# Barriers to STEM outreach revealed in new survey of UK teachers



Outreach programmes are increasingly recognised as an essential component of promoting engineering and addressing the industry's future skills needs. However, a recent survey has revealed that a significant majority of STEM teachers in the UK encounter various barriers when attempting to organise such activities. The survey was published on 26 February by EngineeringUK, an organisation dedicated to fostering engineering engagement in education.

The research, which surveyed 800 STEM teachers from schools across the UK, found that a mere 7% of respondents had not experienced any obstacles related to STEM outreach. The primary barrier cited by over half of the teachers—52%—was a lack of funding. Time constraints emerged as the second most prevalent issue, affecting 49% of those surveyed. Furthermore, 22% of teachers reported that limitations related to support staff hindered their ability to provide outreach activities.

The survey also highlighted additional challenges faced by teachers, including the costs associated with hiring travel arrangements or cover teachers, which further complicates the ability to engage students in engineering-related experiences. Almost two-fifths (38%) of teachers indicated that they were unable to locate appropriate outreach opportunities or organisations, while the pressures of delivering the national curriculum were also identified as a significant barrier to engagement.

"Engineering is not very visible in the curriculum, so STEM outreach is an important avenue for young people to gain subject or career knowledge," said Becca Gooch, head of research at EngineeringUK, speaking to Professional Engineering. "We know outreach plays a vital role in sparking interest and passion, so we need industry to support teachers and students in STEM outreach."

EngineeringUK's findings underscore the critical need for increased awareness of career opportunities in engineering and technology, particularly as the sector employs over 6 million people and is expected to grow more rapidly than other sectors by 2030. This anticipated growth is coupled with a considerable skills and labour shortage, further emphasising the importance of engaging young people with the opportunities within the field.

To ameliorate this situation, EngineeringUK advocates for stronger connections between school career hubs and engineering employers. The institution offers various initiatives to support STEM outreach, including its STEM Ambassador programme, which aims to highlight the value of engineering and problem-solving skills. Additionally, EngineeringUK provides resources for STEM activities and free educational outreach training for its members. A partnership with Primary Engineer is also fostering interest in mechanical engineering among school pupils.

The research indicated that most teachers find STEM engagement activities through online resources, direct contact with providers, and their professional networks. Recommendations for outreach providers and funders include enhancing visibility on social media and relevant websites, employing teacher ambassadors, and offering bursaries to support schools with limited budgets. Furthermore, the report suggests that efforts should be made to include underrepresented groups in STEM outreach activities.

The next publication in the School Report series is expected to delve into practical work, teacher awareness of pathways into engineering and technology, and issues surrounding teacher recruitment and retention.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://holtengineering.co.uk/blog/stem-outreach-is-it-working/> - This article discusses the challenges in STEM outreach, including the lack of career information integration by teachers and the decline in student engagement with STEM subjects. It highlights the importance of STEM outreach in addressing skills gaps and dispelling stereotypes.
* <https://www.theengineer.co.uk/content/news/engineeringuk-report-highlights-flaws-in-access-to-stem-careers/> - This report from EngineeringUK emphasizes the need for better access to STEM careers, highlighting barriers such as funding and teacher support. It calls for a strategic approach to STEM education and skills development.
* <https://www.pandct.com/news/engineeringuk-report-lack-of-work-experience-strategy-teacher-time-holding-back-stem-career-success> - This article discusses EngineeringUK's findings on the barriers to effective STEM careers guidance, including lack of work experience strategies and insufficient teacher time. It underscores the importance of structured work experience for STEM career success.
* <https://www.engineeringuk.com/> - EngineeringUK is an organization dedicated to promoting engineering and technology education. It provides resources and initiatives to support STEM outreach and engagement, aligning with the article's discussion on the importance of such efforts.
* <https://www.stem.org.uk/> - STEM Learning provides resources and support for STEM education, which aligns with the article's emphasis on the need for enhanced STEM outreach and engagement activities to address industry skills needs.