

Overview

The University of Exeter investigated the impact of practical and vocational learning on the motivation, attitudes and achievement of 'academically able' young people in six schools in England and Wales.

The authors also reviewed the history of secondary education in England, showing how we have come to value abstract and analytical learning more highly than practical and vocational education.

Key findings

Practical and applied learning at school has a strong and positive effect on the motivation and achievement of 'academically-able' students. This was true across all six schools. Despite their enjoyment of practical and applied learning, however, a great majority of these students gravitate to more abstract/analytical learning as they progress through the teenage years. This reflects, in large part, a growing realisation that abstract learning offers the best prospect of a place at a high-status university – and this matters

more to them than their enjoyment of practical learning.

Modern ideas about education continue to be dominated by 19th century concepts of merit and ability, which were based on abstract reasoning rather than the ability to design and make things or solve practical problems.

Technologies used to measure intelligence are widely used in schools. They are closely related to attainment tests in 'core' subjects and are used as a way of predicting likely success in traditional GCSE subjects. This has the effect of treating other forms of ability as second-best.

Similarly, achievement in traditional subjects is widely used when selecting candidates for high-status university places and jobs, while technical and 'vocational' qualifications have largely failed to achieve the same currency.

Taken together, these findings raise a fundamental question: to what extent does the secondary school curriculum in England and Wales remain well-suited to contemporary conditions?

About the research

The Edge Foundation asked Professor William Richardson and Dr Sue Sing (University of Exeter) to assess whether practical and vocational learning at school has any positive or negative effect on students':

- motivation
- levels of achievement
- choice of post-16 learning routes; and
- awareness of (and attitudes towards) a variety of career options.

Research focused on students identified as achieving average or above average levels of attainment in 'academic' terms.

In addition, the authors carried out an extensive literature review and examined the history of the secondary school curriculum and methods of assessment in England and Wales.

We believe this to be first UK study to investigate these themes through the attitudes and outlooks of 'academically-able' students across a range of varied schools.

Fieldwork was carried out in six schools in 2010 and the report was completed in May 2011.

The full report can be downloaded from www.edge.co.uk.

The history

19th century definitions of merit and ability – were largely worked out among universities, public schools and reformed grammar schools. Leadership roles, at home and overseas, were reserved for the gentlemanly products of the public schools and Oxbridge. At the same time, Britain was, by international standards, a very late provider of universal elementary education for the working poor.

Local education authorities were established in 1902. One of their tasks was to determine which children aged 10-14 should proceed to selective secondary schools. Many introduced IQ-style psychometric tests alongside scholarship examinations and interviews. As psychometric tests continued to be refined, test questions increasingly took on the characteristics of tests in certain curriculum subjects – maths and language in particular.

Secondary school selection reached its peak in the 1950s. Tests were now used as a predictive instrument: that is, to identify children likely to excel in tests based on the grammar school curriculum. Along with this, the GCE A-level examination, introduced in 1951, placed the spotlight firmly on attainment in individual subjects as the route to university. Inevitably, this led to a common association of 'intelligence' with the grammar school curriculum, A-levels and university entry.

The major curriculum task during 1965-80 was to fuse the two curricular traditions inherited by comprehensive schools: the grammar – subject-based, historic and prestigious – and the modern – non-examined, of twentieth-century origin and experiential. The debate was fuelled by historic assumptions about 'ability' and 'merit'. Comprehensive schools started to make widespread use of streaming, banding or subject setting by ability, based on test or attainment scores; and very soon, the practical curriculum came to exist as a junior partner and poor relation alongside revered academic traditions.

Today, almost all 11-14 year-olds in England follow a subject-based curriculum which anticipates 14-16 programmes of learning dominated by traditional

GCSE subjects. However, mental testing is probably as prevalent now among 10-12 year-olds as it was during the 1950s, chiefly because tests help predict achievement in GCSE exams.

Curriculum areas that derive their prestige from nineteenth century conceptions of 'merit' and 'ability' still hold sway, leaving practical, technical and 'vocational' abilities trailing in the wake of abstract and analytical reasoning.

The research

Research took place in six secondary schools, four in England and two in Wales. Schools were asked to identify 'academically able' students in Key Stages 3 and 4, based on prior and predicted attainment. Students completed questionnaires and took part in focus group discussions.

Almost half of the sample at Key Stage 4 had opted for at least some learning which merits the description 'vocational', in the sense of studies with an occupational orientation (BTEC, Diploma, etc).

The research found that high ability students in Key Stages 3 and 4 value physical, expressive and experiment-based learning and place these well above more analytical forms of learning (especially 'writing') for enjoyment. A very large majority consider that learning with practical elements is more (or just as) important as mandatory subjects such as English and maths. Few (even in the very high attaining grammar schools) chose traditional analytical subjects as their preferred types of learning. These headline findings were not affected by the type of school attended (selective/non selective entry, higher/lower overall attainment, Welsh/English)

Regardless of the type of school they attended or the type of Key Stage 4 programme they followed, therefore, 'academically-able' teenagers taking part in this research enjoy their school learning and value practical learning just as much as more abstract forms.

However, students taking part in this study mainly expect to follow traditional subject learning post-16. It appears that patterns of existing and projected attainment (reinforced by the ability measurement tools in use in the schools) push many or most 'academically-able' students away from practical learning after Key Stage 4.