

Royal Society response to the Sub-Committee on Education, Skills and the Economy inquiry into Careers advice

Summary

1. The Society believes that all young people should receive high quality guidance on careers from an early age, especially the wide range of career options that studying science, technology, engineering and mathematics (STEM) subjects opens up.
2. Careers information advice and guidance (IAG) should be an integral component of the school/college week throughout secondary education and provided objective and fairly to all pupils, regardless of gender, race, ethnicity or socio-economic background.
3. To deliver high quality careers IAG, schools need strong, sustained relationships with employers. These provide unique opportunities for young people to interact with STEM role models and help teachers and families to better engage with the myriad opportunities within academia and industry that studying STEM subjects can lead to.

Introduction

1. The Royal Society is the independent scientific academy of the UK. It is a self-governing Fellowship of many of the world's most distinguished scientists working in academia, charities, industry and public service. It draws on the expertise of the Fellowship to provide independent and authoritative advice. As the UK's national academy of science, the Society is concerned with the health of the UK's research, innovation and education systems.
2. The Society welcomes the formation of the Sub-Committee on Education, Skills and the Economy and the Sub-Committee's first inquiry, into careers information, advice and guidance (IAG).
3. The Society is concerned about the quality and effectiveness of careers IAG, particularly in respect of science, technology, engineering and mathematics (STEM). It is too early to tell whether the shift in statutory responsibility for the provision of careers IAG (from publicly funded services to schools) has made a difference – particularly since schools are also coping with the challenges of introducing a new National Curriculum and changes to qualifications. The Sub-Committee's inquiry will provide a useful gauge of progress in the transition.

The importance of high quality careers advice

4. As the Society set out in its long-term [Vision for science and mathematics education](#), it believes that all young people are entitled to receive high quality guidance on careers from an early age, especially the wide range of career options that studying STEM subjects opens up, for instance by providing children with opportunities to engage with role models, including professional scientists, engineers and technologists. While schools are currently required to provide careers information, advice and guidance (IAG) for pupils from year 8 (age 13) onwards, informal approaches should be used from an earlier age to raise young people's awareness of a full range of interests, including STEM. It is important to open children's minds to what the world

offers, fire their imagination and encourage them to develop positive attitudes toward science, which are important to encourage them to consider a STEM-related career.¹

5. In addition, given the complex breadth and changing nature of the careers landscape, and the costs to both young people and the economy of pupils making choices that are not well-informed,² careers IAG should become an integral component of the school/college week throughout secondary education, thereby ensuring this has a higher priority in timetables than has traditionally been the case.
6. It is essential that careers IAG is provided objectively and fairly. All pupils should be treated equally regardless of gender, race, ethnicity or socio-economic background. This is a moral imperative that has acquired greater import given the urgent need for more STEM-skilled employees,³ which can only be met by increasing the diversity of the scientific workforce.⁴ Achieving this requires efforts to be made to ensure that pupils are not unreasonably prevented from studying STEM courses due, for instance, to the costs or the availability of either courses or public transport.^{5,6}

The potential for employers to play a greater role in careers advice

7. The Society recognises that if schools are to offer high quality careers IAG, they need to be able to develop stronger, more sustained relationships with employers. Research has shown that such engagement is essential if teachers are to be effective in incorporating into their lessons relevant and up-to-date careers information.⁷ The Royal Society will shortly publish, jointly with the CBI, a toolkit offering practical guidance to assist and encourage more employers to work with schools and colleges. The toolkit will seek to shift the focus of business–education engagement away from a traditionally pupil-focused approach to one that directly supports teachers and their teaching. The Society believes these partnerships strengthen the experience of experimental and investigative science at school, which has been largely lost in many, and provides a valuable context within which to communicate IAG at the same time.
8. Investment should be maintained in large-scale national programmes and events, delivered locally. These provide young people with unique opportunities to interact with STEM role models and help teachers and families to better engage with, and understand, the myriad opportunities within academia and industry that studying STEM subjects can lead to. The Royal Society runs several initiatives designed to inspire young people's enthusiasm for science and interest in STEM careers. Among these is our Partnership Grants scheme, which enables pupils aged 5–18 in schools and colleges across the country to take part in innovative science projects co-developed by teachers and practising scientists or engineers. Each year the Society hosts a week-long Summer Science Exhibition, which enables the public to engage with cutting-edge science being undertaken by researchers in industry and academic institutions across the UK. The 2015 exhibition was visited by over 2,000 pupils from 130 schools.

For further information concerning this response, please contact Becky Purvis, Head of Public Affairs (becky.purvis@royalsociety.org).

¹ King's College London 2013 ASPIRES. Young people's science and career aspirations, age 10–14. London: KCL.

² House of Commons Education Select Committee 2013 *Careers guidance for young people: the impact of the new duty on schools*. Seventh report of session 2012–13, vol. I, p. 9. Report HC 632-I. London: The Stationery Office.

³ CBI 2015 Inspiring growth. CBI/Pearson Education and Skills Survey 2015, p. 6. London: CBI.

⁴ Royal Society 2013 *Leading the way. Increasing diversity in the scientific workforce*. London: Royal Society.

⁵ Royal Society 2008 *Science and mathematics education, 14–19. A 'state of the nation' report*. London: Royal Society.

⁶ See <https://www.aoc.co.uk/news/students-are-struggling-afford-travel-costs>, accessed 14 January 2016.

⁷ *Op. cit.*, note 1.