

Ofqual: Qualification support material and services

Response by the Wellcome Trust

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KEY POINTS

1. Textbooks should be effective tools to aid deep and lasting learning. We are concerned that linking textbooks solely with awarding body examination specifications encourages “teaching to the test”. Ofqual should use its Codes of Practice to stop awarding bodies endorsing textbooks where appropriate.
2. At their best, examination seminars can be constructive. But too often the seminars are so narrowly focused on the examination that they become “coaching sessions” for teachers on how best their students can pass the examinations.

INTRODUCTION

3. The Wellcome Trust is a global charitable foundation dedicated to achieving extraordinary improvements in human and animal health. We are committed to science education and work to support ways to develop the science skills and knowledge necessary for young people to live and work in an ever more scientific age. We are therefore pleased to respond to this consultation.
4. Our response is mainly concerned with textbooks, with some brief additional comments about training seminars for examinations. We have provided some examples of good practice with regard to supporting materials to qualifications. However, we are also concerned that in many cases, linking textbooks with awarding bodies is unhelpful in influencing how young people are taught and learn. This is of particular concern in science education, where a deep understanding of how science works is important.
5. The danger with any examination system is that learning becomes directed towards achieving the best examination results rather than giving students a broad understanding of a subject - “the tail that wags the dog”. Textbooks have increasingly become “examination guides” instead of providing broad and deep knowledge¹. The endorsement of textbooks by awarding bodies exacerbates this problem by promoting teaching to the test. Of particular concern is that examiners are commissioned to write textbooks that are endorsed by an awarding body. This carries the risk that examinations could be used to maximise sales of books rather than in the public interest.
6. In Scotland, the SQA does not endorse specific textbooks, but supports a wide range of resources, including electronic resources, that can be used to teach the courses effectively. This is a sensible approach that does not unduly influence teachers or schools when purchasing appropriate materials. We therefore urge Ofqual to take action to stop awarding bodies endorsing textbooks through inclusion in Codes of Practice.

¹ Report of the Science and Learning Expert Group (2010). *Science and mathematics secondary education for the 21st century* <http://interactive.bis.gov.uk/scienceandsociety/site/learning/files/2010/02/Science-and-Learning-Expert-Group-Report-Annexes-31.pdf>

Textbooks

7. Textbooks should be effective tools to aid deep and lasting learning. However, textbooks (especially for schools) have low status in the academic world. Very little research has been done into their effectiveness as learning tools, yet schools spend about 1% of their budget on them². Linking textbooks to examination specifications has been an unhealthy development which inhibits innovation and drives publishers and teachers to regard textbooks as examination guides rather than deep learning tools.
8. Not all textbook-specification tie-ins are the same. We identify three types, with different implications for learning.

Type 1: Textbooks to accompany project courses

9. There are several examples of integrated courses that have been developed *ab initio* as a complete programme, comprising textbook and other learning tools, teachers' guides and supporting examination specification, all with the same underlying content and pedagogy. Good examples are *Salters-Nuffield Advanced Biology* and *Twentyfirst Century Science*, both developed by the Nuffield Foundation and the University of York with support from a range of funders (the Wellcome Trust supported the development of *Twentyfirst Century Science*). Such courses have a carefully thought-through underlying pedagogy, which is reflected in the learning materials, teaching guides, the specification and the assessment model.
10. Such courses are often innovative and aid the development of pedagogy and assessment. They are to be encouraged, but are very different from the other two types described below.

Type 2: Textbooks written in response to a particular specification

11. Twenty years ago, most textbooks were 'generic', that is, they were written to be used with a number of different specifications. Today, most textbooks are specific to a particular awarding body specification. In some cases this is as a result of an exclusive publisher-awarding body agreement such as that between Edexcel and Pearson (both owned by the same organisation) or between Nelson Thornes and AQA. In other cases a publisher seeks the endorsement of an awarding body for a particular textbook.
12. The effect of this trend towards specification-specific books has been a narrowing of focus onto what is needed to pass the examination concerned - sometimes on a grade by grade basis – because this is what teachers, driven by school accountability measures, buy. By and large the purpose of the book is to coach students to pass the examination concerned, with less emphasis on deep learning of fundamental information, concepts and skills.
13. This is best seen by comparing such textbooks with their equivalents from other countries, such as Australia, where there is less of an emphasis on passing specific examinations.

Type 3: Textbooks written by examiners for a particular specification

14. This is a subset of type 2 above, where a person involved in examining, typically the chief examiner for the specification concerned, is an author of the book. Often this fact is

² Educational Publishers Council data

used as a marketing tool. In our view, this type of book should not be permitted by the regulator.

15. This arrangement not only suffers from the narrowing shown in type 2; it also carries the risk that the author will, consciously or unconsciously, tailor the questions in an examination to the book, thus making the book an indispensable support for the teacher, and penalising those schools that cannot afford to, or do not wish to, buy it. It introduces a perverse distortion into the market whereby books are purchased, not for their effectiveness as aids to deep learning, but for the ‘insider information’ they provide.

Other learning resources

16. There is an increasing amount of non-textbook learning material available, particularly in the digital sphere (online, DVD etc), but much of it – especially when produced by commercial publishers – suffers from the problem identified in type 2 textbooks above.
17. There are exceptions. Notable among these are learning materials produced by non-profit organisations, such as the Royal Society of Chemistry³ and the Institute of Physics⁴, which produce outstanding materials whose purpose is to ensure deep learning, while nevertheless focussing enough on examinations to ensure that teachers use them. The Wellcome Trust also produces learning resources of this type, available free to schools, such as the *Big Picture*⁵ magazine targeted at A Level Biology teachers and the *In the Zone*⁶ experimental kits on sports science inspired by the London 2012 Olympic and Paralympic Games.

Training seminars for examinations

18. Many awarding bodies run seminars focussed on their specifications, sometimes to prepare teachers for using the specification, sometimes to review the past examination, sometimes both. At their best, these perform a useful function in which the examiner passes on to the teachers intelligence about those areas the candidates find difficult, thus helping teachers to focus on critical areas of learning. But too often the seminars are so narrowly focussed on the examination that they suffer from the same problems identified for type 2 texts above. Needless to say, the recently publicised extremes of unprofessional behaviour by examiners at seminars are completely unacceptable.
19. To make matters worse, these examination seminars may be the only subject-specific training that a teacher gets all year. With schools so fiercely focussed on examination performance, head teachers are more likely to agree to a teacher’s absence from school to attend an event that could have a directly attributable effect on examination performance, than to their attending professional development likely to have a broader and more enduring effect on their professional ability.
20. The Science Learning Centre network, which the Wellcome Trust established and continues to fund in partnership with the Department for Education and industry, has direct experience of this effect. Science teachers may wish to attend professional development courses that will give long-term benefit to their professional skills, only to be

³ <http://www.rsc.org/education/>

⁴ <http://www.iop.org/education/index.html>

⁵ <http://www.wellcome.ac.uk/Education-resources/Teaching-and-education/index.htm>

⁶ <http://www.wellcome.ac.uk/Education-resources/Teaching-and-education/In-the-zone/index.htm>

told by their school that their allocation of ‘time off’ has been used up by attending examination seminars whose long-term professional impact is more superficial.

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