

## **Fit for the future: Growing and sustaining engineering and technology apprenticeships for young people**

### **Response of the Association of School and College Leaders**

#### **A. Introduction**

1. The Association of School and College Leaders (ASCL) represents over 23,000 education system leaders, heads, principals, deputies, vice-principals, assistant heads, business managers and other senior staff of state-funded and independent schools and colleges throughout the UK. ASCL members are responsible for the education of more than four million children and young people across primary, secondary, post-16 and specialist education. This places the association in a strong position to consider this issue from the viewpoint of the leaders of schools and colleges of all types.
2. ASCL welcomes the opportunity to contribute to this consultation. Our response below is informed by evidence from ASCL College members, the majority of whom deliver engineering apprenticeships.

#### **B. Key points**

3. Research funded by the Gatsby Foundation has found that solutions to productivity problems in this country lie in creating increasingly large numbers of technicians and associate professionals. A means needs to be found to increase the supply of people with the skills required to fill these roles. This is a key role of apprenticeships.
4. To achieve this goal in engineering and technology, employers need to be incentivised to invest in intermediate level skills, and to be empowered to invest in their own skills development. Leaving the market to determine intermediate skills demand will result in supply meeting short-term goals and doing little to ensure that supply is better matched to demand over the longer term.
5. There are 119 apprenticeship standards available to support a broad range of engineering businesses or roles within the engineering and technology sectors. All of these have been developed by engineering businesses to meet the training and skills development needs of the sector. Engineering employers can not only use the apprenticeship option to recruit and train new talent, but also to upskill their existing workforce where needed.
6. Engineering is continuously evolving and, with the growing need for sustainable technology, apprenticeship standards also evolve and introduce solutions to meeting this need. Providers recognise the need to offer flexibility in their engineering programmes to support interest, the growing need for skills and knowledge in sustainable technology, and the need to introduce new subject matter to increase awareness of these new subject areas.

7. However, with the wide range of subjects and pathways on offer, part of the problem in filling apprenticeship vacancies in engineering is that young people and their parents or carers do not know enough about them.

### **C. Responses to specific questions**

#### **Opportunities: What part do apprenticeships play in helping to meet the UK's skills needs in engineering and technology?**

8. Apprenticeships play a key part in supporting engineering and technology industries. They provide skills at all levels to develop the products and operations of engineering companies, as these companies have a long history of recruiting and developing their workforce via the apprenticeship route.
9. However, some providers state that schools have reduced the opportunities for young people to develop practical knowledge and skills, including basic hand skills, electronics, and access to new technologies such as robotics and automation/control systems, either because of the cost of equipment or because of staff shortages.
10. Others report that employers and FE providers have limited opportunities to get into schools to be able to effectively inform young people about apprenticeship opportunities, and key influencers such as parents/carers have limited information about this being a credible route.
11. Employers want to increase engineering apprenticeship numbers, but they are struggling to fill vacancies with suitable applicants. Young people often do not understand the breadth of engineering and technology opportunities, the careers advice available can be limited, and there is often a lack of work experience opportunities. This means that many young people are not able to make informed decisions.
12. Where employers can recruit, due to the extended duration of engineering apprenticeship programmes in particular, they are not always able to measure the impact training is having on their organisation, so it can be some time before an employer can see a return on their investment.

#### **State of play: What are the reasons behind the overall decline in engineering apprenticeship starts in recent years? We are particularly interested in understanding more about supply and demand.**

13. The pandemic played a role in the decline of available apprenticeship opportunities, but this is not the only reason for the decline in engineering apprenticeships.
14. Engineering apprentices are often required to work at a high level, including at degree level and beyond. Employers need their apprentices to develop state-of-the-art technology to manufacture in the car industry, mechanical, electrical and product engineering. There is no direct route from subjects at school, which means that those taking apprenticeships may have to begin at level two and progress through levels three, four and five or further. This takes time and not only is training expensive to the employer, but it means that the apprentice could be in training for five years or more before they 'graduate' to an established role within the company. Not all apprentices can or do manage to progress through that length and intensity of training.

15. The cost of delivering apprenticeships has increased over the last few years; this includes the increased cost of consumables and equipment following Brexit and increased staff costs due to FE lecturer shortages. This makes it significantly more costly for providers to deliver apprenticeships.
16. The increased employer incentive for a brief period during the pandemic provided employers with additional support in purchasing PPE, equipment and resources required for the apprentices, but this additional funding did not last.
17. Engineering apprenticeship standards at level 3 and above can require a level 2 mandatory qualification at the foundation stage of the apprenticeship. This adds to the overall length of the apprenticeship, and does not support the flexibility required by employers in the design and implementation of training to meet their specific needs in the development of core foundation skills.
18. Engineering apprenticeships were a rapidly growing area of demand amongst many providers up to 2021, and saw increased numbers of apprentices across a broad range of apprenticeship standards. However, in 2022 some areas saw a decline in manufacturing recruitment and therefore decline in the need for apprentices, whilst other providers experienced an increase in interest in apprenticeships for civil engineering.
19. This has meant that many of the manufacturing businesses have too many trainees. This, together with the instability of the economy, has seen some employers stop or reduce recruitment this year, reluctant to commit to more staff and investment in training. There are many reasons why the number of engineering apprenticeship starts has declined. However, there are also some clear opportunities for stemming that trend, as we set out below.

**Barriers: What are the barriers for businesses taking on young people as apprentices and what are the barriers for young people in accessing them?**

20. For businesses, the barriers to taking on apprentices are attracting and retaining young people to train for the jobs that are required. Employers value the rigour of apprenticeships, and many people who start at level 3 do progress to levels four and five. However, to ensure an apprentice receives the on-the-job training and mentoring required to develop the necessary knowledge, skills, and behaviours, the employer has the responsibility of investing time and commitment into the training. The time required for mentoring and support can be costly. For employers without the infrastructure in place to provide the support and on the job training, this is difficult. Some employees struggle with the rigour of apprenticeships, including off-the-job requirements. This can be challenging for SMEs in terms of back-filling roles. Others are unable to release staff to develop, supervise and monitor the apprentice in the workplace.
21. For young people, the training for an engineering apprentice is long and demanding. Over the last few years, young people have missed out on social engagement and some lack levels of maturity which may deter employers from engaging with school leavers to provide entrance on to apprenticeship programmes. Engineering is one of the subject areas where many school leavers have very little knowledge of the opportunities available to them or understanding of the extremely broad range of engineering professions.
22. The current financial crisis is a barrier to further training for many families, resulting in young people taking low-level jobs without training and not considering long term career pathways.

23. Teacher and assessor shortages are a major issue. Some centres announced they were stopping enrolments of engineering apprentices; others find that just maintaining delivery to existing engineering apprentices, let alone managing any growth that they need, is difficult. Our members report there being a skills crisis because of teacher and assessor shortages.
24. Many providers are struggling to recruit to the technical posts required to train and assess apprenticeships. This means that some apprentice enrolments have had to be put on hold or declined in the couple of years.
25. The number of mandated qualifications is significant and needs to be reduced. Engineering standards can include up to four mandatory qualifications. This leads to apprenticeships being delivered against qualifications rather than meeting the skills needs of the employer and apprentices.

**Solutions: What do you think needs to change to help increase the number and diversity of young people taking up and completing engineering and technology apprenticeships?**

26. Apprenticeships enable opportunities for SMEs and levy-paying employers to upskill their existing workforce in addition to attracting and training new recruits into the sector. Apprentices play a significant part in upskilling their colleagues in the workplace, are usually familiar with the use of state-of-the-art equipment at college and support their colleagues back in industry. However, a key change needed is that already employed workers must be empowered to undertake training to update and reskill as necessary to support apprentices. This will help reduce the cost barriers mentioned in our response.
27. High-quality careers guidance should be available in work as well as to those seeking work. Employers need guidance about the skills their workforces need to acquire and to meet future changes in the demand for skills. Careers education, information, advice and guidance (CEIAG) needs to be fully impartial to avoid providers 'over-signposting' young people to A levels and other traditional routes.
28. Employers need encouragement to engage in training which leads to benefits for businesses as well as individual workers, through incentives and a variety of tax credits. Employers need to fully understand how engineering and technology apprenticeships can be used in partnership with full cost (unfunded) training to upskill their current workforce through the identification of the skills required for the future, as well as being able to profile for the future with an often-aging workforce.
29. Employers need to be prepared to pay a premium to engineering and technology apprentices, as the basic apprentice wage is too low for unsupported young people and adults to train over the longer periods required.
30. There must be opportunities for young people to learn about engineering in school, even at a basic level. Schools need to have the capacity to offer more opportunities for meaningful work experience and exposure to work through a range of guest lectures, tour, and work experience placements. More opportunities are needed at levels one and two in engineering so that young people can learn about and understand the multiplicity of pathways in engineering.

31. Some schools need to be further encouraged to enable providers and employers to access young people between years 7 and 11, so they understand which engineering and technology careers and opportunities are available to them.
32. Schools also need to be supported to enable young people to learn more engineering and technology subjects. GCSE Science is usually in one option group with limited practical delivery linked to this sector, whilst GCSE (or equivalent) Engineering and Design and Technology are usually grouped alongside other subjects, so there is little incentive to deliver these when staffing is scarce, and costs of delivery are much higher.
33. Families should be able to retain child benefit until the age of 18 if their child starts an apprenticeship at 16yrs, as they do if a child remains in full-time education until the age of 18. For some families losing this benefit will be a factor as to why the child may not choose the apprenticeship route to study. Young people on an apprenticeship programme should be able to access funding to support with travel and learning resources.
34. The government needs to reduce the net cost of apprenticeship training to employers and providers. This will make both more likely to invest in this form of training. There should be more funding available from the government at a systems level to help providers fill the technical trainer roles needed to train and support apprenticeships.
35. The £27,000 cap on the levy for engineering and technology apprenticeships must be reviewed, especially for degree apprenticeships, where the usual cost for 120 credits per apprentice is £9250. Currently, this means that providers must charge employers additional fees. This has not changed since 2017, but costs for the delivery of these apprenticeships have substantially increased, which has been absorbed by the college and ITP sectors. This situation is not sustainable. Both staffing and resource costs have increased significantly. Although some level two and three engineering and technology apprenticeships have been identified for an exceptional funding review, two of these apprenticeship standards are already at £26,000. This means providers can only attract an increase of £1000, or £250 per year of training and delivery, which is less than the current inflation rate and substantially less than the price rise of engineering materials, which is currently around 24%.

## **D. Conclusion**

36. The evidence used in this response comes directly from our college members, who have long histories in delivering engineering apprenticeships. Members suggest that educating young people at school about engineering and giving them the opportunity to explore the vast range of engineering careers, is very important to solving the problem of the reducing numbers of engineering apprentices. Employers also need to take every opportunity to work with education providers to give young people an insight and, whenever possible, some practical hands-on work experience.
37. Providers report that the level of knowledge of engineering as a career is limited. When young people attend provider open evenings and talk with staff about engineering careers, they have little idea what a career in engineering can offer, with the 119 different apprenticeships standards that support the many different job roles within the sector.
38. Overall, young people, adults and families need support to embrace engineering as a career, but the government must provide more funding for apprenticeships, both training

and on the job. Without more government funding, many of the current apprenticeships in engineering and technology will be too costly to deliver.

39. We hope this response is helpful. ASCL is happy to be contacted about this response, if required.

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