CONSULTATION RESPONSE wellcome trust

Department for Education: Wolf Review of 14-19 Vocational Education

Response by the Wellcome Trust **October 2010**

1. The Wellcome Trust is a global charitable foundation dedicated to achieving extraordinary improvements in human and animal health. It supports the brightest minds in biomedical research and the medical humanities. The Trust's breadth of support includes public engagement, education and the application of research to improve health. It is independent of both political and commercial interests.
2. We believe that our vision and mission can only be realised if there is both a sustainable supply of high-quality scientists and a wider population that can embrace, challenge and respond to the innovation and development brought about by science and technology.
3. We are therefore committed to inspiring and educating young people. As stated in our Strategic Plan[1] we aim to enhance science education by stimulating a culture of professional development among teachers, raising the standard of science education research and ensuring that contemporary science is integrated into teaching.
4. We welcome the opportunity to contribute to the Wolf Review on 14-19 vocational education. The economic future of the UK depends critically on the education and training of future generations – particularly in science and mathematics. Vocational education and training routes are clearly vital and key elements in securing a strong economic future.
5. We are unable to comment on all the areas identified in the consultation letter, but wish to comment on four areas in relation to the questions and remit, specifically:
   - What are the appropriate target audiences for vocational education?
   - What are the principles that underpin the content, structure and teaching of vocational qualifications?
   - How can we improve progression to positive work destinations?
   - Improvement of institutional accountability.

What are the appropriate target audiences for vocational education?

6. Vocational educational routes should provide entry to technical jobs directly from school or college, or provide the entry qualification to pursue a degree qualification in an applied subject at a Higher Education Institution (HEI). This route should be distinct from that of a young person committed to undertaking further studies in the academic qualifications range e.g. physics or biology.
7. More generally, there should be wider recognition of the extensive range of disciplines and levels of qualification offered under the "vocational" title: from medical, legal and

[1] Wellcome Trust Strategic Plan (2010-2020) http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/WTDV027438.pdf

accountancy pathways through to electrician and fitness instruction pathways. The former grouping is arguably more academically based and the latter more technical and applied, however *all* are vocational by nature. This means that the target audiences for vocational education are broad and will cover a wide range of skills and competencies.

What are the principles that underpin the content, structure and teaching of vocational qualifications

8. Many of the principles relating to vocational routes are the same as those that apply to non-vocational routes. Specifically, all educational provision be should provided by well-qualified and trained teachers. Teachers should be up-dated throughout their careers and the curriculum and its related assessment should be fit for purpose. This is an 'obvious', but must be maintained with rigour to prevent a divide in the value of vocational and non-vocational routes.

9. Within the context of science-related vocational qualifications, we support the recent recommendation from the Science and Learning Expert Group report[2] that vocational qualifications should be a sufficiently differentiated, rigorous and challenging pathway for applied science learning that ensures progression into further education and employment. No matter what level or discipline, these qualifications should build up to specialist knowledge of the subject area and develop a broad skill set through practical work, applied experiences and opportunities for enrichment outside the classroom.

10. Further, it is important that subject specialists from industry, professional bodies, HEI's and the local community are closely partnered with educational experts for any work on the design process and the delivery of qualifications. Better links with industry and employers will improve post-19 continuity for young people to higher education or the work place and the competitiveness in industries where technical skills are in high demand.

How do we improve progression to positive work destinations?

11. Careers advice and guidance in schools regarding vocational qualifications and their intended routes is critical and must be improved to ensure students are aware of the different career opportunities and appropriate progression routes.

12. Within this context, there is a need for teachers to improve their industry and sector knowledge in relation to the subject they teach and possible career destinations. This is especially important in the context of vocational qualifications in order to provide appropriate and effective careers advice to learners. Teachers should receive regular training and resources to assist them in this task. This support should be integrated into the curriculum and not left as a 'add-on' provided by an external agency. Schools should work with, and draw on, FE colleges' links with local employers and industry to improve the sector-knowledge of their teachers.

13. Exposing young people to real life experiences of their chosen vocation in the workplace cannot be underestimated, and it may be useful to consider ways to increase the opportunities for students to experience these first-hand. In the case of STEM education, students should be given the opportunity to gain practical experience of 'real' science. The Nuffield science bursaries[3] - a scheme for post-16 STEM

[2] Science and Learning Expert Group report (2010) http://webarchive.nationalarchives.gov.uk/tna/+/http://www.bis.gov.uk/wp-content/uploads/2010/02/Science-Learning-Group-Report.pdf/

[3] Nuffield science bursaries http://www.nuffieldfoundation.org/science-bursaries-schools-and-colleges

students and university undergraduates - provides a successful example of the importance of such experiences and as a way for schools to establish links with research labs in universities or industry.

Improvement of institutional accountability

14. As recommended in the Science and Learning Expert Group report, we believe that strong local governance is vital. Within schools in particular this should be enhanced to ensure that vocational routes and qualifications are given sufficient attention. In that regard, we support the recommendation that the governance mechanisms for STEM education should be transformed by strengthening the capacity of school and FE college governing bodies to provide rigorous governance combining support and challenge to the executive team, including rigorous training and wider recruitment of governors with experience of accountability systems in other environments including the commercial sector.