



Association of Teachers and Lecturers (ATL Cymru's) and ACM/AMiE Response to the Enterprise and Learning Committee inquiry into Science, Technology, Engineering and Mathematics (STEM) skills

The Association of Teachers and Lecturers represents over 160,000 education professionals across the four constituent parts of the United Kingdom. It draws its membership from teachers and lecturers, leaders and support staff in maintained and independent schools, and Further Education Colleges. As well as campaigning vigorously to protect and enhance members' pay and conditions ATL also believes that the education profession has a key role in developing education strategy and policy. ATL Cymru represents over 6,500 education professionals in colleges and schools across the whole of Wales.

The Association for College Management is the TUC affiliated trade union and professional association that champions, represents and supports managers in the post-16 education and training sector throughout the United Kingdom. Our membership embraces academic and business managers at all levels up to and including college principals. In Wales the Association is governed by the ACM Wales Committee, an autonomous committee of the ACM National Executive Council. There are over four hundred further education college managers in membership of ACM in Wales.

In 2008, realising the common shared values and commitments of Associations, ACM and ATL joined together to form AMiE – the Association of Managers in Education. AMiE represents managers across the spectrum of colleges and secondary and primary schools. As an organisation that crosses the traditional divide between schools and colleges it is thus uniquely placed to voice concerns and provide innovative solutions to the challenges of post-16 education.

We welcome the opportunity to respond to this consultation and have some comments on the questions posed by the committee:

- **The adequacy of provision of science, technology, engineering and mathematics skills in schools, further education colleges, higher education and work-based learning (including apprenticeships).**

Given the skills policies of the WAG, developed in the wake of Leitch and Webb, it would seem that provision of these subjects needs to be expanded. They are seen as key to future economic success for Wales. We would however draw members' attention to the recently published SKOPE paper¹ which challenges an overly simplistic interpretation of the upskilling agenda. One member reports that in his school the STEM students post 16 are by far the largest group in the 6th form. The STEM courses are also the most successful in the school and a high proportion go on to higher education STEM courses. We believe that such good practice needs more recognition and far more sharing if this is to be true of all schools.

- **The additional funding to support and promote STEM skills and whether the current supply of STEM skills is meeting the needs of the Welsh labour market, including international comparison with selected relevant countries and regions.**

Members questioned what additional money this referred to as they had little or no knowledge of this.

Careers Wales and local industry tell schools and colleges that more people with STEM skills are needed, engineers in particular. Many colleges across Wales are pushing their Engineering BTECs, but when one member asked Careers Wales to find out at what level engineers are in demand - it turns out to be at least level 3 and mainly graduate level, so it seems as if many colleges may be providing courses too low a level.

Sciences and Maths A levels need publicity and increased funding as they equip students for starting an Engineering degree. The bland push for 'more with STEM skills' misses the point unless it is made clear what level of such skills is required. Again we would draw members' attention to the above mentioned SKOPE report.

- **The supply of education professionals able to teach STEM subjects and the impact of Initial Teacher Training Grants and the Graduate Teacher Programme on recruiting STEM teachers and education professionals.**

There is a mixed picture across Wales. In many schools and colleges there are well qualified staff and few significant recruitment problems, although it should be noted that even in these schools and colleges the number of applicants for such posts tends to be much smaller than for most other subjects.

In some areas however, the picture is more concerning with schools having to share staff because they can't recruit or afford to recruit properly qualified teachers, especially in Physics, but also in Maths.

¹ Skope Cardiff University and Skope, University of Oxford, *What incentives to learn at the bottom end of the labour market?*, Skope research papers no.94, July 2010 , <http://www.skope.ox.ac.uk/sites/default/files/RP94.pdf>

- **The effectiveness of education and business links between education institutions and STEM employers.**

In many areas, especially rural and deprived ones, there is a shortage of work experience and apprenticeship or similar placements, and there are limited opportunities for students to be sponsored through University as was the case many years ago.

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