CITB is the Industrial Training Board for the construction industry in Great Britain, working to ensure that construction employers have the skills and training they need.

In order to ensure STEM education is effective at preparing people for work in the construction sector, three challenges need to be met:

- Learners must be given a clear understanding of how STEM education is used in the workplace.
- Construction must be seen by teachers as one of the careers that involves STEM.
- University Technical Colleges need support to take on more learners in STEM subjects.

Too often construction is not seen as a STEM career in schools, and school age children are often discouraged from following vocational routes. 62% of young people surveyed by the Demos Commission on Apprenticeships, funded by CITB, reported that their school perceived higher education as the ‘number one pathway’.

This means that while teachers may be well equipped to contextualise STEM learning for careers with higher education pathways such as medicine or engineering, they cannot effectively do so for construction. This leaves people interested in construction careers less engaged with STEM subjects at school. Schools need to work with local construction employers to provide this context and the real-world examples that will inspire learners in STEM subjects.

CITB has established Go Construct, the construction sector’s first all industry careers website. Through this we promote the CREST Awards, which aim to raise awareness of STEM amongst young people and to highlight which careers in construction are linked to these subjects. School teams can work together on a variety of contextualised learning projects. For example, they can use their STEM knowledge to produce a proposal for a housing development. The programme is aimed at 11-16 year olds.

We have also recently agreed funding to develop a programme in Wales to give real-world examples of the construction industry, providing resources for STEM subject lessons. These resources will show how subjects, such as mathematics, are used for construction occupations such as carpentry and woodwork. The goal of our work will be to improve young peoples' engagement with STEM subjects.

University Technical Colleges (UTCs) were created to bridge the gap between education and employment. CITB supports the work of UTCs across England, and helped to establish the West Midlands UTC. Students in UTCs are taught from the National Curriculum, but with the syllabus set within the relevant work context. This is supplemented by work experience and site visits, ensuring the learners know how and where their knowledge will be used in the workplace. If these continue to prove effective the Government should continue to establish new UTCs to address the STEM skills gap.

However, UTCs find it difficult to compete for pupils with schools. Children generally enter secondary school in year 7, but enter UTCs in year 9. This means that UTCs are attempting to recruit people who are already settled in their school environment. In addition, where schools have identified academically talented children, they may be keen to retain them in school and direct them along an academic pathway, making it difficult for UTCs to recruit the best candidates.

Pupils may also be discouraged from taking a vocational route by their parents – research by the Commission on Apprenticeships also found that only 32% of parents thought that route would be best for their child. Schools are required to provide independent careers advice to pupils – advice to pupils in year 8 should include information on UTCs, regardless of their academic skill.
Written evidence submitted by CITB (GAP0075)

I would be keen to meet with you to discuss our work in this area and how we can further work to break down barriers to construction as a STEM subject in schools.

January 2017