology ventures with funding remits attached by City and location, linked to universities that hold Small Business Charter status in the UK.

How: Abolish national innovation funding bodies and appoint regional accessible innovation boards linked to Mayoral offices; they would in turn partner and control innovation funding with the universities in their combined authority region to identify research and growth opportunities.

Note: Boards would have 50/50 gender representation to operate with targets for deployment of funding including SMEs and business represented. Universities can then accelerate the research and funding life cycle and work more effectively with SMEs in their local communities engendering economic growth and job creation.

About Becky Lodge

[Becky Lodge BA \(Hons\) FRSA](#) is an edtech and AI technology entrepreneur and business leader with more than three decades of experience across technology, entrepreneurship and digital innovation primarily in radio broadcast software and F1 globally.

She is the founder of Desk2Educate, an award-winning edtech company focused on personalised learning and the use of AI in education. Becky is also a member of the Business AI Alliance and contributes to national conversations around AI, technology, education, digital inclusion and women's participation in STEM and contributes via APPG PICTFOR around the subjects of technology and DEI/ESG.

Becky has been recognised through Women in Data's © 'Twenty in Data and Tech' and has been named among the Top 50 UK's most influential leaders in technology, by Computer Weekly. She has contributed to parliamentary discussions on technology, diversity and inclusion and has campaigned publicly on access to funding for women-led businesses and Desk2Educate was named one of the Top 20 Tech Companies to Watch in the UK (TechRound).

Also a Fellow of the Royal Society of Arts (FRSA), Becky is passionate about social mobility and ensuring that talent and potential, rather than background, gender or circumstance determine opportunity in the digital economy and actively advocates for neurodiverse people and inclusion.

Her own experience as a neurodiverse working-class arts graduate (MMU) born in inner city Leicester highlights the close relationship between the arts; tech and engineering and how it is possible to gain social mobility in the UK through persistence, hard work and breaking through the glass ceiling by never giving up; always being open to learning and always acting with compassion and kindness first.

References

1. WomenTech.net — Women in Tech Statistics, UK.
2. Women in Data UK — Industry insight on retention and representation.
3. The Alan Turing Institute / Nesta — research on gender diversity in AI.
4. McKinsey & Company — Women in the Workplace.
5. Harvard Business Review — research examining women's retention in technology.
6. Women and Equalities Committee — UK Parliament report