

Textbooks: Risks and Opportunities

Summary of Evidence Review

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Nature of the Evidence

Some of the evidence reviewed was provided in the context of a wider review of the administration of exams for 15–19 year olds in England carried out by the Education Select Committee in 2011/12. In addition to the written and verbal evidence of the Select Committee, a range of recent relevant reports that refer to the use of textbooks has been included in the evidence base. This includes previous Ofqual work on predictability, a call for evidence, complaints to Ofqual on textbooks, two Ofsted subject reports, position papers and research from awarding organisations, statements and submissions from publishers and subject organisations. A comprehensive list of all the sources is included at the end of this summary.

To supplement the range of evidence already available, we commissioned the following specific pieces of research on this issue:

- 'Textbooks, Study Aids and Support Services', completed by the Host Policy Research (HOST) organisation in July 2012. This involved a literature review, telephone survey with schools and a series of in-depth case studies. This collated existing evidence and gathered views from key stakeholders in schools and colleges.
- *Research into specifications, textbooks and assessment materials to review the potential impact on standards', completed by Taylor Minnis consultants in July 2012. This involved a direct scrutiny of awarding organisation textbooks or study aids for selected GCSE or GCE A Level specifications and the relevant exam or assessment material. Three subjects were included in the study (Maths GCSE, Science GCSE and English Literature GCE/ A level) reviewed by independent subject experts.
- A call for evidence, using a pro-forma and key questions on the issue of textbooks or study aids produced 84 written submissions from, amongst others, schools or colleges, interested individuals (teachers, examiners, awarding organisation staff) awarding organisations, publishers, teacher associations, and subject-specialist organisations.

All the available evidence has been stored into a single database and has been reviewed and coded using a thematic framework relevant for this study. This report summarises the evidence under sections derived from this framework:

- Factors affecting purchasing behaviours
- Views on current endorsement arrangements
- Chief Examiners as authors of textbooks

- Competition risks
- The impact on teaching and learning
- Impact on support materials for GCE A levels
- The impact on predictability and assessment standards

1. Factors affecting purchasing decisions

Evidence from the Association of Teachers and Lecturers (ATL) suggests that a typical secondary school might spend £100K on exam fees; purchased textbooks account for a significant additional portion of the school budget. The Publishers Association's submission to the Select Committee stated that the average secondary school spent £26,320 on textbooks and printed material in 2010–11 but expected to spend 4 per cent less in 2011-12.

In schools, heads of department tend to decide which awarding organisation to use; in colleges, individual lecturers are the main decision makers. The predominant factors in their choice relate to the awarding organisation's provision of a good understanding of the specification and assessment; their support services and training offered; and familiarity with the awarding organisation. Schools and colleges will change organisations if they have had particularly poor results. There is some evidence to suggest that they select the exam board they believe gives them the best chance of passing. While the quality of textbooks and support materials is less important, just over half of those surveyed see support material as a significant factor in choosing an awarding organisation and, significantly, 65 per cent in the same survey use materials endorsed or provided by their awarding organisation. The single most important factor in this choice is the certainty that the textbook covers the whole specification.³

Some publishers view approaches where textbooks are 'bundled' by the awarding organisation and sent out along with the specification with the same logo as unfair competition⁴. The Taylor Minnis (2012) report also suggested textbooks are more likely to be the 'endorsed' version written by examiners. Teachers describe a range of materials or study aids that are used to support their teaching. From the HOST (2012) research it was noted that textbooks endorsed by the awarding organisation were ranked as 2nd in level of importance by teachers, behind past papers, but

¹ Association of Teachers and Lecturers (2010) *Teachers demand probe into £100,000 exam fees.*

² House of Commons Education Committee, (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

³ Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.*

⁴ House of Commons Education Committee (2012) "The administration of examinations for 15-19 year olds in England. Written evidence submitted by Oxford University Press

ahead of their own developed resources and online materials. This did vary slightly across subjects, however.⁵

Some observers, including ATL emphasise that the strong link between the choice of awarding organisation, textbooks and the pressures in the system, combined with the commercial behaviour of awarding organisations, influences textbook-purchasing decisions: "The pressures of a high stakes accountability atmosphere when coupled with the overly commercial behaviour of Awarding Bodies lead to perverse but perfectly rational decision-making by teachers which threatens to undermine the quality of education offered to young people." ⁶

A key driver of demand is that materials cover the relevant content and awarding organisations have responded to this: "In our experience, teachers in schools value choice between resources to suit their teaching style and the needs of the children in their classes. Given the emphasis on qualifications, many teachers also ask for assurance that the resources they are using cover all of the content on which students may be assessed." ⁷

There are distinct differences in the use of textbooks across subjects; for example, English literature teachers are far less likely than mathematics teachers to use awarding organisation-endorsed materials: "Maths teachers are feeling increasingly obliged to buy textbooks and other teaching resources endorsed by examining boards and written by examiners, fearing that their pupils would be disadvantaged if they did not."

This is supported by the evidence generated in the Host (2012) survey where the majority of English literature teachers noted they do not use textbooks. Variations in other subjects suggest that endorsed versions for a particular specification are not always selected by teachers. For example, Pearson (2012) notes its market share in resources does not match its share in qualifications. Pearson reports that it has 37 per cent of the qualifications market for A level Geography but only 12 per cent of the

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⁵ Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.* Figure A3.10

⁶ Association of Teachers and Lecturers submission – House of Commons Education Committee, (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

⁷ Pearson submission – House of Commons Education Committee, (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

⁸ IMA submission – House of Commons Education Committee, (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

market for textbooks in that subject. In GCSE English its qualifications share is 4 per cent and publishing 45 per cent. ⁹

2. Views on Endorsement Arrangements

The evidence suggests a polarised view of the benefits and risks of the current arrangements for the endorsement of textbooks. There are significant differences in perception on this issue, across different groups of stakeholders.

Subject-specialist bodies and teacher or head teacher associations expressed concerns about endorsement processes contributing to a narrowing of the curriculum and leading to resources that are too focused on exam preparation. Some publishing organisations are concerned that endorsement is impacting on competition in the publishing market. The Society of Authors believes that: "those bodies that provide public assessment (and their employees) should be banned from giving advice on how to improve grades, from endorsing exam-related materials, and from profiting from such provision." ¹⁰

Generally Senior Examiners and examiners are not employees of an exam board, they provide assessment expertise on a contractual basis although there are exceptions to this.

The report, *Science and Mathematics Education for the 21st Century*', published by Department for Business, Innovation and Skills (BIS) (2010) concluded that endorsement processes made textbooks align closely to awarding organisations' exams and specifications. As a result, they are too focused on directing students to pass exams rather than to understand the subject in depth.¹¹

Teachers involved in delivery or those responsible for purchasing decisions within schools and colleges see endorsement in a more positive light because they believe it provides some confidence that the textbook will cover the specification and they suggest that competition issues are minimised if endorsement processes are run in an open and fair manner: "Study aids written by Chief Examiners and/or endorsed by

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⁹ Pearson submission (Annex C) – House of Commons Education Committee, (2012) *The administration of examinations for 15-19 years olds in England.* First Report of Session 2012-13 Volume II: Oral and written evidence.

¹⁰ Society of Authors submission – House of Commons Education Committee, (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

¹¹ BIS (2010) Science and Mathematics Education for the 21st Century.

awarding organisations are more likely to be comprehensive and thorough. They are less likely to contain irrelevant information. This helps teachers and students understand what is covered by the specification. There are no conflicts of interest provided endorsement is open to all authors/texts that meet requirements, and Chief Examiners remain anonymous. In addition, writing such texts helps Chief Examiners understand the specification in breadth and in depth"; "I like endorsement ... I want to know that I've covered the core and then I can bring in articles and up-to-date information from elsewhere."; "... easy to manage" (i.e. a set of curriculum-matched resources 'all in one place'). 12

Many teachers in their written submissions report that they use a range of sources to supplement the awarding organisation-endorsed textbook.¹³ The AQA (2012) research supports this view suggesting that teachers value endorsed textbooks as part of the wide range of resources they can draw on. They want to be confident that a textbook is relevant to the specification they have chosen and value endorsement because it helps them to select what they believe to be the best resource for their students and teaching preferences.¹⁴

Research on international high-performance systems points to the potentially positive nature of the alignment between exams and learning resources, suggesting that to break this link presents risks. The same research cites a range of international comparisons and observes that the use of government-endorsed textbooks is seen as a critical element in developing a high-performing education system. The precise status of 'approved' texts and the processes which are used for approval vary, but the research points to examples where the textbook-curriculum-assessment linkage has been used as a key policy instrument in system improvement: "international studies make clear that introducing policy which breaks the link between textbooks (or key learning materials of any form) and examinations – and indeed the various producers of these different things – is simply contrary to what is happening in systems which have radically improved their performance. At its most extreme, a reaction against the current forms of linkage in England might be 'there should be no link between textbooks and examinations'. This is patently absurd. Textbooks should help the delivery of a high-quality curriculum. Examinations should provide fair and accurate assessment of the outcomes which are attained through the learning to

¹² Teacher responses – Ofqual (2012) *Call for evidence*.

¹³ House of Commons Education Committee, (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence; and Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.*

¹⁴ AQA responses – Ofqual (2012) Call for evidence.

which this curriculum gives rise. The fact that we currently have the wrong sort of linkage between textbooks and examinations – and we are thus unhappy with the current set of texts and examinations – does not mean that there should be no link.¹⁵

3. Role of Examiners as Authors

The role of examiners directly involved in the exam process as authors of endorsed textbooks or their involvement in paid seminars to focus on improving exam results was a particular issue raised in the evidence.

It is recognised that there are regulations in place to address conflicts of interest in the sector, including our recognition conditions. Any implicit or explicit claims in awarding organisation support materials that these could increase exam success would be in breach of our Conditions of Recognition: "Condition A4 requires awarding organisations to identify and monitor any conflicts of interest between the activities of persons involved in the development, delivery and award of qualifications and other activities in which they are engaged. Where a conflict of interest has been identified, the awarding organisation must take steps to ensure that it does not have an adverse effect. This could include adverse effects on the standards of qualifications or public confidence in qualifications. Awarding organisations will be required to establish and comply with a written conflict of interest policy." ¹⁶

Awarding organisations argue that examiners are often the recognised subject leaders and are well placed to develop support materials for specifications. Many examiners are self-employed and take on additional work as authors, which is outside their contractual role with the awarding organisation. The rules governing this are expressed in internal policy guidance and also the JCQ Code of Practice. It states that publishers are not permitted to give information on the position of an author in relation to an awarding organisation or particular syllabus except by reference to their generic role (for example 'a Senior Examiner' or 'a Principal Moderator') or their experience. For examiners, any activities which raise any

¹⁵ Oates, T (2012) The role of high quality textbooks in raising educational standards – how we need to link textbooks to curriculum and to assessment – the evidence from transnational analysis – Working Paper. Cambridge Assessment.

¹⁶ Ofqual (2012) General Conditions of Recognition.

¹⁷ AQA responses – Ofqual (2012) Call for evidence.

questions about the probity of the assessment process are restricted by clauses in contracts, in so far as current employment legislation allows.¹⁸

There is evidence that awarding organisations are seeking to strengthen these rules and introduce further contract measures which prevent conflicts of interest. The Host (2012) survey found that almost 80 per cent of teachers believed examiners should be allowed to work as authors for textbooks and this was as high as 88 per cent for English teachers.

The perception of gaining insider knowledge from the involvement of examiners as authors is raised as a risk to the confidentiality and integrity of exam papers but the evidence of this occurring is rare. Exam boards say that they take appropriate action if issues are brought to their attention: "AQA, the largest exam board, says it would terminate the contracts of any examiner found to have breached the confidentiality of exam papers" ¹⁹

4. Competition Risks

The review of the evidence highlighted concerns, in particular from some publishers, about how the current arrangements for producing textbooks and other resources impact on competition in the publishing market. The concern is that the arrangements make it more difficult for others to develop and sell high-quality alternative textbooks. They claim this problem may be exacerbated if awarding organisations 'bundle' qualifications and textbooks (and other related products), selling them as a package, even if bundling has other benefits such as lower costs.²⁰

These have been long-held concerns by some publishers, who argue that once excluded from the secondary school market it is difficult for them to re-establish themselves in this market given the cyclical nature of purchasing behaviours and limited switching patterns between awarding organisation specifications.

JCQ issued a Code of Practice in May 2005 with the aim that the links between awarding bodies and publishers should contribute to the raising of standards and not diminish confidence in the probity of the assessment process. The key provisions of the code acknowledge:

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¹⁸ JCQ (2008) Code of Practice: Awarding Body/Publisher relationships.

¹⁹ Guardian (April 2009) Should the people who set exams profit from it by training teachers how to pass them?

²⁰ Written Evidence of Oxford University press to Select committee 2011 – House of Commons Education Committee (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

- The importance of plurality and choice in the provision of publications and media resources
- The importance of impartiality and the avoidance of actual or apparent conflicts of interest which might undermine public confidence in the independence and disinterested approach of all those involved in dealing with schools in relation to public examinations.²¹

Particular issues have been raised about Pearson's arrangements with Edexcel, its awarding organisation function. In 2007, the OFT considered Pearson's proposed acquisition of Harcourt (a provider of teaching and learning resources for use in UK primary and secondary schools and a publisher of resources through Heinemann and Ribby and Ginn). For the supply of resources for GCSE and A level exams, concerns were expressed to OFT about Pearson's ability to potentially favour the supply of resources for its exam qualifications by exclusive endorsement and to also potentially refuse to supply resources for other exam boards. The concern was that the Pearson's sales staff in schools would also be the representative of the exam board and that in practice it would be impossible to separate the activities.²²

The conclusion of the OFT was not to refer the merger to the Competition Commission: "However, the OFT considered that the merger does not create or enhance market power at any level; and that the combination of Pearson's position at the exam board level and the alleged foreclosure mechanism – refusal to endorse rival suppliers resources or otherwise favour its own resources for Edexcel qualifications – may present some disadvantage to competitors but will not harm customers." ²³

Edexcel and Pearson do not operate exclusive endorsement arrangements, nor do any of the other awarding organisations.

The Taylor Minnis (2012) report notes from reviews of examples that there is some variation in the degree to which the different boards promote their own textbooks through the specification, and that greater scrutiny of this aspect may be helpful. ²⁶

While there are concerns about of the current arrangements for the production of textbooks by publishers and subject organisations a number of schools surveyed in the Host (2012) report identify positive impacts of a competitive market on textbooks,

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²¹ JCQ (2008) Code of Practice: Awarding Body/Publisher relationships.

²² OFT (2007) Completed acquisition by Pearson plc of Harcourt Businesses from Reed Elsevier plc.

²³ Executive Summary – House of Commons Education Committee (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

including more student-friendly materials, increased choice, lower prices and teachers taking on an increased role in writing new resources.²⁴

5. Impact of resources on teaching and learning

There are significant differences in perception across different groups of stakeholders about the impact of textbooks and support materials on teaching and learning.

Narrowing impact

Some stakeholders view the use of awarding organisation textbooks negatively because they believe these are impacting on the quality of teaching and learning at Key Stage 4, in terms of a lack of breadth, narrowing of lessons towards assessment preparation, and use of limited contexts and examples.²⁵

There is general consensus that textbooks and support materials have become increasingly tied to the specification, and more significantly the assessment. Teachers recognise the advantages and disadvantages of this: "The advantages are that teachers do not have to worry about whether the material is relevant. A student who wants to work ahead does not need to be directed to miss out certain sections. Everything in the book will be relevant. Questions will be in a similar style to those set in the paper and the student will be familiar with the way questions are asked. The disadvantage is that it discourages the student from broadening their knowledge. They do not follow interests which are not on the specification." ²⁶

Endorsement processes, in all likelihood, contribute to this outcome, although it is possible that the alignment of resources to specifications may have arisen even without explicit endorsement undertaken by awarding organisations due to demand pressures from schools over time.

While there are significant comments on the potential narrowing of focus in awarding organisation materials or declining quality there is very little that defines what good or best practice might look like: "While there are considerable views on the pitfalls of the current situation, few commentators explain what 'good' textbooks would look like,

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²⁴ Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.*

²⁵ Written Evidence of Oxford University press to Select Committee (2011) – House of Commons Education Committee (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

²⁶ Teacher responses – Ofqual (2012) *Call for evidence*.

nor how they would be used. While some talk about a situation in which teachers would be free to use a wider range of resources to the benefit of their students, they do not explain how the availability of awarding organisation endorsed textbooks prevents this from happening now." ²⁷

Particular concerns were raised by a number of expert groups and subject organisations about the negative impact of exam-driven teaching on the development of skills in maths, for example. They suggest that, as a result, some key elements in the way maths skills should be developed are missing or given lower significance in the curriculum and supporting textbooks in England, when compared with other countries: "English textbooks are more routine and involve less variation than those of many other countries. In England, procedural fluency and conceptual understanding are largely seen as mutually exclusive aims. This polarising of procedural and conceptual is not helpful. Pacific Rim teaching is largely dominated by procedures and hence supportive of procedural fluency, but the procedures used tend to be explicitly grounded in mathematical principles and consequently more mathematically coherent and meaningful than those most commonly used in the United Kingdom. In the Pacific Rim, mathematically informed procedural teaching is introduced and promoted through carefully constructed textbooks." 28 "This pattern has had an invidious impact on publishers, who appear no longer interested in publishing serious mathematics textbooks which seek to present elementary mathematics in a way that is independent of any particular syllabus." 29

Some of the evidence from the same source suggests that there may be benefits from using a range of textbooks that are independent of any syllabus or specification. Examples are cited in the evidence which are more subject focused: "A distinction needs to be made between awarding organisations' textbooks and those provided by other bodies such as subject associations, charitable foundations and curriculum development bodies which have been amongst the best, for example SMP and MEI in mathematics." ³⁰

Viewed in isolation there may be concerns about the content of endorsed textbooks, but earlier evidence from the Host (2012) surveys, on factors affecting purchasing

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²⁷ Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.*

²⁸ Askew, M. et al (2012) Values and Variables: Mathematics education in high performing countries.

²⁹ House of Commons Education Committee (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

³⁰ Select Committee enquiry on the administration of exams in England – Summary of responses in relation to textbooks.

decisions, indicates that teachers do in practice use a range of these alternative materials.

Other specific issues raised by teachers in surveys for the Host (2012) report were:

- Targeting of minimum requirements in resources for C grade at the expense of breadth in learning.
- That mathematics and sciences need complex and varied examples or questions but that these were very limited in textbooks.
- Teachers of Art and Design and English stress the need to ask students to read around the subject.³¹

Positive Impacts

Only a small minority of teachers surveyed in the Host (2012) report identified the competitive marketplace for support materials as a risk to standards in teaching and learning.³²

The evidence from teachers is that they use a wide range of materials of which exam board-endorsed textbook forms only one part. They express positive and negative views on the quality of endorsed textbooks and its relationship to the exam. Teachers believe that endorsed textbooks have a place in a 'portfolio of resources' and that they are written by those with a close understanding of the ability levels of target students and exam demands: "When they are written by senior examiners, one pro is that they have a better understanding of the ability levels of your notional 16 year-old pupil, for example. Other resources can be simply too inaccessible. Most of these books are not sufficient to get an A grade though and only a lazy teacher would rely on that one resource". "Very useful to staff and pupils for reducing their workload - they only teach what is in the relevant textbook and use the same examples, thereby saving teachers from developing their own case studies and materials. Students who are often absent do not suffer as much as they can just get all their information from the textbook. This can be useful for candidates who have 'weak' teachers - they can just learn it all themselves from the book." ³³

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³¹ Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.*

³² Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.*

³³ Teacher responses to Ofqual's (2012) Call for Evidence.

The high-stakes testing regime as a key driver to the educational experience of students is a theme running through the evidence: "London Mathematical Society said that the increasing involvement of awarding organisations in the professional development of teachers, together with their involvement in textbooks, heightened the risk of "teaching to the test", saying that: 'CPD sessions run by exam boards are likely to focus on explaining to teachers how to train students to maximise marks in exams set by one particular board, while a textbook endorsed by the same boards leaves the teacher no option but to coach students for the relevant examination."³⁴

Balanced against the evidence on the potentially negative impact of endorsement is a strong argument in defence of aligning textbooks to exams on the basis of curriculum coherence and the role of alignment in high-performing countries: "This is strongly grounded in evidence from TIMSS, and argues that 'curriculum coherence' is vital, and is associated with high-performing systems. This is not just a trivial, common-language use of the term 'coherence'. A system is regarded as 'coherent' when the national curriculum content, textbooks, teaching content, pedagogy, assessment, and drivers and incentives all are aligned and reinforce one another. Curricular materials in high-performing nations focus on fewer topics, but also communicate the expectation that those topics will be taught in a deeper, more profound way." (Schmidt W & Prawat R 2006 p1)³⁵

While there are concerns over competition and 'teaching to the test' it is perfectly possible for awarding organisations to produce high-quality materials under the current system as the Taylor Minnis (2012) report observes: "It is also clear that good-quality materials **can** be created by awarding organisations that accurately reflect the requirements of a specification and actively avoid the potential for conflict of interest. This 'best practice' should be used by all awarding organisations when developing and publishing materials in the future." ³⁶

6. Impact on support materials for A levels

The evidence review found that there are particular issues related to A level qualification and support materials.

³⁴ Host Policy Research (2012) *Textbooks, Study Aids and Support Services Research.*

³⁵ Cambridge Assessment (2010) Could do better: Using international comparisons to refine the National Curriculum in England.

³⁶ Taylor Minnis (2012) Research into specifications, textbook and assessment materials to review potential impact on standards.

Many of the professional bodies and subject organisations express concerns about the impact and use of formulaic answers on the quality of learning, breath of knowledge, the need for independent thinking and creativity, particularly for A levels.³⁷ The term 'scaffolding' captures the concept of providing support for students, which is reduced as confidence and maturity grow, to allow more independent learning to develop as needed. The nature of support materials for GCSE reflects a high degree of structure or scaffolding. The evidence suggests a historic tendency to transfer a similarly structured approach to A Levels: "An example of a book on critical thinking was provided, which was supposed to broaden and instil an ability to think in the student. But in their view the system has managed to narrow even this subject to a series of short-answer questions and prescriptive mark schemes with books that encourage students to learn just what they need to know." ³⁸

Ofsted in its reports on the teaching of history (2007) and geography (2011) also comment on concerns over the narrowing of learning, especially for A levels. While acknowledging that it raised achievement at GCSE they observed: "it was clear that, at A level, the mushrooming of course-endorsed and linked textbooks was having a negative impact. They stultified teachers' thinking and restricted students' progress. The weaker students relied on the textbook as being sufficient preparation for the external examinations and were less willing to read beyond the 'set textbook'. Their written and oral work revealed how their understanding of the topics they studied was narrowed. It also meant that students were not as well prepared to meet the challenges of higher education where independent learning and extensive reading were required."

The Taylor Minnis (2012) report identifies examples where awarding organisations might be producing materials that are over structured and too simplified for A level studies.

This trend appears to go across all subjects, with further concerns from senior maths subject experts on the detrimental impact at higher levels: "The practice of reducing

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 ³⁷ 1. Teacher response – House of Commons Education Committee (2012) *The administration of examinations for* 15–19 year olds in England. First Report of Session 2012–13 Volume II: Oral and written evidence;
 Association of Teachers of Mathematics; and 3. Mathematics Education Centre.

³⁸ Society of Authors submission – House of Commons Education Committee (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

³⁹ Ofsted (2007) History for all and Ofsted (2011) Geography – Learning to make a world of difference.

mathematics to 'exam fodder' reduces candidates' experience of learning to a 'boring drill', whose only perceived purpose is to pass a particular examination. When combined with a modular system and regular examinations, the traditional eye-opening experience of A level studies is completely lost. The resulting pressure to focus on a particular set of exams, rather than on the discipline ostensibly being studied, narrows students' horizons and sets them false criteria of personal achievement. And it de-professionalises teaching." 40

The development of courseware for undergraduate study in higher education mirrors to some extent the developments in Key Stage 4 and post 16. The set text and 'readers' developed by the Open University and with a high degree of 'scaffolding' are now a model used across higher education.

7. Impact on Predictability and Assessment Standards

We have sought to gather initial evidence on how textbooks and other resources may impact on assessment predictability. The Taylor Minnis (2012) report indicated that predictability arises from a combination of factors which include:

- Exam cycle in which topics are covered over a period of time. Working from past papers this cycle might be predictable.
- The use of contexts and case studies which are very similar to those in textbooks.
- The style and construction of questions in the exam being replicated in the textbooks so students become familiar with these.
- Worked examples in textbooks illustrating how particular styles of questions should be answered to gain maximum marks.

The combination of these creates a perception that standards could be compromised and, through support materials or textbooks, impact on the way students are being taught. Materials are available to help teachers and students prepare for exams in a highly targeted fashion, but there may be inequality of access to this level of preparedness based on:

⁴⁰ Evidence submission – House of Commons Education Committee (2012) *The administration of examinations for 15–19 year olds in England.* First Report of Session 2012–13 Volume II: Oral and written evidence.

- The choice of subject or modules within subjects as some have fewer resources available
- The choice of awarding organisation as some may be providing greater levels of focused material for the same subject
- The availability of this material in schools based on budget and policy decisions.

The Taylor Minnis (2012) report looked for examples where the textbooks might contribute to different outcomes and performance across different qualifications. Across the whole range of resources covered in its work there was very limited evidence of a question or context from an endorsed text appearing in the exam. The report does conclude, however, that more analysis of support materials is justified, in order to investigate other features that could contribute to predictability.

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