Written Evidence Submitted by BCS, The Chartered Institute for IT (DIV0092)

The purpose of BCS, as defined by its Royal Charter, is to promote and advance the education and practice of computing for the benefit of the public. We bring together industry, academics, practitioners, and governments to share knowledge, promote new thinking, inform the design of new curricula, shape public policy and inform the public.

As the professional membership and accreditation body for IT, we serve 60,000 members, including practitioners, businesses, academics, and students, in the UK and internationally. We accredit the computing degree courses in ninety-eight universities around the UK and as a leading IT qualification body, we offer a range of widely recognised professional and end-user qualifications.

Summary of BCS Position

BCS is grateful for the opportunity to respond to the UK Parliament's Call for evidence in relation to Diversity in STEM; this submission is supplementary to that of the National Engineering Policy Centre (NEPC), to which we are a co-signatory. The NEPC submission deals with many of the common issues across our sectors and industries. BCS champions the importance of diversity and inclusion in the IT and wider STEM sectors; advancing diversity and inclusion are an organisational priority[1].

• The nature or extent to which women, ethnic minorities, people with disabilities and those from disadvantaged socioeconomic backgrounds are underrepresented in STEM in academia and industry;

BCS research (2021) into gender and ethnicity in the UK's IT and digital industries showed a mixed picture across the UK's IT industries[2]. Compared with the UK population (50%), women remain significantly underrepresented, comprising 19% of the total IT specialist workforce, or 312,000 individuals.

Like other STEM subjects, gender disparity can be traced across the educational life cycle, with biased perceptions affecting the choices of children, young people, parents, and carers. When comparing the attainment of female and male candidates across GCSE, AS, and A levels over the past five years, female candidates appear to outperform male candidates regularly at the highest grades. However, there seems to be a plateau in entries at GCSE, and a much slower growth rate in uptake at A level by female candidates compared with males. The 2019 Department for Education's School Snapshot Survey[3] reported:

- Almost three times as many males students as female students were planning to take computer science
- Whilst a substantial element of those rejecting GCSE Computer Science (62%) said that they did not enjoy the subject, male students tended to opt for the subject because they did enjoy it

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[1] https://www.bcs.org/policy-and-influence/bcs-four-themes-and-campaign-goals-2021-2025/
[2] https://www.bcs.org/policy-and-influence/diversity-and-inclusion/bcs-diversity-report-2021-women-in-it/
[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/885695/SSS_Summer19_Curriculum.pdf

- Female students reported that they were more likely than their male counterparts to opt for GCSE Computer Science as their schools insisted upon it
- Parents and carers were less likely to discuss careers in computer science with their children, however they were enthusiastic about the subject and, when presented with options, were highly likely to recommend it to their children

These barriers continue into higher education where the ratio of male and female undergraduates in Computer Science remains stubbornly over 4:1[4].

Ethnic minority representation is higher amongst IT specialists (18%) than within the workforce as a whole (12%) of the UK population (14.4%) with 300,000 ethnic minority IT specialists.

The different barriers to careers in IT for ethnic minority groups in the UK are varied for different ethnic groups; the term 'ethnic minorities' does not represent a homogenous group and is increasingly becoming an unhelpful categorisation. It is vital that the differences between those British born individuals from ethnic minorities and those who have come to the UK for work are understood. The more positive representation of ethnic minorities in the UK IT industries is likely due to the immigration of skilled individuals from overseas rather than evidence of a uniquely progressive, supportive or tolerant sector for British people of ethnic minorities.

Geographical differences in the representation of people from ethnic minorities working in IT are pronounced. STEM organisations based in London have a higher representation (33%) than those in the South West of England (4%)[5]. Considering the regional differences in ethnic minority populations, the disparity identified in this research calls into question the efficacy of diversity initiatives across the country.

Conclusion

The scale of underrepresentation in STEM continues to cause great concern within the BCS, for our members and across society. This is particularly poignant as the effects of the current pandemic erodes some of our hard-won advances. We hope this Call provides the information required for a renewed focus on the barriers to full participation in our vital STEM sectors and industries, and we are committed to supporting the UK Parliament, UK and devolved governments, industry, academia and civil society to achieve our shared aims of a fairer and more inclusive society.

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[4] https://www.ucas.com/data-and-analysis/undergraduate-statistics-and-reports/ucas-undergraduate-sector-level-end-cycle-data-resources-2020
[5] https://www.bcs.org/media/5873/virtual-insights-2020-report.pdf