Response to Skills England Autumn Engagement by BCS, The Chartered Institute for IT

13 December 2024

Who we are

BCS, The Chartered Institute for IT is the professional body for information technology. Our purpose as defined by our 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 government to share knowledge, promote new thinking, inform, and shape public policy. BCS has over 70,000 members including businesses, entrepreneurs, public sector leaders, academics, educators, and students, in the UK and internationally. We accredit computing degree courses in over ninety UK universities. As a leading information technology qualification body, we offer a range of widely recognised professional and end-user qualifications. **We are a leading end point assessment organisation for digital apprenticeships.** BCS is the home of Computing at School, our network of computing teachers, academics, and employers.

Digital Apprenticeships - key to digitalisation of the economy:

As recognised by the government's own analysis, the digital skills gap needs to be bridged if the UK economy is to grow, and its citizens are to thrive.
BCS has been an approved end-point assessment organisation since 2017 and has assessed over 28,500 apprentices in software, network, infrastructure, cyber, AI, data, business analysis and digital marketing.
From our position in the sector, we know an increasingly diverse range of employers are investing in digital apprenticeships, finding them to be an excellent route into the IT and digital profession. As reported in the government's most recent apprenticeship statistical release – 28 November 2024:

Information and Communications Technology (ICT) apprenticeship starts continue to rise. In 2022/23, ICT was the only tier 1 subject area to see an increase in starts compared to 2021/22. In 2023/24 starts have grown a further 7.9% and make up 8.0% of all starts.

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Information and Communication Technology	21,110	18,230	18,400	22,820	25,100	27,090

Engaging smaller business

Digital skills are in demand across all sectors and sizes of organisations, but many small businesses are reluctant to engage in apprenticeships.
In our recent report, 'Protect. Improve. Grow. The Future of Digital Apprenticeships[1]', which included a survey, BCS found:

- Two thirds of businesses (66%) think digital apprenticeships are effective in addressing digital skills gaps in England, according to the BCS study, which includes a YouGov poll.
- However, smaller UK organisations are held back from hiring more apprentices because of bureaucracy and funding challenges.
- But more than half (55%) said better financial incentives for employers would make digital apprenticeships more attractive to them and prospective apprentices.
- Government grants or tax breaks would be a 'huge motivator' to get more digital apprentices into small organisations.
- The 5% 'co-funding' requirement for non-levy paying organisations to take on apprentices was also found to be a barrier – removing it would reduce the disproportionate impact on small and medium enterprises (SMEs).

 A typical small business view, gathered as part our evidence based is:
"There's been an awful lot of input from employers into, [what] businesses are looking for. And I wouldn't want all of that ripped up and started again. And I actually think that needs to be taken and added to. You know, what is going to come next …it's just so important that employers of varying sizes from small up to large are listened to.

Alison Galvin Chief People Officer and Co-found Invotra Group

Funding Level 7 Apprenticeships

We recommend that serious consideration is given to retaining the funding of Level 7 apprenticeships. The feedback we have received from training providers and employers is that this provision should be funded via the growth and skills levy, where the occupational area has significant economic relevance (as identified in Invest 2035, the UK's modern industrial strategy).

Certain higher-level qualifications in digital and leadership are not only required to ensure that the UK has the skills it needs, but importantly to ensure we have sufficient economic capability to advance and compete in digital innovation and emerging technologies.

Concerns about the shortage of higher-level skilled tech candidates were outlined in the government's own data in the Employer Skills Survey 2022 [2], which will be refreshed and re-published in 2025. The Employer Skills Survey provides a comprehensive overview of the skills and training requirements in the UK's tech and digital sector. It is one of the trusted sources of data listed on the Skills England website as part of its 'data driven decision making' mission.

Unlike many other sectors, tech skills require continuous investment from employers, educators, and practitioners.

Here are some key points from the above research around **recruitment and training challenges.**

- **High Demand for Specialists**: The sector faces challenges in recruiting specialists with expertise in emerging technologies such as artificial intelligence, machine learning, and blockchain.

- **Competition for Talent**: Intense competition for skilled professionals often leads to prolonged vacancies and increased recruitment costs.

- **Continuous Learning**: Employers emphasize the need for continuous professional development to keep pace with rapid technological advancements.

While digital apprenticeships have been popular at Levels 3 and 4 for the past seven years, there has been increasing demand for higher level apprenticeships, for example the Level 7 AI Data Specialist. Over 230 apprentices have completed the programme, and circa 630 are currently in training. Other higher level digital apprenticeships only recently developed and approved for delivery include the Level 7 Advanced Digital Forensic Professional and Spatial Data Specialist.

BCS has seen digital apprenticeships being undertaken by a diverse population. Winners of the BCS IT and Digital awards for 2024 in AI, Cyber and DevOps were all women. This engagement is significant in a profession that struggles to attract female talent.

We recommend that Skills England should be wary of implementing broad brush changes that can have unintended consequences. It is vital to ensure funding is appropriate to the economic priorities and helps to drive inclusion and social mobility.

BCS has considerable concerns about removing the funding of Level 7 digital skills and would ask that this is not enacted without consultation with the relevant stakeholders, including employers, training providers and assessment organisations to establish a clear understanding of the likely outcomes.

We do not believe that the removal of funding of Level 7 digital skills is aligned with the government's Invest 2030 – Modern Industrial Strategy: "*With its world-leading research, strong culture of innovation, and thriving start-up ecosystem, **backed by a deep talent pool** and the investment required to grow and scale sustainable businesses globally, the UK is well positioned to build on its success and develop the next wave of groundbreaking digital and technology companies*".

Our work with SMEs strongly indicates that de-funding of such programmes relevant to their organisations is only likely to disengage these businesses further.

There are ample examples of people who have progressed onto higher level digital apprenticeships that would not have had the confidence without the apprenticeship route and would not have achieved what they have through traditional higher education.

We have every confidence that DfE and Skills England understand that funding specialist technical skills are essential for the economy and our society and will look to nurture higher level digital apprenticeships as part of that strategy.

The Youth Factor

The number of young people not in education or training is at a record ten year high and we welcome the approaches outlined in the Get Britain Working White Paper including:

- Ensuring that every young person aged 18 to 21 in England has access to an apprenticeship, training, education, or help to find a job through the new Youth Guarantee.
- Working with mayoral authorities to deliver the trailblazers programme as part of the Youth Guarantee.
- Funding Further education provision, including at Level 2 for those with those low digital skills.
- Transforming Jobcentre Plus across Great Britain into a genuine public employment service, bringing it together with the National Careers Service in England.

In our recent response to the Industrial Strategy [3] we found:

- The most significant barrier to growth in many regions outside of London is a lack of high-productivity firms and specialised STEM skills.
- To encourage employers to invest in upskilling, the government could provide financial incentives, such as vouchers for training, grants, or tax breaks for companies that invest in digital apprenticeships and skills development programs.
- Building a skilled, digitally literate workforce needs to start early - 94% of girls and 79% of boys drop computing at age 14. All young people need to leave school digitally literate and this needs to be recognised in a qualification to give employers, universities, and training providers the confidence that young people are sufficiently digitally literate.

Diversity and Inclusion

Our recent BCS Diversity report [4] said: *The tech profession must address its stark disparity in part time roles, where only 5% of jobs are part-time, compared to 23% in other sectors. To attract and retain women, particularly those balancing family responsibilities, part-time and job-sharing roles must be expanded. Employers should adapt hiring practices to offer flexible job structures that cater to diverse needs, making tech careers more accessible and sustainable for women who might otherwise leave the sector.*

To encourage more employers to take on female apprentices we would recommend that a financial incentive is offered through the apprenticeship levy. Technology is a male dominated sector where women make up only 21% of the workforce. Making the tech sector more female-friendly by removing barriers to participation - such as supporting flexible working - would benefit the career aspirations of women, the economy, and bridge the skills and gender-gap. Getting more women to participate in tech careers is vital if technology, including in emerging fields such as AI, is to be relevant, applicable, and accessible to all UK citizens.

Early Education

Building a skilled, digitally literate workforce needs to start early - 94% of girls and 79% of boys drop computing at age 14 [5] . The computing curriculum is abstract and unmotivating, with insufficient connections to how computing can be applied to address the world's great challenges. The key stage 3 curriculum and the GCSE in particular need updating to reflect this and to include AI and data.

All young people need to leave school digitally literate and this needs to be recognised in a qualification to give employers, universities, and training providers the confidence that young people are sufficiently digitally literate. This goes beyond low level functional skills and includes critical thinking about the opportunities and risks digital technology presents.

For more information see the BCS response to the **government's Curriculum and Assessment Review - Call for Evidence [6] .**

Closing the gender gap in information technology can solve many of its issues around the digital skills shortage – over 500,000 women are 'missing' from the profession [7]. Thousands of people aged 50 and over, and people with disabilities, are also under-represented in the digital sector. This matters because we will only create systems that work for everyone in society if they are created by teams that reflect all of society.

Careers guidance in schools despite the Baker Clause remains insufficient and unbalanced. Whilst information and insight into the apprenticeship route for students, parents and carers has improved in some schools and areas, this is not always the case and across the country it is inconsistent.

Quality of apprenticeships

The last apprenticeship reform (initiated in 2013) has been successful in engaging employers and positioning them at the heart of apprenticeship design. The other significant aim of the reform was to raise the quality and robustness of apprenticeships, removing the historical view of some employers that apprenticeship training was inconsistent and sometimes very poor quality.

In the past 10 years we believe there is strong evidence that employers and apprentices have experienced clear return on investment from the apprenticeship programme. More than ever before it means something to have achieved an apprenticeship.

BCS is concerned about the regulatory approach to apprenticeship assessment which does not include sufficient standardisation. This has led to different interpretations of apprenticeship assessment plans, and what we see as the market competing on grades. Whilst market competition is expected and healthy, the approach to assessing should be standardised and in line with the published assessment criteria. Unlike some qualifications that can be regulated in a relatively mechanical way, standardisation of apprenticeship assessment benefits from collaborative dialogue, but since the move to Ofqual, we feel this part of the system is lacking. Where an impartial body is not responsible for standardisation, it is challenging to ensure consistent assessment decisions across awarding organisations, which is disingenuous to employers, and most importantly apprentices. There is a risk of damaging the apprenticeship brand after all the investment and effort to raise its profile. We believe that including assessment expertise in assessment design and formalising a process of standardisation will future proof the quality of apprenticeships. It is also essential to ensure consistent assessment of competence, so that employers are confident in the work readiness of recruits that have completed an apprenticeship.

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[1] https://www.bcs.org/media/lxjjuglz/the-future-of-digital-apprenticeships.pdf

[2] https://explore-education-statistics.service.gov.uk/find-statistics/employer-skills-survey/2022

[3] https://www.bcs.org/media/oqschgph/bcs-response-industrial-strategy-open-consultation.pdf

[4] https://www.bcs.org/policy-and-influence/equity-diversity-and-inclusion/bcs-diversity-report-2024-addressing-the-under-representation-of-women-in-technology/

[5] https://www.bcs.org/articles-opinion-and-research/house-of-lords-committee-backs-bcs-call-for-reform-of-computing-qualifications-for-14-16-year-olds/

[6] https://www.bcs.org/media/jmcif1hn/bcs-response-to-curriculum-and-assessment-review-call-for-evidence-nov-24.pdf

[7] https://www.bcs.org/articles-opinion-and-research/diversity-2023-the-missing-756-000/