GATSBY

PARENTS' VIEWS OF PRACTICAL WORK IN SECONDARY SCHOOL SCIENCE

Results of a survey undertaken by NFER for the Gatsby Charitable Foundation, November 2011

Summary

In November 2011, 545 parents of pupils in secondary schools were surveyed on their views of practical work in science. The results show parents are strongly in favour of practical work in school science because it improves their children's prospects and increases their enjoyment of science. However, a significant number of parents are disappointed in the amount of time currently devoted to experiments in their children's science lessons. These activities are difficult for many parents to carry out with their children at home, which is perhaps why parents feel that the resourcing and regularity of science practical work in schools is so important.

- 90% of parents think it is important that their children carry out experiments regularly in their science lessons because it gives them practical skills valuable for employment, further study and general enjoyment of science.
- Just over a quarter of parents feel their children spend too little time on practical activities at school.
- 79% of parents think developing skills in carrying out scientific experiments is as important as learning about scientific concepts when it comes to school science lessons.
- 89% of parents feel they should have access to information about the facilities and equipment in school science departments to help them make decisions about which school their child should attend.

Key Findings

Parents almost all agree that it is important for their children to regularly carry out experiments in science, and that developing practical skills is as important as gaining knowledge of scientific concepts.

- *90% of parents said it is important to them that their children regularly carry out experiments, and 55% regarded it as very important.*
- *79% of parents said it is equally important for young people to gain skills in carrying out scientific experiments as it is for them to gain knowledge of scientific concepts. 11% saw knowledge as more important and 8% felt skills more important.*

Parents value practical work for its contribution to their children's current enjoyment of science and their prospects for further study and employment.

- *When asked what was the most important reason for their children to carry out scientific experiments, 31% of parents said 'to help them gain practical skills valued by employers'; the same percentage said 'to help them gain the skills needed to study science further'; and 35% said 'to help them enjoy science'.*
- *Further analysis showed no difference between the views of parents in educationally challenging circumstances (high levels of deprivation and low levels of educational aspiration) and those in more supportive circumstances. Parents from both groups placed equal value on their children gaining skills for further study and for employment.*

A significant proportion of parents feel their children are not doing enough practical work in their science lessons.

- *A quarter of parents said their children spend too little time carrying out experiments in their science lessons.*
- *Almost a third of parents said they do not know how much time their children spend carrying out experiments.*

Significant numbers of parents never carry out scientific experiments at home with their children, but feel a variety of factors could change this.

- *A third of parents said they do not carry out scientific experiments with their children at home.*
- *Parents cited a number of reasons for this: 21% mentioned a lack of equipment, resources and facilities; 11% mentioned a lack of time; 11% said they did not know what experiments to do; 10% said they lacked the scientific knowledge, expertise or confidence; and 10% said experiments had never been part of their child's homework.*
- *When asked what would encourage them to try more scientific experiments at home, 58% of parents picked a list of recommended experiments designed to be done in the home, and 37% chose a list of experiments that would engage children's interest. 26% said they wanted evidence that such experiments would help children's science learning, and 39% opted for experiments being a homework requirement.*

About the study

Gatsby is a foundation set up by David Sainsbury to realise his charitable objectives. Gatsby has been supporting Science, Technology, Engineering and Mathematics (STEM) education in the UK for more than 25 years. In 2011, Gatsby began work to build an accurate picture of the health of practical work in secondary school science in order to understand how best to support it in the future.

In November 2011, Gatsby submitted nine questions to the National Foundation for Education Research (NFER) Parent Voice Omnibus Survey, completed online by a panel of 1,000 parents of children aged 4-18 in school, college or full-time education in England. The questions covered the topics of: the importance of regularly carrying out experiments during science lessons; the reasons for carrying out science experiments; the importance of skills in carrying out experiments against knowledge of scientific concepts; time spent on science experiments; school facilities and funding for science experiments; and science experiments in the home.

NFER separated out the responses of participants who only had children in primary school, leaving a sample size of 545 parents with children only in secondary schools, or with children in both primary and secondary schools.

NFER also carried out analyses in relation to the deprivation index on three separate questions to see if there were differences in the answers given by those in educationally challenging circumstances (high levels of deprivation and low levels of educational aspiration) compared with those in more supportive circumstances. There were only slight variations.

For more information about this study and Gatsby's Practical Work in School Science programme, please see our website: http://www.gatsby.org.uk/Education/Projects/Review-of-Practical-Science-in-Schools.aspx