

Synoptic assessment: report for QCA


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Caveat

This report was prepared to a tight deadline and the work was done largely as a desk exercise, using a limited selection of materials. It should be regarded as an exploratory study.

Disclaimer

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I Background

In the 1990s, there was concern that students who took modular syllabuses would lack an overview of their subject. There was no evidence that those taking linear syllabuses had such a view, nor indeed was there any such requirement built into the syllabuses. Arguably, however, linear syllabuses offered a better opportunity for students to gain 'a holistic grasp of the syllabus' in that they were working throughout the course towards the assessment of all the material at the end (Dearing, 1996a). Another concern was whether modular syllabuses were properly rigorous given that students could tackle the course and the assessment one module at a time, with the option of re-sitting modules, rather than facing all the assessment at once. As more students took modular courses, particularly in mathematics, it was suggested that students with similar prior attainment were getting better results from the modular route (Taverner and Wright, 1997). Synoptic assessment was seen as a way of addressing both these concerns.

In 1996 Sir Ron Dearing produced his review of qualifications for 16-19 year olds (Dearing, 1996a, b, c and d), which led ultimately to the development of the Curriculum 2000 A level specifications. One of the questions which he posed in his interim review was:

Should the requirement for synoptic assessment, which at present only applies to the modular AS and A levels, be extended to conventional terminal examinations? (Dearing, 1996b, para 10.5).

In his final report, Dearing (1996b) noted:

Few chose to comment on the requirement, for the final unit in modular A levels, to include questions involving a synoptic coverage of the whole content of an A level, and only a few supported its extension to conventional A levels. Many would argue that since the end of course examinations in conventional A levels sample the whole of the syllabus, they are already "synoptic" and that this is therefore only an issue for modular A levels. (para 10.5)

Dearing himself accepted this view, and he therefore felt the need to address the 'Fear of lack of coherence in a student's understanding of the subject' (Dearing 1996d, appendix G4). Dearing recognised that there was no 'adequate and uniform approach' to synoptic assessment (1996b, para 10.59) but he concluded:

the final examination in a modular scheme of assessment should count for not less than 30 per cent of the total marks and should include a number of questions, for which at least half the marks (15 per cent of the total marks for the A level) are reserved, that test understanding of the syllabus as a whole. (para 10.61)

Following the Dearing review, in 1997 the government put proposals out for consultation in *Qualifying for Success* (DfEE, 1997). These included a proposal that modular A levels should require:

a substantial element of 'synoptic' assessment (which tests the candidate's understanding of the connections between the different elements of the subject at the end of the course) (para 3.8)

When the arrangements for the new qualifications were finalised, most Curriculum 2000 specifications were modular in design and synoptic assessment was required. The *Arrangements for the statutory regulations of external qualifications* (QCA, 2000) stated:

29. Advanced level specifications must include synoptic assessment, located in the A2, which tests candidates' understanding of the connections between the different elements of the subject. The synoptic element should normally contribute 20% of the marks, with a minimum of 15%. It should normally be in the form of external assessment taken at the end of the course, except in certain practical subjects where that is not appropriate. (Appendix 2)

The end of course requirement has since been relaxed (JCGQ, 2002).

This brief analysis suggests that synoptic assessment was introduced partly to sustain the idea of A levels as coherent courses and partly to maintain high levels of demand on students. At the same time, demand for modular syllabuses was increasing, and modularity was perceived as having 'the potential to encourage breadth, flexibility and lifelong learning and help to raise levels of motivation and commitment' (DfEE, 1997, para 3.7). Did the introduction of synoptic assessment suggest that we didn't have the courage of our modular convictions, or was it a device for getting the best of both linear and modular worlds?

II Definitions and applications

1 Introduction

There is a range of definitions of synoptic assessment and probably even more ways of putting it into practice. It ought to be possible to separate out definitions and applications, but many descriptions use very similar language for both and do not distinguish clearly between them, using applications as a means of explaining as well as exemplifying definitions. They are therefore treated together for the most part.

When synoptic assessment was first introduced, the A level Code of Practice defined it as testing 'students' understanding of the connections between the different elements of the subject' (Dearing, 1996a, para 92). Dearing himself (1996a, para 92) referred to 'whether a student had a holistic grasp of the syllabus' and he investigated what synoptic assessment meant in modular syllabuses at that time. The full text of his discussion is reproduced in Annex 1. Dearing identified five existing approaches and added a sixth:

- (i) all modules may be regarded as addressing the connections between elements of the subject;
- (ii) strict ordering of modules and the need in later modules to use knowledge, understanding and skills from earlier ones ensures that later modules assess whether students have a holistic grasp of the syllabus;
- (iii) a synoptic element is part of one or more modules;
- (iv) a synoptic module assesses students' understanding of the connections between the different elements of the subject;
- (v) a synoptic module as in (iv) is combined with a synoptic element in other modules;
- (vi) a synoptic examination at the end of a course of study which assesses students' grasp of the whole syllabus. (para 93)

Dearing concluded:

A range of approaches to synoptic assessment is currently used in modular examinations. Although they all comply with the current wording in the GCE Code of Practice definition, it is likely that the different approaches place different types of demands on students. This aspect of the GCE Code of Practice should, therefore, be reviewed by SCAA/ACAC in consultation with the GCE examining boards. (para 98)

A common definition of synoptic, gleaned from a Google search, is 'presenting a summary or general view of a whole'.

If synoptic assessment is defined in this way, it might be achieved through introductory modules rather than final ones. The UCLES modular business studies syllabus developed in the 1990s had a double module which had to be taken at the start of the course with the aim of giving students an overview of the subject, probably putting it in Dearing's second category above. A similar approach could be applied in other subjects. In history, for example, there could be an introductory module in the form of a survey of a longish period, followed by more in-depth modules on selected aspects or shorter periods. In terms of Curriculum 2000 A levels, however, such an approach might not be demanding enough. Edexcel's Nuffield chemistry specification has an introductory chemistry module, but it does not count towards synoptic assessment.

QCA has defined synoptic assessment as follows (QCA, 2000):

Synoptic assessment A form of assessment which tests candidates' understanding of the connections between the different elements of a subject. (Glossary)

Given this definition, a possible approach to synoptic assessment is the use of generic questions (e.g. ACCAC, 2003), that is, questions which ask about themes or issues. In English literature, for example, there might be questions about plot development or characterisation, which candidates could answer by drawing on the works which they had studied in their course. Similarly, in history there could be questions about the causes of war or the role of great leaders, or perhaps questions about historiography, the nature of the evidence and tools which historians use, and so on, which students could address using material from the different periods which they had studied. For example, Aberdeen University's honours degree in history has a unit on historical problems (personal communication and see www.abdn.ac.uk).

Depending on the definition of 'elements', another possible approach to synoptic assessment is to ask students to apply the skills and methods used in the subject. In science and psychology this could be planning and conducting an experiment, in English it might be literary criticism or linguistic analysis, in history it might be analysing historical documents, in statistics and business studies it might be data analysis and interpretation, and so on.

Advanced extension awards (AEAs) are designed to achieve aims which are similar in some respects to those of synoptic assessment. According to the QCA website, Advanced Extension Awards should:

- challenge the most able advanced level students by providing opportunities for students to demonstrate greater depth of understanding than that required at Advanced GCE; . . .
- be accessible to all able students, whatever their school or college and whichever specification they are studying . . .
- help differentiate between the most able candidates, particularly in subjects with a high proportion of A grades at Advanced GCE, . . .

The qualification will: . . .

- test candidates' depth of understanding and their ability to think critically and creatively;
- test candidates' ability to demonstrate an understanding of the connections between different elements of the subject;
- have 100% external assessment; . . .

It is not surprising, then, that the language of the AEA specifications is very similar to that of some of the definitions of synoptic assessment described above. The language is also very similar to that used in the Curriculum 2000 A level subject criteria and specifications, as described below.

2 A level subject criteria

The subject criteria which current A level specifications have to meet include definitions of synoptic assessment and suggestions on how it might be achieved. Of the 27 subject areas for which QCA publish subject criteria, 24 were surveyed in this study. The three which were omitted were English language and literature, Welsh and Welsh second language.

There is no clear distinction in the A level subject criteria between definitions and applications, but an attempt has been made to deal with them separately.

a Definitions of synoptic assessment

Almost all subject areas had references to breadth in some form e.g. 'different parts of the A level course', 'range of texts', 'number of areas', 'range of different contexts', 'different approaches', 'many economic issues', and so on. Only classical civilisation, Latin and classical Greek, and law did not refer explicitly to breadth in some form.

The most common single word used was understanding, or, occasionally, appreciation, sometimes preceded by adjectives such as 'critical', 'analytical', 'broader' and 'deeper'. 'Understanding', or its equivalent, appeared in 19 of the 24 subject areas surveyed, the exceptions being art, business studies, D&T, music and PE. It should be noted that this refers to phrases such as 'test candidates' understanding of the connections between different elements of the subject', that is, understanding as a feature of synoptic assessment.

The definitions of synoptic assessment in the subject criteria were categorised on the basis of the language used. Tables 1 and 2 in Annex 2 give full details and a summary by subject area. References to breadth and understanding were so common that they have not been included in the tables.

Of the 24 subject areas surveyed, 18 referred in their definitions to relationships, connections, inter-relatedness or links, while 16 referred to drawing together, integration, synthesis or bringing together. Latin and classical Greek was the only subject area which did not have any explicit reference to either of these two categories. It is not clear whether these should be regarded as two categories or simply two ways of

saying what is effectively the same thing. Except that even within each category it is not clear that it is the same thing. Does 'understanding of the connections between the essential characteristics of historical study' (history) mean the same as 'see the relationship between different aspects of the subject' (business studies), even allowing for their being different subjects and in the absence of a definition of either 'characteristics' or 'aspects'?

The next most common category, with 15 subject areas, was applying and using. Subjects which did not explicitly refer to this kind of activity were art, business studies, classical civilisation, computing, English literature, geography, government and politics, history, and Latin and classical Greek. Yet, as is described below, some of these subjects clearly required application.

The fourth most common category related to principles and concepts, which were specifically referred to in the criteria for nine subjects. The other categories, contexts, analysis, evaluation, expression, interpretation and personal response, were referred to in only small numbers of subject areas.

Some caveats should be noted. First, the categorisation was undertaken by the author and has not been independently replicated or checked. Second, the same words may mean different things to different people, and different words may mean the same thing, particularly in the context of the kinds of high level concepts to which synoptic assessment relates. It is possible that the words used in the criteria have tacit meanings which are assumed by specialists in the context of their own subject but which are not apparent to the general reader. Third, the definitions are of a general nature, which may obscure their meaning.

Even so, it is clear that synoptic assessment is generally taken to involve links across different parts of the A level course. In many cases the definition also involves application of the knowledge, understanding and skills gained from the course.

Superficially there would appear to be a good deal of agreement on what synoptic assessment means.

b Achieving synoptic assessment

The suggestions in the subject criteria for achieving synoptic assessment were also categorised on the basis of the language used. The categorisation was in two parts. One part related to the nature of the activities which candidates might undertake. Often these were further explications of the definitions. Tables 3 and 4 in Annex 2 give full details and a summary by subject area. The second part related more explicitly to assessment methods. But this distinction was not clear cut.

With regard to the kinds of activities which candidates might undertake, the most common feature related to range or breadth. All subject areas, apart from modern foreign languages, had such references in various forms e.g. 'range of skills', 'learned throughout the course', 'number of areas', 'from different parts of the course', 'different approaches', 'the full breadth of the period', 'a range of different activities', and so on. In a few cases, the subject criteria allowed synoptic assessment to concentrate on one area of content on condition that a range of skills and concepts were brought to bear on it. References to range or breadth were so common that they have not been included in the tables.

After range and breadth the next most common type of activity, mentioned in some form in 17 of the 24 subject areas, was application, as in 'applying knowledge and understanding', 'bring to bear their knowledge', 'use ideas and skills', 'using evidence', and so on. This was closely followed by making connections and links, taken together here as one category, e.g. 'making connections between the areas of knowledge', 'draw together and apply skills, knowledge and understanding', 'links between a range of historical perspectives', and so on.

Working in new contexts or with unfamiliar material was referred to in eleven subject areas, evaluation in nine, selecting or drawing on appropriate material in seven, and analysis in six. Other activities, with three or fewer references, were contextualisation, critical comparison, interpretation, ability to think like a subject specialist and transfer of skills.

As with the definitions, and allowing for the same caveats, there was a good deal of similarity across subject areas.

When it came to suggestions for assessment methods, however, there was much more variation. Details are given in Table 5 in Annex 2.

The most commonly suggested method of assessment was the essay, or work explicitly described as 'written', but even this was mentioned in only eight subject areas. The next most common, suggested in six subject areas, was some form of research or enquiry. These were followed by problem solving exercises, data analysis and evaluation or other forms of quantitative work, evaluation exercises, responding to a stimulus, case studies and experimental work. Other suggestions mentioned in only one or two subject areas were:

tackling a design problem, decision making exercises, responding to debates, preparing a plan or proposal, personal study, analytical work, responding to the work of artist(s), craftsperson(s) or designer(s), responding to a task which specifies an image, object or outcome to be achieved, writing chemical equations, design and making assignments, produce a new text, use pre-released materials, preparing an informative article, translation, comprehension, literary appreciation, linguistic analysis, respond in speech or writing, study a topic through both written and recorded documents, reading and performing/directing music, creating a composition within a clearly defined brief.

Of course some of this variation is semantic rather than real. A personal study, for example, might well be a piece of research, and most of the assessment methods would involve written work in some form. But the subject criteria are very general and do not provide enough detail to support further categorisation.

c Other issues arising from the subject criteria

There is a lot of similarity of language across the criteria for different subject areas, but there are small variations which suggest inconsistency. It may be argued that most of this is trivial, but synoptic assessment is a difficult and complex concept, and it is not clear whether semantic differences represent differences of meaning and substance or simply variations in drafting style from subject to subject. If the former, clarification is needed. If the latter, they could be tidied up.

There are also variations in what is included in definitions of synoptic assessment and what is included in suggestions for achieving synoptic assessment. For example, only two subjects referred to evaluation in their definitions of synoptic assessment, but nine did so in their suggestions for achieving it. Similarly, analysis appeared in the definitions for five subjects, and in the suggestions for six subjects, but the two lists had only one subject in common. It should be made clear whether such differences are trivial or are indicative of substantive differences. Many teachers probably read the subject criteria for only one subject, but for those who teach more than one subject, semantic variations are a potential source of confusion.

A disjunction arises in a few subjects between the rules for synoptic assessment and the suggestions for achieving it. The rules state that the synoptic element 'should normally be in the form of external assessment taken at the end of the course, except in certain practical subjects where that is not appropriate' (QCA, 2000). A total of ten of the 24 subjects – art, business studies, D&T, general studies, government and politics, history, modern foreign languages, psychology, religious studies and sociology – had explicit references to internal assessment, and a further three – classical civilisation, English literature and law – suggested work which would be difficult to assess externally. Clearly, some of these are practical subjects which may have different rules, but the rest are not.

3 A level specifications, question papers and mark schemes

The A level specifications set out how synoptic assessment is to be achieved, and question papers and mark schemes exemplify it. It was not possible to undertake a detailed survey of all subjects, but some are used for illustrative purposes.

a Business studies and economics

The definition of synoptic assessment in the subject criteria for business studies is:

Synoptic assessment should address the requirement that A level business studies specifications should encourage students to see the relationship between different aspects of the subject.

Synoptic assessment involves the explicit integration of knowledge, understanding and skills learned in different parts of the A level course. . . .

Ways in which synoptic assessment might be conducted include:

decision making/problem solving exercises, requiring candidates to draw together knowledge, understanding and skills learned throughout the course to tackle a decision, problem or issue that is new to them;

a case study within which specific questions require candidates to apply knowledge, understanding and skills learned throughout the course;

internal assessment requiring candidates to apply knowledge, understanding and skills learned in other parts of the course, eg a project based on experience of work;

preparing a business plan.

AQA, Edexcel and OCR each has a specification for business studies. Each uses the definition and embellishes it, as follows:

AQA

In the context of Business Studies, this (synoptic assessment) involves the explicit integration of knowledge, understanding and skills learned in different parts of the A level course. This synoptic assessment takes place in Unit 6 (20%) which assesses candidates' understanding of the relationship between the different aspects of Business Studies and the use of skills acquired throughout the course of study. Several areas of the Subject content may be assessed using integrating themes which emphasise the interactive nature of the business world and draw all the Subject Content together.

Edexcel

The content of unit 6 is synoptic because it brings together all elements of business in the formulation of a corporate strategy. The paper for this unit will, therefore, be entirely synoptic.

The aim of this unit is to develop students' understanding of:

- the links between sections of business studies
- how corporate strategy can respond to its external environment, ethics, and change
- the development of global strategy
- corporate strategies for managing change.

At the end of the unit students should be able to:

- develop further skills of analysis and evaluation in a synoptic manner
- assess the opportunities and constraints presented by the need to co-ordinate and balance all elements of business activity in order to achieve success.

OCR

Unit 2880 brings together all aspects of the AS and A2 study except those contained within the optional units 2874-2877. Its purpose is to ensure that candidates have a good understanding of the subject as a whole and are able to address issues within the subject from a range of perspectives and in an integrated way. The emphasis is on strategic understanding and on the ability to draw evidence together from any relevant areas of the syllabus. Assessment focuses on the breadth, depth and quality of the candidate's analysis and evaluation.

Unit 2880 is a compulsory and entirely synoptic unit. It assesses the ability of candidates to use, explain, analyse and evaluate the whole of the subject core. It requires candidates to think in an integrated and strategic way about the way businesses operate and the way they react to changes in parameters both within and outside the business.

The "unifying theme" of unit 2880 is "choosing and justifying strategy".

Candidates are required to demonstrate their integrative understanding of the subject and to be able to approach situations from the perspective of different stakeholders.

The specifications interpret the subject criteria and attempt to make them more explicit. But they vary in how they do it. There are references to 'integrating' and 'unifying' themes in two of the specifications. One

specification refers to the higher level skills of analysis and evaluation. All three specifications have chosen content for the synoptic unit which on the face of it has an overarching quality – External influences and objectives and strategy (AQA), Corporate strategy (Edexcel) and Business strategy (OCR). This is reinforced by descriptions of the content, which include references to critical understanding and analysis, building on the AS content, and presenting the synoptic content in an integrated way. All three specifications have the same assessment objectives, which may be summarised as knowledge, application, analysis and evaluation. The higher level objectives are more heavily weighted in A2 than in AS.

All three specifications have a specific synoptic unit which is assessed by means of a written paper based on a case study. The case study material consists of written documents, tables, diagrams, balance sheets, and so on. In two specifications the case study material, though not the questions, is pre-released.

The questions asked in the case studies suggest additional features of synoptic assessment. They use expressions such as 'assess the reasons', 'discuss whether', 'would you recommend', 'critically discuss', 'evaluate the responsibilities', 'recommend a strategic plan', 'evaluate the results'. There are almost no questions of the 'describe' or 'explain' variety.

All three specifications use levels of response mark schemes for the synoptic unit, based on all four assessment objectives. AQA has up to three levels within each assessment objective. OCR and Edexcel have up to four levels, one for each assessment objective.

There is a good deal of similarity in the ways in which the specifications interpret synoptic assessment, though in varying degrees of detail. All the specifications are aiming for a relatively high level of demand, expecting candidates to draw on other parts of the course, to address macro rather than micro content and to meet high level criteria such as analysis and evaluation.

The most obvious difference between the specifications is that the synoptic assessment case study material is pre-released in two cases and not in the third (AQA). It seems likely that this would affect the level of difficulty of the synoptic unit. When the material is pre-released candidates have the time and the opportunity, with the help of their teachers, to re-visit content from different parts of the course, to select relevant material and to develop links across the course, focusing on the case study. When the material is not pre-released, all this kind of activity has to be undertaken on the day, which is surely more demanding, though of course the level of demand may be moderated by the mark scheme.

Similar issues arise in economics, where all three specifications also have specified synoptic units. The synoptic units all use data response and essays as their methods of assessment. They focus on macro rather than micro economics – Government policy, the national and international economy (one of the two AQA synoptic units), The UK in the global economy (Edexcel), Economics in a European context (OCR). They build on content covered at AS, as well as requiring additional coverage, though OCR plays down the significance of the additional content. They aim to assess higher order skills, requiring candidates to draw on 'the economist's toolkit' to answer questions based on stimulus material consisting of text, tables and diagrams.

All the economics specifications have essentially the same assessment objectives, which may be summarised, like the business studies ones, as knowledge, application, analysis and evaluation. Synoptic assessment units address all the objectives and use levels of response mark schemes, though not exclusively. AQA and Edexcel have up to five generic levels, and OCR no more than four contextualised levels. The AQA generic levels refer to the assessment objectives within each level and to features of synoptic assessment, including using the economist's toolkit and understanding the inter-relatedness of economic issues, problems and institutions, also within each level. The Edexcel generic levels also refer to the assessment objectives within each level, but not to features of synoptic assessment, perhaps because the same generic levels are used for at least some other units. Examiners are reminded at the top of the synoptic unit mark scheme that all the questions are synoptic in nature, and the definition is included. For each question synoptic content is included, though not separately identified. The OCR mark scheme is more explicit about what counts as synoptic features in candidates' answers.

The main structural differences are that AQA has two synoptic units, making up 30% of the A level assessment, while Edexcel and OCR have 20%, and the stimulus material is pre-released for the OCR specification but not for the others. If synoptic assessment is more demanding than the rest of the A level assessment, the AQA specification would appear to be more demanding. On the other hand, each AQA synoptic unit is arguably more constrained in its coverage. If, as argued earlier, pre-releasing material gives candidates and their teachers opportunities that they would not otherwise have, OCR's synoptic

assessment unit would appear to be less demanding than those of the other awarding bodies, but the level of demand may be moderated by the mark scheme.

These specifications use a number of approaches to make assessment both synoptic and demanding. There is no single definition of synoptic assessment, but a number of features which are pretty much common across the specifications, at least at a superficial level. Do these features constitute a coherent approach to synoptic assessment? Candidates are supposed to draw on material from elsewhere in the course, but the synoptic units also have their own additional material. Candidates are also supposed to draw on skills learned during the rest of the course, and demonstrate some of these to a consistently high level, but it is not clear that these are new skills. Synoptic assessment would seem to be about both content and skills. Defining synoptic in this complex way puts a heavy burden on marking strategies and marker judgment. What happens to a candidate who draws on material from all over the specification, but cannot get further than demonstrating a lot of knowledge? Or the candidate who evaluates a problem at a high level, but in doing so draws on material from a limited part of the course content? Or the candidate who has a good understanding of strategy or some other macro concept, but cannot produce the material from elsewhere in the course to illustrate it?

b Psychology

In psychology, similar things seem to be happening. AQA's psychology A specification has a 20% synoptic assessment unit and an additional 6% for preparing a project brief for the coursework investigation. The synoptic unit is introduced as follows:

In this psychology specification, synoptic assessment is taken to mean candidates having an understanding and critical appreciation of the breadth of theoretical and methodological *approaches, issues and debates* in psychology.

The synoptic unit has sections on individual differences, issues and debates in psychology, and theoretical or methodological approaches, and candidates have to choose a question from each. The mark scheme requires high level skills such as analysis, evaluation, interpretation, appropriate selection, coherent elaboration and critical commentary. The mark scheme also sets out a range of ways in which candidates can demonstrate synoptic assessment. It is reproduced in Annex 3. In psychology, as in business studies and economics, synoptic assessment has accrued a range of meanings. Even so, the report of the examiners for summer 2002 suggests that 'the assessment of the synoptic element . . . may need to change some time in the future, to encourage candidates to think more widely . . . '.

AQA's psychology B specification has a 17.5% synoptic unit and a further 6% of synoptic marks from coursework. Again, a long list of synoptic elements are identified. Edexcel's specification has a synoptic unit worth 16.67% of the marks for the A level, which covers perspectives, approaches, issues and debates and methodology. There is also a synoptic section in another unit which deals with research methods. Here too synoptic has a range of meanings. The OCR specification organises things differently, but has an equally broad approach. A2 candidates do a research report which includes a written assignment and a practical report. It is externally marked, and each part has some synoptic marks. Candidates also choose two of six optional units, each of which requires them to consider how a range of psychological approaches can be applied to practical problems, and to draw on their AS work. The assessment of these units includes a synoptic element, with marks for drawing on material from throughout the course and marks for 'evaluation issues'.

In psychology synoptic assessment has several meanings and the specifications attempt to apply most of them. The percentage of the overall GCE marks allocated for synoptic assessment varies as do the contexts within which candidates can gain these marks. There is almost a feeling of trying to find every possible definition of synoptic assessment and include it. It does not emerge to the author, who is not a psychologist, as a coherent approach. There may also be a risk that the different assessment methods result in differential levels of demand.

c Mathematics

In contrast, in mathematics synoptic assessment is very simply defined. According to the revised subject criteria:

Synoptic assessment in mathematics addresses candidates' understanding of the connections between different elements of the subject. It involves the explicit drawing together of knowledge, understanding and skills learned in different parts of the A level course through using and applying methods developed at earlier stages of study in solving problems. Making and understanding connections in this way is intrinsic to learning mathematics.

In papers which address the A2 core content, synoptic assessment requires the use of methods from the AS core content. In papers which address mathematical content outside the core content, synoptic assessment requires the use of methods from the core content and/or methods from earlier stages of the same aspect of mathematics (pure mathematics, mechanics, statistics or discrete mathematics).

In determining what content may appropriately be required, the rules of dependency for modules set out in the specification . . . should be observed.

The specifications tend to quote the criteria, with minor modifications, and to say little or nothing more. Synoptic assessment is achieved by doing more mathematics, in a specific order, so that later modules depend on knowledge, understanding and skills learned in earlier ones. Synoptic assessment is thus effectively defined as 'doing mathematics'. Interestingly, a similar claim has been made for modern foreign languages in a QCA review of standards – 'all assessment is arguably synoptic' (QCA, personal communication). In modern foreign languages, however, specification designers have tried to achieve a more explicit integration, for example, by asking candidates to conduct conversations on cultural topics studied or on an issue which they have prepared.

OCR's MEI mathematics specification is an exception to the general mathematics rule. It includes in the Pure Mathematics 3 unit a comprehension section based on stimulus material featuring 'real life' applications of mathematics. According to the specification, this section 'may draw on any of the content in the Pure Mathematics 1, 2 and 3 modules, and on the ideas which pervade applied mathematics at this level of sophistication'. The questions ask for explanations, comparisons and mathematical reasoning.

MEI apart, does 'doing mathematics' constitute a very restricted definition of synoptic assessment or a very wide one?

d Geography

The definition of synoptic assessment in the Geography subject criteria is very brief:

Synoptic assessment involves assessment of the candidates' ability to draw on their understanding of the connections between different aspects of the subject represented in the specification.

The specifications elaborate on this, referring to a range of features of synoptic assessment, for example, knowledge and understanding across a range of geographical subject matter, the importance of human perspectives, integrating themes, addressing global issues, and applying higher order skills such as analysis, synthesis, evaluation, using evidence, balancing different perspectives and providing geographical rationales.

Each English awarding body offers two specifications. Synoptic assessment is usually addressed in one specific unit, though AQA's specification A has synoptic essays in two of the A2 units, and even where there is one unit, there may be choice within it, as in Edexcel's specification A. Assessment is by analysis of stimulus material, and essays addressing themes and perspectives. In three specifications there is pre-released material and the synoptic assessment takes the form wholly or partly of a decision making exercise.

As in some other subjects, synoptic assessment in geography has a range of features, which may not constitute a coherent whole. It is not clear that the features are applied in a consistent way across the specifications, with the risk that the demand on candidates varies.

e English literature

The subject criteria for English literature define synoptic assessment as:

Synoptic assessment in English Literature will take account of the requirement that A level qualifications should enable candidates to develop a broader and deeper understanding of the connections between the knowledge and understanding set out in the specification as a whole. Synoptic assessment will involve the explicit synthesis of insights gained from a close and detailed study of a range of texts important for the development of English Literature. It will require candidates to show evidence of the ways in which contextual factors and different interpretations of texts illuminate their own readings, and ensure that candidates demonstrate their skills of interpretation and expression to give articulate, well-argued responses.

Even at this level of generality, this appears demanding. Specifications address it in different ways.

AQA specification A has a 20% synoptic unit. It is based on an area of study, war in literature, with unprepared examples covering prose, poetry, drama and non-fiction, and both the twentieth century and earlier. It is expected that candidates will undertake reading specifically for this unit, relating to the theme. It aims to test candidates' skills and all the assessment objectives fairly equally, and it requires input from across the range of the course. AQA's specification B also has a 20% synoptic unit. It uses pre-release material which is released close to the examination, and candidates are forbidden to discuss it with their teachers. There is also unseen material on the question paper. The texts come from a wide range of literature and literature related material. Candidates are expected to have developed a methodology for approaching literature which draws on and synthesises all the assessment objectives, but there is more weight attached to three of the objectives than to the others.

The Edexcel specification also has a 20% synoptic unit. It has a section on unseen material, where students are asked to explore the meaning and to comment on the way in which the material is presented, showing appreciation of literary form and content. There is also a section on comparative work based on comparing texts which they have studied. Different forms of literature, poetry, prose and drama, must be addressed in each section. The synoptic unit gives more weight to two of the assessment objectives than to the others. The OCR 20% synoptic unit also has two sections, but candidates can choose one of six topic areas and both the unseen work and the comparative and contextual work are based on their chosen topic. Three of the assessment objectives have more weight than the others.

In English literature, as in other subjects, synoptic assessment has a range of features relating to coverage of a variety of material, from different parts of the course, to both depth and breadth, and to higher order skills. There are variations between the specifications in what counts specifically as synoptic, in the weight given to the assessment objectives, in the extent to which material is unseen and in the amount of additional reading recommended or required for the synoptic unit.

f Physical education

For physical education, the subject criteria define synoptic assessment as follows:

Synoptic assessment in physical education should require candidates to bring together their knowledge of principles and concepts of connections across areas of the subject, for example, applying knowledge and understanding of a number of areas to a particular situation and using specialist vocabulary where appropriate.

This is a rather more restrained definition than those for some other subjects.

AQA's physical education specification has synoptic assessment in two units. In one it is a section of the written paper on individual development in physical education and sport – a holistic view. In the other it is a coursework assignment requiring analysis and evaluation of a live or video performance and the application of knowledge and understanding from various parts of the course. Performance acts as a focus.

Edexcel's synoptic assessment has an additional dimension. It is also assessed in parts of two units, but one is on global trends in international sport and the other on scientific principles of exercise and performance. Although the emphasis is on scientific principles, students are expected to draw on social factors too. All the assessment is by written examination. Again, performance is a central focus.

OCR's specification is similar to AQA's in spreading synoptic assessment across two units, one a written examination and the other coursework. Again, the focus is on performance, from both scientific and socio-cultural perspectives.

In physical education there is some variation in how synoptic assessment is carried out, but there is a focus on performance and on applying knowledge and understanding from a range of perspectives to that focus. It is not clear whether the assessment criteria for synoptic assessment are distinctive, but there seems to be less loading of a range of features on to synoptic assessment than in some other subjects, perhaps because of the more restrained definition in the subject criteria.

g Issues arising from the specifications, question papers and mark schemes

One of the issues arising from the exemplification in the specifications, question papers and mark schemes, is that in many subject areas synoptic assessment has multiple features. This is perhaps not surprising given the rather general nature of the subject criteria. Phrases such as 'assessment of the understanding of the connections between different aspect of the subject' (geography), for example, do not provide explicit guidance. Terms such as 'aspects', 'elements', 'areas of study', 'activities', and so on, have been assumed to encompass some, or even all, of content, skills, concepts, methods, applications and themes. In their efforts to demonstrate that they are meeting the criteria, specification designers seem to have felt obliged to load synoptic assessment with a range of meanings. Even in subject areas such as biology, for example, where there is no additional content associated with synoptic assessment, the definition is still broad because candidates have to draw on large parts of the rest of the course.

It could be argued that in some cases the requirement for synoptic assessment has distorted the subject in an effort to identify links which may not naturally arise. In two of the religious studies specifications, for example, there are long lists of synoptic options from which candidates select on the basis of the options which they have studied elsewhere in the course. The synoptic options attempt explicitly to bring together what are sometimes diverse areas of content, with results which can look rather uncomfortable, at least to a non specialist. The third specification gets round the problem by taking a topic based or thematic approach where students have to draw on perspectives from different options to explore the topic.

The way in which synoptic assessment is defined has implications for how it is assessed. In order to demonstrate that all the features are indeed assessed, specification designers have used a range of tactics. We have synoptic assessment appearing in a number of units, or we have a unit with a series of questions aiming to address different features of synoptic assessment, or we have mark schemes loaded with criteria which markers have to identify and on which they need to form some aggregate judgment to arrive at a mark. As a result, for some candidates, there will be several small pockets of work relating to different aspects of synoptic assessment, none of which is sufficient to provide a reliable assessment. Ironically, in attempting to make synoptic assessment all encompassing, specification designers may have ended up atomising it. This tendency may be exacerbated by the 20% requirement, which does not fit well with the basic six unit A level model. Another risk with the multiple features approach is the demand it places on markers, and the implications for marking reliability.

Another feature of synoptic assessment is that in most subject areas the bulk of it has to be externally assessed. It could be argued, however, that activities such as drawing on the content of different parts of the course, applying a range of methods, or demonstrating a variety of skills might best be assessed by projects, experiments, assignments, research studies and so on, which traditionally have been the province of coursework. In some specifications, such methods are used for synoptic assessment but the work is externally marked. In others, these activities are shoehorned into examination questions, raising doubts about fitness for purpose.

There is a risk that different specifications within the same subject area may be making differential demands on candidates. Sometimes this risk lies in variations in the assessment methods, for example, whether stimulus material is pre-released or not. Sometimes it lies in the varying amounts of synoptic assessment, sometimes in variations in the amount of content specifically associated with synoptic assessment, and sometimes in differences in the ways that 'synoptic' is defined in practice.

It should be noted that these comments are based on a limited and selective analysis of specifications, question papers and mark schemes.

III Proposals for further work

These proposals relate to validity and demand. Although they are treated separately, the issues raised are interdependent.

1 Validity

The analysis set out in this report suggests that issues of validity lie at the heart of synoptic assessment.

It is not clear from the available materials how far the specifications fulfil their aims for synoptic assessment. Do the questions in the synoptic units really require candidates to draw on different parts of the course? Does the use of themes and macro content give candidates an overview? How clearly can examiners identify the difference between analysis and evaluation? Is there a qualitative difference between performance on synoptic assessment and on the other units? How many marks can candidates accrue without demonstrating synoptic qualities? If all references to synoptic assessment were removed, would an independent observer be able to identify, either from the specifications, question papers and mark schemes, or from the candidates' performances, which units were synoptic? Is there a difference in the minds of teachers and candidates when they prepare for synoptic assessment? Is there a qualitative difference in performance between new A levels with synoptic elements and legacy A levels which did not have them? Is synoptic assessment more appropriate in some subjects than in others?

In some subject areas synoptic assessment has accrued a range of meanings and applications. In some cases candidates have a choice of questions and a choice of ways of demonstrating that they have met one or more of the synoptic requirements. Different assessment methods are used. As a result, the construct validity of synoptic assessment may be compromised (AERA, APA and NCME, 1999). Theoretically, if synoptic assessment means lots of things, candidates should have to show that they can do all these things. Otherwise, candidates are not all being assessed on the same domains and their results do not mean the same thing even if they all have an A level in the same subject based on the same specification. Letting a thousand flowers bloom may not be consistent with the requirements of the code of practice (QCA, 2003) for 'coverage of a similar balance of content and assessment criteria' (para 31) and 'comparable demands' (para 40).

And it might not be consistent with the requirements of reliable marking. Defining synoptic in so many ways even within one unit makes heavy demands on marker judgment and requires strategies for ensuring that candidates who meet different selections of criteria are treated consistently and fairly. The difficulties of dealing with even one criterion when it is as complex as 'evaluation' are well recognised, as described in the June 2002 AQA business studies unit 6 mark scheme – see Annex 3.

Nor is it always clear that synoptic assessment can be distinguished from other aspects of A level assessment. Some of the features of synoptic assessment, for example, the demonstration of high level skills such as evaluation, are not unique to synoptic assessment. The issue of the distinguishing features of synoptic assessment arises partly because there is no clear definition of the construct or constructs which make up synoptic assessment, and partly because the construct validity of A levels in general may not be fully defined (Baker et al, 2002).

Now that evidence exists about how synoptic assessment works, it should be possible to explore its validity, addressing questions of the kind raised here.

2 Demand

Closely related to issues of validity are those of demand. Is it asking too much of A level candidates to have an overview of their subject, demonstrate the skills of a subject expert, and engage with high level themes?

There is anecdotal evidence from the press following the summer 2002 examinations that in some subjects, or perhaps for some candidates, synoptic assessment has not only met the requirement for a high level of demand, but has perhaps gone too far. There is also evidence from examiners' meetings and reports that candidates have found synoptic assessment very demanding. Examples have been cited of candidates who have relied too heavily on pre-prepared or model answers, or on question spotting, strategies which may be particularly inappropriate in synoptic units. But even with more appropriate preparation, it is hardly surprising that candidates find synoptic assessment demanding. It is intended to be so, and the analysis in this report suggests that it has all the features normally associated with high levels of demand. Of course, many candidates have risen to the challenge, and some examiners' reports are very positive. It has been suggested that such is the level of demand that synoptic assessment could be used as a means of distinguishing between the best candidates for the purpose of selection for higher education (e.g. Lucas, 2003).

Research might be undertaken, both statistical and qualitative, to investigate whether, and in what circumstances, synoptic assessment is indeed demanding. Does candidate performance on synoptic units exhibit different qualities in comparison with their performance on other units? Is it more difficult for candidates to perform well in the synoptic units than in the other A2 units? Do they tend to get worse marks on synoptic units than on their other units? How many candidates gain the highest marks on synoptic tasks? If synoptic assessment is more demanding, what are the features which make it so? How well do synoptic units correlate with other units, in comparison with the correlations between the other units? If synoptic units are more demanding, what are the implications for the weighting of AS and A2, and for the conversion from raw to uniform marks?

3 Conclusions

The kinds of questions raised here would generate a very large programme of research, which could not be justified by an exploratory study of this kind.

In order to focus the work, a first step might be to consult awarding body subject officers, senior examiners and teachers about how well synoptic assessment works for them, addressing the kinds of issues raised here. It may be that in practice synoptic assessment is better defined and applied than it appears to be from a superficial survey of the documentation.

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Annex 1 **Extract from DEARING, R (1996b) *Review of Qualifications for 16-19 Year Olds, Quality and Rigour in A Level Examinations*, London, SCAA**

Synoptic assessment

92 When rules for modular examinations were first being formulated, it was assumed that the terminal examination in linear syllabuses assessed whether a student had a holistic grasp of the syllabus. To ensure that the demand through modular forms of assessment was comparable to that in linear schemes, the Code of Practice explicitly required modular syllabuses to:

‘...provide for a form of “synoptic assessment” which tests the students’ understanding of the connections between the different elements of the subject. Syllabuses will make explicit how synoptic assessment is provided for’.

93 A review of current approaches to synoptic assessment was carried out. Five distinct approaches may be discerned in modular syllabuses approved to date; a sixth approach (vi below) has not been adopted but has been suggested as a possibility:

- (i) all modules may be regarded as addressing the connections between elements of the subject;
- (ii) strict ordering of modules and the need in later modules to use knowledge, understanding and skills from earlier ones ensures that later modules assess whether students have a holistic grasp of the syllabus;
- (iii) a synoptic element is part of one or more modules;
- (iv) a synoptic module assesses students’ understanding of the connections between the different elements of the subject;
- (v) a synoptic module as in (iv) is combined with a synoptic element in other modules;
- (vi) a synoptic examination at the end of a course of study which assesses students’ grasp of the whole syllabus.

94 Whilst all these approaches comply with the Code of Practice, approaches (vi) and to a lesser extent (ii) are potentially more demanding because they require students, in the terminal examination, to show a grasp of the whole content of the syllabus and to use the skills and techniques developed over the whole course.

95 With linear syllabuses, there is no doubt that the requirement to take all examination papers during a single examination session ensures that students are assessed on their grasp of the content of the whole syllabus. In linear syllabuses there is no *requirement* that students’ understanding of the connections between the different elements of the subject is assessed. However, in practice, the questions set usually encourage or allow students to make such connections, drawing upon their knowledge and understanding of the syllabus as a whole.

- 96** Applying the current GCE Code of Practice requirements on synoptic assessment to *all* syllabuses (linear and modular) would require all syllabuses formally to assess students' understanding of the connections between the different elements of the subject.
- 97** A more radical approach would be to require that an element in the scheme of assessment of all syllabuses must be a terminal synoptic assessment of students' grasp of the whole syllabus. In practice this would have far greater consequences for modular syllabuses than for linear ones.

Conclusions

- 98** A range of approaches to synoptic assessment is currently used in modular examinations. Although they all comply with the current wording in the GCE Code of Practice definition, it is likely that the different approaches place different types of demands on students. This aspect of the GCE Code of Practice should, therefore, be reviewed by SCAA/ACAC in consultation with the GCE examining boards.

Annex 2 Analyses of subject criteria

Table 1 Definitions of synoptic assessment: key words and phrases from the subject criteria

Key words and phrases	Subject
1 relationships, connections, inter-relatedness, links	
encourage students to see the relationship between different aspects of the subject understanding, critical analysis and evaluation of primary classical sources and of the links between them in their classical contexts	business studies classical civilisation
understanding of the connections between different elements of the subject make connections between different areas of computing represented in the specification to make and use connections between different skills and concepts, for example, by applying these connections to a particular situation or context	computing computing D&T
understanding of the connections between different elements of the subject understand the inter-relatedness of many economic issues, problems and institutions understanding of the connections between components of the specification as a whole understanding of the connections between the knowledge and understanding set out in the specification as a whole	economics economics English language English literature
ability to draw on their understanding of the connections between different aspects of the subject represented in the specification	geography
to integrate knowledge and skills from a range of disciplines in order to develop an appreciation of how they relate to one another and how each may contribute to the understanding of issues being studied	general studies
explicit assessment of understanding of the connections between the areas of study included in sections 3.2 and 3.4 above (sections 3.2 and 3.4 set out issues and skills)	govt. and politics
explicit assessment of understanding of the connections between the essential characteristics of historical study including at least two of the concepts and/or perspectives included in section 3.2 above (section 3.2 sets out knowledge, understanding and skills)	history
to draw together and make connections between this area of law and between legal structures and/or legal processes and/or legal issues in section 3.2 of the criteria (section 3.2 sets out knowledge, understanding and skills)	law
understanding of the connections between different elements of the subject	mathematics (new criteria) modern foreign languages
Knowledge, understanding and skills in Modern Foreign Languages are closely linked. Synoptic assessment covers both knowledge of the modern foreign language and skills in using it which have been developed in different parts of the A level course.	
making connections between different aspects of musical activities links between different approaches and perspectives in psychology, and/or psychological applications	music psychology
knowledge and understanding of the connections between elements of the area(s) of study selected	religious studies
explicit assessment of understanding of the connections between one or more substantive areas of Sociology, and the nature of sociological thought and methods of sociological enquiry using the higher level skills identified in Section 3.5 above (i.e. knowledge, understanding, skills and methods)	sociology
2 drawing together, integration, synthesis, bring together	
drawing together the knowledge, understanding and skills learned in different parts of the A level course	art
the explicit drawing together of knowledge, understanding and skills learned from different parts of the A level course	biology
the explicit integration of knowledge, understanding and skills learned in different parts of the A level course	business studies
the explicit drawing together of knowledge, understanding and skills learned in different parts of the A level course	chemistry physics
the explicit drawing together of skills, knowledge and understanding acquired in different parts of the A level course	D&T
the explicit synthesis of insights developed through the application of theoretical frameworks to the study of language, both spoken and written	English language
the explicit synthesis of insights gained from a close and detailed study of a range of texts important for the development of English Literature	English literature
to integrate knowledge and skills from a range of disciplines in order to develop an	general studies

<p>appreciation of how they relate to one another and how each may contribute to the understanding of issues being studied</p> <p>the explicit drawing together and application of knowledge, understanding and skills acquired and developed in different parts of the A level course</p> <p>the drawing together of knowledge, understanding and skills learned in different parts of the A level course</p> <p>the drawing together of knowledge and skills in order to demonstrate overall historical understanding</p> <p>to draw together and make connections between this area of law and between legal structures and/or legal processes and/or legal issues in section 3.2 of the criteria (section 3.2 sets out knowledge, understanding and skills)</p> <p>explicit drawing together of knowledge, understanding and skills learned in different parts of the A level</p> <p>to bring together their knowledge of principles and concepts of connections across areas of the subject</p> <p>applying knowledge and understanding of a number of areas to a particular situation and using specialist vocabulary where appropriate</p> <p>explicit drawing together of knowledge, understanding and skills learned in different elements of the A level course.</p> <p>the drawing together of knowledge, understanding and skills learned in different aspects of the course</p>	<p>general studies</p> <p>govt. and politics</p> <p>history</p> <p>law</p> <p>mathematics (new criteria)</p> <p>PE</p> <p>PE</p> <p>religious studies</p> <p>sociology</p>
3 application, using, applying	
<p>understanding and application of the principles included in the specification</p> <p>to make and use connections between different skills and concepts, for example, by applying these connections to a particular situation or context</p> <p>apply such (economic) concepts, theories and techniques in analysing economic issues and problems and in evaluating arguments and evidence</p> <p>the explicit synthesis of insights developed through the application of theoretical frameworks to the study of language, both spoken and written</p> <p>application of knowledge, understanding and skills acquired and developed in different parts of the A level course</p> <p>understanding of at least one branch of law using legal methods and reasoning to analyse legal material, to select appropriate legal rules and apply these in order to draw legal conclusions</p> <p>using and applying methods developed at earlier stages of study in solving problems</p> <p>demonstrate understanding and the ability to use advanced level modern foreign language skills in one or more tasks which require them to show knowledge of the society of culture of one or more of the countries or communities studied</p> <p>applying the musical skills, knowledge and understanding, described in both assessment objectives, to unfamiliar music</p> <p>applying knowledge and understanding of a number of areas to a particular situation and using specialist vocabulary where appropriate</p> <p>appreciation of the appropriateness of different methodologies in psychology to the investigation of issues and problems</p> <p>the skill of relating such connections to specified aspects of human experience</p> <p>explicit assessment of understanding of the connections between one or more substantive areas of Sociology, and the nature of sociological thought and methods of sociological enquiry using the higher level skills identified in Section 3.5 above (i.e. knowledge, understanding, skills and methods)</p>	<p>biology chemistry physics D&T</p> <p>economics</p> <p>English language</p> <p>general studies</p> <p>law</p> <p>mathematics (new criteria) modern foreign languages</p> <p>music</p> <p>PE</p> <p>psychology</p> <p>religious studies sociology</p>
4 principles, concepts, theories, theoretical frameworks, thought, approaches, perspectives	
<p>understanding and application of the principles included in the specification</p> <p>understand how certain economic concepts, theories and techniques may be relevant to a range of different contexts</p> <p>the explicit synthesis of insights developed through the application of theoretical frameworks to the study of language, both spoken and written</p> <p>explicit assessment of understanding of the connections between the essential characteristics of historical study including at least two of the concepts and/or perspectives included in section 3.2 above (section 3.2 sets out knowledge, understanding and skills)</p>	<p>biology chemistry physics economics</p> <p>English language</p> <p>history</p>

	to bring together their knowledge of principles and concepts of connections across areas of the subject	PE
	links between different approaches and perspectives in psychology, and/or psychological applications	psychology
	understanding and critical appreciation of the breadth of theoretical and methodological approaches to psychology	psychology
	explicit assessment of understanding of the connections between one or more substantive areas of Sociology, and the nature of sociological thought and methods of sociological enquiry using the higher level skills identified in Section 3.5 above (i.e. knowledge, understanding, skills and methods)	sociology
5	critical analysis, analysis, analytical understanding	
	understanding, critical analysis and evaluation of primary classical sources and of the links between them in their classical contexts	classical civilisation
	apply such (economic) concepts, theories and techniques in analysing economic issues and problems and in evaluating arguments and evidence	economics
	appropriate use of linguistic analyses	English language
	demonstrate knowledge, analytical understanding, personal response to and appreciation of the language and the style of prescribed literature	Latin and classical Greek
	understanding of at least one branch of law using legal methods and reasoning to analyse legal material	law
6	contexts, contextual factors	
	understanding, critical analysis and evaluation of primary classical sources and of the links between them in their classical contexts	classical civilisation
	understand how certain economic concepts, theories and techniques may be relevant to a range of different contexts	economics
	show evidence of the ways in which contextual factors and different interpretations of texts illuminate their own readings	English literature
7	illumination, personal response, perception	
	show evidence of the ways in which contextual factors and different interpretations of texts illuminate their own readings	English literature
	demonstrate knowledge, analytical understanding, personal response to and appreciation of the language and the style of prescribed literature	Latin and classical Greek
	the demonstration of aural perception	music
8	writing, expression, responses	
	the requirement to produce a range of writing	English language
	demonstrate their skills of interpretation and expression in accurate, well argued responses	English language
	ensure that candidates demonstrate their skills of interpretation and expression to give articulate, well-argued responses	English literature
9	interpretation	
	demonstrate their skill of interpretation and expression in accurate, well argued responses	English language
	ensure that candidates demonstrate their skills of interpretation and expression to give articulate, well-argued responses	English literature
10	evaluation	
	understanding, critical analysis and evaluation of primary classical sources and of the links between them in their classical contexts	classical civilisation
	apply such (economic) concepts, theories and techniques in analysing economic issues and problems and in evaluating arguments and evidence	economics

Table 2 Summary by subject area of Table 1

Subject area	Definitions of synoptic assessment									
	link	integrate	apply	theorise	analyse	contextualise	respond	write	interpret	evaluate
art		✓								
biology		✓	✓	✓						
bus stds	✓	✓								
chemistry		✓	✓	✓						
class civ	✓				✓	✓				✓
computing	✓									
D&T	✓	✓	✓							
economics	✓		✓	✓	✓	✓				✓
Eng lang	✓	✓	✓	✓	✓			✓	✓	
Eng lit	✓	✓				✓	✓	✓	✓	
gen stds	✓	✓	✓							
geography	✓									
govt & pol	✓	✓								
history	✓	✓		✓						
Latin & Gr					✓		✓			
law	✓	✓	✓		✓					
maths	✓	✓	✓							
MFL	✓		✓							
music	✓		✓				✓			
PE		✓	✓	✓						
physics		✓	✓	✓						
psych	✓		✓	✓						
relig stds	✓	✓	✓							
sociology	✓	✓	✓	✓						

Table 3 Applications of synoptic assessment: key words and phrases from the subject criteria

Key words and phrases	Subject
1 applying, using, bring to bear	
bringing together and making connections between the areas of knowledge and the range of skills described and learned throughout the course and applying this make and use connections between different areas of biology applying knowledge of a number of areas to a particular situation or context or by using knowledge and understanding of principles and concepts in planning experimental work and in the analysis and evaluation of data	art biology biology
use ideas and skills which permeate biology decision making/problem solving exercises, requiring candidates to draw together knowledge, understanding and skills learned throughout the course to tackle a decision, problem or issue that is new to them	biology business studies
a case study within which specific questions require candidates to apply knowledge, understanding and skills learned throughout the course	business studies
to apply knowledge, understanding and skills learned in other parts of the course applying knowledge and understanding of principles and concepts of chemistry in planning experimental work and in the analysis and evaluation of data	business studies chemistry
opportunities for candidates to use, in contexts which may be new to them, skills and ideas that permeate chemistry	chemistry
applying knowledge and understanding of the methods of organising and structuring information when designing a system	computing
draw together and apply skills, knowledge and understanding draw together skills, knowledge and understanding learned in a specific materials area, and then apply them in another context	D&T D&T
use effectively the economist's 'tool kit' of concepts, theories and techniques which they have built up during their course of study	economics
using a variety of documentary source material using evidence	English language English language
bring to bear their knowledge gained from previous study draw together and apply relevant knowledge, understanding and skills	English literature geography
the use of methods from the AS core content . . . and/or methods from earlier stages of the same aspect of mathematics	mathematics (new criteria)
the use and selection of resources, structural and expressive features and contextual influences	music
apply knowledge, understanding and skills learned in other units make and use connections between different areas of physics	PE physics physics
applying knowledge of a number of areas to a particular situation or context relate their understanding of the ideas and skills which permeate physics to empirical data and information in contexts which may be new to them	physics
design and conduct some empirical work use their knowledge and understanding of a range of psychological applications and concepts	psychology psychology
draw together and apply knowledge, understanding and skills learned in other units sociological theories and methods are applied to an area of interest	religious studies sociology
2 connections, draw together, integrate, links	
bringing together and making connections between the areas of knowledge and the range of skills described and learned throughout the course	art
make and use connections between different areas of biology decision making/problem solving exercises, requiring candidates to draw together knowledge, understanding and skills learned throughout the course	biology business studies
require candidates to make connections between different areas of chemistry designing and making assignments that require candidates to draw together skills, knowledge and understanding learned throughout the course	chemistry D&T
draw together and apply skills, knowledge and understanding learned in different parts of the A level course, for example, when planning work or evaluating products	D&T
draw together skills, knowledge and understanding learned in a specific materials area, and then apply them in another context	D&T
draw together knowledge, understanding and skills acquired and developed throughout the course and demonstrate transfer of skills	general studies
draw together relevant knowledge, understanding and skills draw together and apply relevant knowledge, understanding and skills	geography geography

	making connections between different parts of the course to demonstrate an in-depth understanding of aspects of the course	govt. and politics
	drawing together knowledge, understanding and skills from different parts of the course to demonstrate an in-depth understanding of aspects of the course	govt. and politics
	an understanding of connections between parts of the course	govt. and politics
	links between a range of historical perspectives (political, cultural, social etc)	history
	making connections with other elements of the knowledge and understanding in the specification	law
	draw together knowledge, understanding and skills learned throughout the course	PE
	make and use connections between different areas of physics	physics
	consider the connections and contrasts between a number of different approaches	psychology
	draw together knowledge, understanding and skills learned throughout the course	religious studies
	draw together and apply knowledge, understanding and skills learned in other units	religious studies
	understanding of the links between sociological theories and methods and substantive topics studied during the course	sociology
	making connections between different parts of the course and involving questions	sociology
	assessing understanding of these connections	
3	new contexts, issues, problems	
	the analysis and evaluation of empirical data and other information in contexts which may be new to them	biology
	tackle a decision, problem or issue that is new to them	business studies
	opportunities for candidates to use, in contexts which may be new to them, skills and ideas that permeate chemistry	chemistry
	tackle a design problem that is new to them	D&T
	draw together skills, knowledge and understanding learned in a specific materials area, and then apply them in another context	D&T
	to inform their interpretation of episodes from a play not previously studied	English literature
	tackle a decision, problem or issue that is new to them	geography
	relating music, previously unheard, to styles, genres and traditions experienced in a range of different activities	music
	tackle a decision, problem or issue that is new to them	PE
	relate their understanding of the ideas and skills which permeate physics to empirical data and information in contexts which may be new to them	physics
	suggest how a novel problem might be explained or dealt with	psychology
	tackle an issue that is new to them	religious studies
4	evaluation	
	analysis and evaluation of data	biology
	the analysis and evaluation of empirical data and other information	biology
	analysis and evaluation of data	chemistry
	a study and evaluation of a Homeric epic poem or Roman town planning in their historical, religious, cultural and social contexts	classical civilisation
	demonstrating the skills associated with analysis, design, implementation and evaluation of computer-based systems	computing
	draw together and apply skills, knowledge and understanding learned in different parts of the A level course, for example, when planning work or evaluating products	D&T
	to analyse and evaluate evidence	English language
	a task requiring the analysis, evaluation and comparison of two texts	English literature
	analysis and evaluating data	physics
	evaluating the relative merits of qualitative and quantitative methods, and consider the behavioural, cognitive, environmental and effective (affective?) influences	psychology
5	selecting, draw on	
	selecting and presenting work for examination which demonstrates their strengths across the areas of knowledge and the range of skills described	art
	draw on their knowledge and understanding of information, software, hardware, communications, applications and effects	computing
	draw on . . . their knowledge of hardware and communications, software and information when discussing the applications and effects of computing, for example, drawing on their understanding of the characteristics of networks when discussing the economic, social, legal, ethical and other consequences of computing	computing
	drawing on candidates' study of other texts and materials	English literature

	draw on knowledge, understanding and skills acquired and developed during the course	general studies
	drawing in appropriate elements of the knowledge and understanding in the specification	law
	the use and selection of resources, structural and expressive features and contextual influences	music
	consider a range of available methods giving a rationale for their own selection	psychology
	draw on a range of theoretical approaches	psychology
6	analysis	
	analysis and evaluation of data	biology
	the analysis and evaluation of empirical data and other information	biology
	analysis and evaluation of data	chemistry
	demonstrating the skills associated with analysis, design, implementation and evaluation of computer-based systems	computing
	to analyse and evaluate evidence	English language
	to analyse and compare critically	English literature
	a task requiring the analysis, evaluation and comparison of two texts	physics
	analysis and evaluating data	
7	contextualisation	
	a study and evaluation of a Homeric epic poem or Roman town planning in their historical, religious, cultural and social contexts	classical civilisation
	historical, religious, cultural and social contexts	Latin and classical Greek
	making judgements based on the identification of musical characteristics which indicate a particular cultural context	music
8	compare critically	
	to analyse and compare critically	English language
	a task requiring the analysis, evaluation and comparison of two texts	English literature
	direct reference to and comparison between at least two writers	English literature
9	interpretation	
	to inform their interpretation of episodes from a play not previously studied	English literature
	interpretation of data	law
10	ability to think like a subject specialist	
	ability to think as economists	economics
11	transfer of skills	
	demonstrate transfer of skills	general studies

Table 4 Summary by subject area of Table 3

Subject area	Applications of synoptic assessment									
	apply	link	new context	evaluate	draw on	analyse	contextualise	compare	interpret	other
art	✓	✓			✓					
biology	✓	✓	✓	✓		✓				
bus stds	✓	✓	✓							
chemistry	✓	✓	✓	✓		✓				
class civ				✓			✓			
computing	✓			✓	✓	✓				
D&T	✓	✓	✓	✓						
economics	✓									✓
Eng lang	✓			✓		✓		✓		
Eng lit	✓		✓	✓	✓	✓		✓	✓	
gen stds		✓			✓					✓
geography	✓	✓	✓							
govt & pol		✓								
history		✓								
Latin & Gr							✓			
law		✓			✓				✓	
maths	✓									
MFL										
music	✓		✓		✓		✓			
PE	✓	✓	✓							
physics	✓	✓	✓	✓		✓				
psych	✓	✓	✓	✓	✓					
relig stds	✓	✓	✓							
sociology	✓	✓								

Table 5 Applications of synoptic assessment: assessment methods suggested in the subject criteria

	Methods of assessment	Subject
1	<p>essay questions</p> <p>essay title . . . providing an opportunity for an extended piece of writing analytical essay writing demonstrate knowledge of an aspect of the society in writing a piece of written work essay title</p>	<p>economics general studies history govt and politics Latin and Greek MFL psychology sociology</p>
2	<p>sustained lines of enquiry research/investigate an issue or problem investigating a valid historical issue information gathering and analysis rigorous legal research a piece of empirical work a piece of sociological research</p>	<p>art general studies history law law psychology sociology</p>
3	<p>problem solving exercises</p> <p>legal problem solving unit using a scenario unit of assessment which covers . . . issues or problems suggest how a novel problem might be explained or dealt with</p>	<p>business studies geography law PE psychology</p>
4	<p>data analysis and evaluation quantitative work relating empirical data to knowledge and understanding interpretation of data</p>	<p>biology physics chemistry chemistry law</p>
5	<p>issues evaluation exercises an evaluation evaluation exercises consider a piece of psychological research and critique it</p>	<p>geography history PE psychology</p>
6	<p>responding to a stimulus or issue a stimulus question based on a prose passage, or two or more shorter prose passages and/or numerical data respond in speech to a written stimulus a stimulus question based on at least one prose passage and/or numerical data</p>	<p>art govt and politics MFL sociology</p>
7	<p>case study</p> <p>extended case study</p>	<p>business studies law economics</p>
8	<p>experimental work planning experimental work</p>	<p>biology chemistry physics</p>
9	<p>responding to a design brief or problem tackle a design problem</p>	<p>art D&T</p>
10	<p>decision making exercises</p>	<p>business studies geography</p>

		Synoptic assessment
11	responding to debates consider a contemporary debate	English language psychology
12	preparing a business plan draw up a proposal	business studies English language
13	personal study, individual assignment study a topic	history MFL
14	analytical essay analytical study information gathering and analysis	Latin and Greek Latin and Greek law
15	responding to the work of artist(s), craftsperson(s) or designer(s)	art
16	responding to a task which specifies an image, object or outcome to be achieved	art
17	writing chemical equations	chemistry
18	design and making assignments	D&T
19	produce a new text	English language
20	pre-released materials	English language
21	preparing an informative article	English language
22	translation	Latin and Greek
23	comprehension	Latin and Greek
24	literary appreciation	Latin and Greek
25	linguistic analysis	Latin and Greek
26	respond in speech or writing	MFL
27	study a topic through both written and recorded documents	MFL
28	reading at sight and performing/directing music	music
29	creating a composition within a clearly defined brief	music

Annex 3 Extracts from specifications, question papers and mark schemes

Extract from mark scheme for AQA psychology A, unit 5, June 2002

Unit 5 rewards the demonstration of synopticity.

In this context, synopticity can be defined as 'affording a general view of the whole'.

It is the addressing of psychology-wide matters and concerns.

Synopticity may be embedded in the question and/or may be something that the candidate adds.

Either way the intention is to provide a broad view.

Possible routes identified in the specification are:

- Demonstrating different explanations or perspectives.
- Demonstrating different methods used.
- Relating overarching issues and debates.
- Links with other areas of the specification.

It is quite acceptable (i.e. will permit access to the full range of marks) for candidates to offer just one of these categories of approaches, or to offer several of them.

Furthermore, synopticity may be demonstrated either within a particular area (i.e., covering a large number of theoretical and methodological components, issues & debates and making links between these) or across a number of different areas (in terms of their theories, methodologies, issues & debates and making links between these). The former can be thought of as 'vertical' synopticity, the latter as 'horizontal' synopticity.

For the Approaches questions (questions 8 and 9) the possibilities for demonstration of synopticity given above are supplemented with the following approaches

- Biological/medical, behavioural, psychodynamic and cognitive approaches
- Other psychological approaches, not named in the specification, such as social constructionism, humanistic psychology, evolutionary psychology.
- Those approaches deriving from other, related disciplines such as sociology, biology and philosophy.

Extract from mark scheme for AQA business studies, unit 6, June 2002

Levels of response marking requires examiners to follow the logic of a candidate's answer. A concept which would receive credit only for knowledge in one context could become a means of analysis in another. For instance, in the question: "Discuss the BGD Company's marketing strategy", a candidate who writes: "approaches to a strategy include SWOT and the Boston Matrix" is showing knowledge. A brief, accurate explanation of the Matrix shows understanding, whereas a candidate who uses the Matrix to examine the BGD Company's case is showing the skill of analysis. **Please note that there are other ways to show analysis.**

What then of evaluation? This is the hardest skill to define because judgement can only be shown in context - and that context is not only the one set in the assessment unit, but also by the candidate's own answer. Evaluation is **not** shown by drilled phrases or approaches such as: "On the other hand ..." or "Business operates in an ever-changing ...". It is shown through the weighting of the candidate's arguments, the logic (and justification) of his/her conclusions.