



**General Certificate of Education (A-level)
January 2011**

Critical Thinking

CRIT2

(Specification 2770)

Unit 2: Information, Inference and Explanation.

Report on the Examination

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Set and published by the Assessment and Qualifications Alliance.

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CRIT2 Information, Inference, Explanation

General comments from the Chief Examiner

Generally speaking both the AS question-papers discriminated well. As in previous sessions, there was a very wide range of ability evident in the scripts, with only the most able candidates gaining A and good-B grades. It is evident from the performance that Critical Thinking remains a difficult subject, and the AQA specification is no exception. That is as it should be, since its purpose is to assess candidates' ability to think and reason independently, using skills that go beyond the recalling of facts and demonstrating of understanding.

There was once again clear evidence of some excellent teaching and thorough preparation in many centres, not just of the most able candidates but of many who were, at best, of average ability. However, there were also continuing signs of insufficient time having been spent exercising critical skill to the level needed for grades above the basic level. I therefore feel justified in repeating some of the comments made after the 2010 award.

The recommended timetable provision for the AQA award is a *minimum* of 2 hours per week. Any less and students are insufficiently immersed in the discipline and all but the most naturally gifted will lack confidence in the skills, and fluency in the associated language. Coupled with this is a perception that because Critical Thinking has less 'content' than other AS-/A-Levels, the syllabus can be covered in significantly fewer hours. This is a misconception: there is a body of knowledge and understanding that is essential to success, and this is laid out and explained in the Specification. If the concepts and related terminology are not well-understood even the most naturally able candidates will struggle to gain the highest marks in the exam. The concepts themselves are not difficult and the terminology is neither technical nor extensive; but much of it will be new to candidates at the start of the course, and some of it quite abstract. Moreover it is not just knowledge of the concepts or of what terms mean that is tested in Critical Thinking but their *application*, and it is this which takes time and practice to bring to the required level.

Finally, there is one vital ingredient that is needed for success in the subject, and that is to enjoy it. Students who have time to debate and discuss issues of interest and importance will exercise their critical skills in ways that cannot be achieved on a limited time allocation and speed-teaching of the bare bones of the syllabus. A more generous allocation of time for Critical Thinking has benefits for other subjects as well, since many of the traditional specifications now require students to demonstrate critical skills in their responses. It has been shown¹ that on average students who take critical thinking perform better – by a small but measurable margin – than others across the 16+ curriculum. But given that Critical Thinking is an exercise in higher-order reasoning, that is not a surprising statistic.

¹ See presentation by Beth Black to the British Academy, February 2010

Introduction: The examination as a whole

General Comments from the Principal Examiner

The two factors which would have most improved candidates' performance on this paper were careful attention to the precise meaning of terms (e.g. single-parent and unmarried parent) and more explicit evaluation of inferences from the information in the source documents. Politicians and the media are paying a lot of attention to welfare reform currently, so the issues here are topical and we were pleased to note that no candidates reported (to us) finding the paper irrelevant.

Section A

Question 1

This was a straightforward question, which most candidates completed successfully.

Questions 2(a) to 2(c)

The vast majority of candidates recognised what was required to answer this style of question and did so frequently with success. The best answers were concise and gave a clear judgement on the reliability of the inference, well justified by reference to information in the text.

Some weak answers to these questions attempted to evaluate the credibility of the source of the data in the text, rather than assessing the safety of the inference itself. Such evaluations of credibility were usually poorly justified. Other weak answers suggested that the candidates concerned thought that they were being asked to identify a claim in the text.

For Question 2(b), candidates' results were largely polarised, depending on whether or not they could see how to calculate the answer. Those who included a correct calculation usually scored full marks. The application of mathematical skills should continue to be practiced.

For Question 2(c), many answers focused on the fact that the text reported an estimate, decreasing the reliability of the inference. However, the best answers showed that the candidate had spotted that even if the estimate is accurate, it would still not imply a 50% rise in expenditure (for a wide variety of reasons).

A number of weaker answers misunderstood

- (a) the conditional statement to be a prediction about what will happen, or
- (b) the meaning of an increase in risk (e.g. by supposing that all children in the category would suffer worse health).

Question 3(a)

This was frequently answered well. A significant number of candidates mistakenly thought that ‘rewards’ only referred to income from tax credits.

The fact that, when *on the minimum wage*, two parent families had to work many more hours than a single-parent to earn the same rewards, did have significance for the next question because it makes clear that Field’s claim is an over-generalisation, taken literally. The qualification was rarely noticed.

Question 3(b)

Candidates often found this a challenging question. Answers in terms of over-generalisation, exaggeration (even a slippery slope) or use of persuasive language for rhetorical effect were acceptable. A fair number of answers seemed to pick one of Field’s claims at random, rather than focusing on the claim about two-parent families dying out.

Question 4(a)

Candidates were usually successful here, unless they described the effects of the current economic crisis as one of the factors.

Question 4(b)

A large number of candidates did not understand what an *implicit* assumption is, but instead quoted from the text. Candidates should ensure that they can identify implicit assumptions competently. While this is a challenging skill for everyone, it is vital.

An answer in terms of the cause-correlation fallacy was credited as an implicit judgement that the assumption was unfair.

Question 5

This proved to be the most difficult question of the paper, despite the fact that the reasoning it required was not challenging. However, it did require careful reading of the text.

A surprising number of candidates concentrated on whether the number concerned could be said to be large or not. Occasionally, this was credited, if supported by genuine critical discussion.

Question 6

On this question, many candidates equated divorced people with single parents, which made scoring more than one mark very difficult. Some candidates equated the terms explicitly and a few attempted to justify equating them, more or less convincingly.

A lot of answers spent too long describing the shape of the graph.

Those who argued that a little can be inferred about growth of single-parent families frequently failed to say why.

Question 7

Many answers to Question 7 showed a lot of effort spent comparing the shape of the graphs, while apparently forgetting that a causal link demands more than correlation. Few noticed the difference in the scale of the graphs. In any case, the factors that were potentially correlated were not what Field claimed were causally linked. Again, attention to the difference between divorce and single-parenthood among the young was needed, although there were plenty of other differences between the graphs to weaken belief in the support for Field's claim.

Question 8(a) and 8(b)

Answers to Question 8(a) were, on average, more successful than those to Question 8(b) because candidates did not always distinguish unmarried parents from single-parents in the latter.

For this type of question, candidates should be encouraged to answer in terms of what is likely to be the case on average for a group and explain why, rather than to make generalisations (especially if unsubstantiated).

For Question 8(b), it was possible to gain credit for suggesting that unmarried parents were more likely to be single-parents and therefore have less time to educate their children, resulting in lower average attainment in maths. However, too many answers failed to make clear that single-parents are just one sub-set of unmarried parents.

Question 9

This was intended to be a challenging question and was found to be so by most candidates. However, it also offered candidates great freedom in how to assess the support for the claim.

The most common failing in answers was simply to not evaluate the case at all. Many answers simply attempted to summarise it and were limited to two marks as a result (rather than zero). It would help candidates to practice giving a judgement at the beginning of their answer when asked to assess, followed by the justification for it.

Furthermore, candidates were often not clear enough about what the claim at issue was (i.e. that social research cannot tell us what makes a happy family). Too much attention was paid to the British Social Attitudes Survey. Finally, even when agreement or disagreement with the idea that happiness cannot be measured was clear, it was rare for reasons to be given.

A small number of answers showed admirable comprehension of the case as a whole and gave a clear account of why the reasons were convincing or how the use of evidence from social research in the latter half of the article undermined the initial implied claim. They received full marks.

Section B

Question 10

As usual, there were a number of pleasing answers to this question, which scored in the mid-to high-twenties. These tended to be carefully argued, detailed, longer than average, articulate and they gave careful consideration to exactly how far disagreement or agreement with the statement could be supported, in the light of the argument given, the information in the source documents and counter-arguments.

Many answers were short and restricted themselves to consideration of the information in the appendix, which frequently resulted in rather simplistic one-sided arguments which avoided evaluating inferences from the information or the credibility of the sources. Virtually all candidates ignored the points made in Document E, which is a shame because it contained both relevant information and claims about motives which could be linked to moral principles. We hope that attention will be paid to it, if the paper is used in teaching.

It was disappointing that hardly any answers considered the meaning of government involvement explicitly (or for that matter where the boundaries of family life fall). It is unlikely that candidates will feel confident in addressing the meaning of the terms of the question unless they practice doing so but it is fruitful strategy because it reveals the assumptions on which arguments are based and encourages suppositional reasoning. Candidates would do well to learn phrases such as ‘Supposing that such and such is the case...’ or ‘If x is true, it implies that...’.

As in previous sessions, candidates struggled to make explicit the principles on which arguments rest. Privacy, which was in the question statement, was a minor exception. While discussion of the grounds for principles or explicit resolution of conflicts of principle will be beyond most candidates, credit will be given for making those principles upon which an argument depends explicit.

Finally, the best route for most candidates to pick up significantly higher marks in CRIT2 Section B would be to concentrate on making and evaluating inferences from the information provided to support their case or undermine counter-claims. Addressing the credibility of sources would also work here. While it is expected that answers do more than repeat responses to earlier questions, candidates should get a good understanding of the strengths and weaknesses of the information in the source documents, with respect to the question statement, from answering Section A. That understanding should inform both the selection and evaluation of evidence in answering Section B.

It may help candidates to adopt the attitude that part of what is required in Section B is to show *why* the information in the source documents falls short of justifying any answer to the question in Section B with *certainty*. It is then the candidate’s task to adopt a more appropriate standard by which to judge (see 3.1.6a in the specification). In this case, it could have been shown that tax credits cannot be proven to be a causal explanation for the growth of single –parent families, given the information in the documents. Nevertheless they are part of a plausible explanation for the growth among a small group of poorer people (see 3.2.4 and 3.2.4a).

It is hoped that, by adopting such a strategy, candidates who are less articulate and less able to write detailed and lengthy answers, will nevertheless pick up considerably in excess of 50% on this question, thanks to their demonstration of their critical reasoning skills. It is also a way to pick up more marks for a relatively simple case for or against the question statement (further marks coming from evaluating the degree to which information supports the reasons). This advice is not intended to indicate that there is only one route to high marks because we hope to see a diverse range of answers. However, to achieve high marks, critical reasoning skills and terms will most likely be highly apparent in their application to information, inference and explanation.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results statistics](#) page of the AQA Website.