

# Teaching quality most important factor for inspiring interest in science

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(Phys.org) —Wellcome Trust Monitor, an independent nationwide survey, highlights the important role of science teachers in encouraging young people to learn science and as a source of careers advice.

The survey, commissioned by the Wellcome Trust and carried out by Ipsos MORI, asked 460 young people aged 14-18 (representative of the UK population) about their [science education](#) to better understand their interests, experience and needs. It is the second wave of a tracking survey originally undertaken in 2009.

Clare Matterson, Director of [Medical Humanities](#) and Engagement at the Wellcome Trust, says: "It is very encouraging to see that young people have such a positive view of their school [science](#) lessons and enthusiasm for [science careers](#). We should be proud of our science teachers who are stimulating them to learn about science, and ensure that we give them the support they need to continue to inspire the [next generation](#) of [scientists](#)

and science teachers."

The Monitor highlighted the important role of science teachers; six in ten young people (58 per cent) said that having a good teacher encouraged them to study science, and more than four in ten (43 per cent) said that having a bad teacher discouraged them.

It also found that young people rate their experience of science at school highly. More than eight in ten (82 per cent) think school science lessons are interesting, and nearly six out of ten (58 per cent) say they are more interesting than maths and English lessons. Their impression of secondary school science is particularly positive: 83 per cent said they have become more interested in the subject since primary school.

There is also a link between how young people see science at school and how they see science as a career: 47 per cent of those who say they find school science lessons interesting are also interested in a future career in science, compared with 11 per cent of young people who are not interested in school science.

Most young people report that they know little or nothing about scientific careers (63 per cent) or STEM (science, technology, engineering and [maths](#)) careers (55 per cent), yet a large majority (82 per cent) of young people consider science to be a good area of employment to go into. When asked whether they would be personally interested in a scientific career, one in eight (14 per cent) young people say they are very interested, and a further 27 per cent are fairly interested.

The majority of young people obtain information about possible careers from their family (67 per cent), teachers (49 per cent) or career advisors at school (44 per cent). Thirty-nine per cent believe that family is the most useful source of careers information; this is followed by careers

advisors (23 per cent) and teachers (18 per cent).

The Monitor highlights the importance of teaching quality in encouraging students to learn science. Unfortunately, many schools struggle to employ enough appropriately qualified [science teachers](#). According to the Schools Workforce Census in 2012, only 55 per cent of physics teachers had a physics degree, 66 per cent of chemistry teachers had a chemistry degree and 79 per cent of biology teachers had a biology degree [1].

Teachers need continuing professional development (CPD) to help them keep up to date with the best ideas for inspiring [young people](#) to learn science; this is especially important for teachers starting out with weaker subject knowledge. The Wellcome Trust supports Project ENTHUSE, a £27 million partnership with Government and industry partners [2], which helps fund the costs of teachers and technicians attending CPD courses delivered by the National Science Learning Centre. Attendance on these courses is associated with improved teaching and learning, and higher take-up and achievement in science [3].

More students selected "having a good teacher" as a reason that had encouraged them to learn science in 2012 than in 2009 (58 per cent compared with 52 per cent); likewise, fewer selected "having a bad teacher" as a reason that had discouraged them from learning science (43 per cent compared with 47 per cent) [4]. We believe that the work of the National Science Learning Centre might have played a part in this change.

Having a good teacher is vital for primary science, as well as secondary science. The National Science Learning Centre and the Wellcome Trust have developed a Primary Science Specialist programme of professional development. This unique programme is being evaluated using a random control trial with results announced at the end of the two-year study in

2014. Science Community Representing Education (SCORE) recommends there should be a designated science curriculum leader in each school who has access to science-specific CPD and influence over the science curriculum budget [5].

Hilary Leever, Head of Education and Learning at the Wellcome Trust, says: "If [teachers](#) lack confidence in their own science knowledge, they not only have trouble teaching students about science but also risk reinforcing the perception that science is difficult. We need to strengthen the science expertise in both secondary and primary schools."

**More information:** [www.wellcome.ac.uk/About-us/Publication/WTX058859.htm](http://www.wellcome.ac.uk/About-us/Publication/WTX058859.htm)

Provided by Wellcome Trust

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