2023 VCE Extended Investigation Critical Thinking Test report

General comments

The Critical Thinking Test is designed to test students’ abilities within a time frame that should allow all students to engage in the type of critical thinking required. The 10 questions are designed to test a variety of aspects of critical thinking, and students should establish what is required for each question by reading each question as closely as possible during the allocated reading time.

In the 2023 Critical Thinking Test, the majority of student responses demonstrated an awareness of what was required to score at a reasonable level throughout the test. Students offered a range of answers and took different approaches within their responses to Questions 3–10. The quality of reasoning or explanation they offered, whether explicit or implicit, was judged on its individual merits – student answers within this report have been deliberately selected to demonstrate the range and type of student responses that were given.

It is important to stress that there is no one prescribed way to demonstrate effective critical thinking, and students are rewarded for finding suitable and appropriate ways to evaluate the issues under discussion. The test has been designed to allow students to demonstrate the quality of their thinking, explanations and justification. It is the demonstration of clear and precise thinking that is assessed, not the quality of writing or accuracy of keyboard skills.

When students use terms associated with research, such as ‘subjective’, ‘objective’, ‘valid’, ‘reliable’ and ‘variables’, they must ensure that they are using them correctly, appropriately and precisely. Responses that explain and justify a viewpoint will score more highly than those that offer formulaic and, at times, likely pre-learnt comments. Similarly, students must avoid commenting on rhetorical effectiveness and persuasive language use, instead of focusing on the quality of argumentation. Several answers in 2023 talked about things such as ‘appeal to the hip pocket’ when the focus of the question in the context of the Critical Thinking Test is always to examine the argument and consider how sound and comprehensive it is.

Most of the issues presented in the test allow for at least two possible sides for argument. Therefore, students are encouraged to practise critiquing and evaluating different points of view on debatable issues in preparation for the test and throughout their Extended Investigation course.

Specific information

Note: Student responses reproduced in this report have not been corrected for grammar, spelling or factual information.

This report provides sample answers, or an indication of what answers may have been included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding, resulting in a total of more or less than 100 per cent.

Question 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | Average |
| % | 14 | 32 | 27 | 26 | 1.7 |

This drag-and-drop item required students to see how statements relate to each other in terms of a proposition, and how three given statements can be best aligned in opposition to statements provided in the table. Students were asked to consider the pros and cons of a four-day working week becoming the standard employment arrangement in Australia, then drag the three statements into one of six empty cells in the table. When evaluating each statement, students needed to identify whether it supports or opposes the proposition, and then try to locate a matching argument in the table – essentially one that deals with the same idea. Using this strategy, students should also be able to evaluate the statements opposite the blank cells and ensure they do not offer a position they have not fully considered.

The grey-shaded boxes in the following table indicate where the statements needed to be placed for marks to be awarded. In Row 1, the idea of value from employees was considered in relation to the notion of a business’s prosperity; in Row 4, the focus of discussion was that of the consequences of the same workload being spread over four or five days; in Row 5, the evidence included in the statement was used to contest the claim that the likely impact of a four-day working week was unknown.

|  |  |
| --- | --- |
| For | Against |
| Business productivity will improve because people will work more effectively. | Employers will get less value for the wages they pay their employees. |
|  | Working a shorter week does not always improve employee wellbeing, as international experience has shown. |
| Employees who work fewer hours experience less stress and fatigue. |  |
| Reducing the number of people who travel to work each day is good for the environment. | Companies may have to hire extra staff for days when there are too few employees in the workplace. |
| In the world’s most productive countries, a four-day working week is common. | Reducing the working week is risky because the likely economic impact is unknown. |
|  | People take pride in their work and need time to do it thoroughly. |

Many students in 2023 seemed to find this task challenging. It is important for students to be aware that there may not be an obvious point of opposition within the table and that they should consider each statement as carefully as possible before making their final selection.

Question 2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | 4 | Average |
| % | 8 | 31 | 45 | 14 | 1 | 1.8 |

This question shows a diagram representing a line of reasoning about encouraging more medical graduates to relocate to regional and rural locations. Students were given definitions of four terms and were asked to drag four of six statements into the appropriate space for each of those terms. Two of the statements did not appropriately fit any of the spaces. One mark was awarded for each correct response:

|  |  |
| --- | --- |
| Elaboration | It is unacceptable that some Victorians have little or no access to basic health care services. |
| Evidence | Similar schemes have operated successfully in the past. |
| Opposing argument | Working conditions, relationships and work-life balance are the most important factors in choosing a job. |
| Counterargument | Medical training is expensive and young doctors are keen to repay their student loans. |

The nuances of this particular line of reasoning were subtle and challenging for students. While most students correctly identified the element of evidence – that the successful operation of similar past schemes supported the proposition – identifying the elaboration to the argument was more challenging. It is worth considering how the evidence already selected could be viewed as a way in to understanding the argument as a whole and thus understanding how each element within the argument can connect. In this instance, the elaboration considered the consequences of the argument as justifiable by the evidence provided.

The difference between an elaboration and a counterargument or evidence is often the most difficult distinction to be made because these elements are always in favour of the proposition and argument. The statements about working conditions, relationships and work-life balance challenged both the proposition and the argument, thus making it the opposing argument as distinct from the counterargument, which deliberately focused on the financial aspects highlighted within the opposing argument.

The following statements did not fit into the line of reasoning:

* Statement 2 – Regional and rural communities are good places to live and have a lot to offer young people.
* Statement 6 – In the metropolitan area, there are many more opportunities for graduates to gain experience and to specialise.

While the two statements identified possible attractions of regional and rural areas and of cities, they did not offer any elaboration on why a shortage of medical staff is important, nor any evidence that financial incentives would be effective in addressing it. Neither offered an opposing argument, nor a counter to any likely argument against the idea of offering incentives.

Question 3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks  | 0 | 1 | 2 | 3 | Average |
| % | 3 | 36 | 42 | 20 | 1.8 |

Question 3 used some common terminology with Question 2 to encourage students to see how the line of reasoning presented in the previous question could help them to construct their own opposing argument within Question 3. In 2023, students were asked to provide an opposing argument to both the proposition and argument that people who give up their pets to animal shelters should be prohibited from pet ownership in the future as this would encourage pet owners to be more responsible. Responses needed to explain, explicitly or within their argument, how their opposing argument was effective in addressing both the proposition and the argument, focusing on the logic of the argument rather than commenting on the use of persuasive devices.

Responses which merely contradicted the proposition or the argument without considering both aspects could not achieve full marks. Similarly, responses that simply offered a contradiction without developing it in a meaningful way were unlikely to receive more than one mark. However, many students were able to produce answers that successfully addressed both the proposition and the argument. A wide variety of arguments and explanations were offered, all of which were assessed with regard to how well the student was able to do this with clarity and precision. Students were also assessed on the quality of reasoning they used in explaining how their opposing argument was effective.

The following is one example of a high-scoring response. The student explicitly addresses both the proposition and the argument while implicitly demonstrating the effectiveness of their argument.

Prohibiting people who give up their pets to animal shelters would not encourage pet owners to be more responsible, and instead will unfairly punish animals by giving them poorer qualities of life. The proposition does not consider any of the valid reasons why people may choose to give up their animals to animal shelters (for example, moving overseas, no longer being financially able to care for their pet). Additionally, good people who may not be able to care for their pet in the current moment may be afraid of giving up their pet to an animal shelter because they will be blacklisted, and so they will instead keep the pet or get rid of it in another way (e.g. selling it online). The ban is unlikely to prevent owners giving up their animals if they do not want them, as there are many other, easy and more irresponsible ways, such as dumping animals and leaving them to fend for themselves, to give up their animals. Giving up an animal you know you cannot care for is a responsible action. On the other hand, banning future pet ownership if animals are given up will only encourage irresponsible action, as well as be damaging to animal lives who could have otherwise been safely housed at animal shelters and re-adopted.

'The following response is an example of a commonly seen confusion in reasoning. Many students clearly understood the proposition but not the presented argument, as its position on the responsibility of pet ownership is inconsistent. Thus, this type of response was a mid-range response. In this specific example, the student comments more explicitly on the creation of this argument rather than extensively developing their own argument.

People who give up their pets should be encouraged to be educated on proper ownership so when the time is right they can properly care for their pet. Oftentimes those who surrender their pets have an inability to properly care for them, thus the surrendering of their pets is actually the most responsible thing they can do, banning them from ownership discourages proper education in the future.

The proposition that prohibiting those who have surrendered their pets to shelters from future pet ownership to encourage responsibility does not consider that surrendering is actually a highly responsible action in a lot of cases, this opposing argument draws on the key idea of responsibility during pet ownership to learn proper care, as education is more important than restriction.

Criteria for assessing arguments

The marks for Questions 4, 5, 9 and 10 are allocated on the understanding of an issue, the comprehensiveness of the response and the validity of the reasoning and argument presented.

In assessing arguments there is always a premium on explaining why a judgment is made, but it is acknowledged that such explanations can be difficult, particularly under test conditions. In responses to the 2023 test, the reasoning and explanations offered by students were sometimes implicit rather than fully formed; however, if the arguments presented were logical and coherent, such implied reasoning was rewarded.

Question 4

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Average |
| % | 2 | 8 | 18 | 30 | 26 | 11 | 5 | 3.2 |

Students were presented with a for/against table for the proposition that private companies should be encouraged to develop space exploration projects. Individual statements on each side of the table were labelled, and students were asked to explain which of these statements was most convincing and why, in terms of its ideas and reasoning, not in its rhetorical appeal to others or in its use of persuasive language.

A successful response could have been made with reference to any one of the individual arguments provided – there was no ‘correct’ answer, although some statements may have been harder to defend than others. Consequently, students were able to take a range of different approaches in developing responses, which were assessed on the clarity of their understanding of the issue, the range and substance of the ideas that they used in explanation or support of their response and the quality and coherence of reasoning that they used in explaining the strengths of their chosen argument.

Responses that scored highly demonstrated a clear understanding of the issue and drew on a range of substantial ideas and coherent reasoning in their explanations to produce a comprehensive evaluative response, as in the following example:

I find that the most convincing proposition is F, as it urges the vital role in which the United Nations has in maintaining an equilibrium for the betterment of the collective nations on this planet as a whole.

Through the emphasis of regulating space exploration, this proposition highlights a crucial point regarding the safekeeping of the unknown, as if privatised organisations were to command space exploration projects theirselves, there lies a possibility of motives and efforts made by initiates employed via that United Nations, arousing a conflict of interests, as private corporations do not necessarily have to abide by what the collective is installing.

Also, F pushes the concern of transparency to the fore, as private businesses are able to conceal information and exploration research from the general public, thus again, betraying the interests of the public and acting against the transparency in which we as people, place faith into public corporations. However, by enforcing strict regulations that are actively enforced by international entities, government bodies could effectively mitigate the arise of such, by establishing a consensus and harmony between private businesses and the United Nations.

And while, it is argued in proposition D that true exploration of space may be inhibited due to the regulations installed by the government, regulation is created to maintain the safety of our people -- and thus, while regulation may be perceived as 'blocking progression', it is crucial in maintaining the safeguarding of humans, as it protects and codifies spaces in which they are easily exploitable.

Thus, the proposition that international agencies should impose regulations to an extent stands as the most convincing argument, as it lends credence to private corporations, but reinforces adherence to national law, which is made to protect and benefit the collective.

Some students were able to consider their chosen argument in the context of other presented arguments. This can be seen in this high-scoring example where the reasons for selecting Argument H are considered not only for its own inherent merits but also in direct comparison with other arguments.

Argument H is strongest as it considers the impending, real, and tangible issues facing humans on Earth, while other arguments brush over this fact for the prospect of new scientific discoveries. Issues on Earth such as climate change, financial inflation, as well as waste and pollution should be considered and prioritised above space exploration projects. If all global citizens, including big, and enterprising businesses put their energy into reducing these issues and preserving the sustainability of our planet, many of the problems affecting people right now, could be addressed. Following the resolution of major issues and further innovation in sustainable fields, topics such as space exploration for companies can be reconsidered, however it is irresponsible to discuss such ideas now when there are immediate problems on Earth.

Argument B directly opposes Argument H in saying that Earth needs access to new supplies of scarce resources. However, this argument lacks the specificity needed to have an impact on this debate. Some resources on Earth are, yes, endangered, but majority of this is a result of human actions, and majority can be reversed or tackled with human action. Issues such as deforestation for example, can be counteracted if companies and governments put more energy into replanting them. Additionally, as we know so little about space, it is unlikely that we would be able to access and utilise 'scarce resources' for decades, by which time many of the issues on Earth would be exacerbated. Therefore, as Argument H suggests, it is important that creative and enterprising companies get involved to address these problems now.

Some may say that Argument C is strongest as it states that letting businesses get involved can lead to better outcomes in space projects. However, if this is the case, it provides all the more reason to put that energy towards issues on Earth. At the end of the day, there is not only the tangible benefit of addressing issues affecting global citizens, but there is more support and perceived benefit among the general community. People are more likely to support a move towards addressing climate change issues, than an exploration of a space environment, highlighting why Argument H is the fundamentally strongest, and the argument most likely to resonate with people.

Question 5

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Average |
| % | 2 | 5 | 15 | 31 | 27 | 14 | 6 | 3.4 |

In this question, students were again presented with a for/against table but for a significantly different task from the one they were asked to complete in the previous question. Some students, however, did not seem to notice this difference, and their approach to Question 5 would have been more appropriate for Question 4. Students were asked to consider arguments for and against the proposition that owners of housing properties that are kept vacant should have to pay extra taxes. Having considered the arguments within the table, they were asked to offer their own position on the issue.

Some students chose to incorporate many of the ideas presented to them within their own arguments – an approach that is perfectly acceptable, although some students merely summarised the presented arguments, keeping them in the same order as they appeared in the for/against table. Such an approach is very limiting and, even if students could not conceive of any argument beyond those presented to them, they are encouraged to synthesise the ideas presented to create an authentic argument of their own. The challenge of this question is for the student to clearly identify their own position on the issue in a plausible and coherent way. Students could also go beyond the ideas presented in the question and use examples from their own experience, provided they are reasonable and appropriate to the argument presented. However, some of the students who attempted this approach were only able to present partially formed ideas. Again, it is worth emphasising that students are not assessed on their general knowledge but on their ability to defend a position in a logical, coherent and plausible way.

In the following response, the student is able to show a precise understanding of the issue with convincing and coherent reasoning in supporting their position.

Despite rising homelessness and economic hardship, the ideology of freedom that is presented is merely an argument by people who are scared of what extra commitments they may have to face for the benefit of society. Everybody has the right to have a roof above their head, and as has been proven in the past and centuries of tax spread out by governments of all nations to survive, the implementation of taxes would certainly result in an increase in owners selling or renting out their properties to avoid paying those extra taxes. Australian culture is regarded as being extremely egalitarian. How can this be achieved if people who do own houses have been seen to take advantage of people who are without. One of societies’ core values today is equality which would mean that all people should be given the right to have shelter. Taxes would inherently result in greater amounts of money being presented to federal and state governments and under proper utilisation the increased revenue would allow government to build more public housing, potentially relieving the burden of lists of people who wait and seek public housing. The increased availability of accommodation would as in the past bring the market for housing down at greater speeds than currently being seen. This proposition will not only greatly improve the life of individuals but allow for a more prosperous and hardworking society which in return creates greater productivity and will also reduce the unemployment rates due to people being given the environment for them to be able to set themselves up for life. Although overseas investment is a core piece of the economy puzzle, the benefits that are seen here are less compared to the countries who take stride in the investment. Investment should stay in Australia, people should support one another, freedom is not broken, as freedom is merely a way of thinking and not a law.

In the following response, the student takes a different approach. They incorporate and evaluate a number of the arguments presented but, in doing so, ultimately reach a clearly stated position based on a thorough understanding of the issue.

Having considered the arguments (A.–J.), I support this proposition.

The arguments in favour of this proposal demonstrate that this policy would have a myriad of benefits for crucial areas of issue in modern Australian life; the environment, wealth inequality, community values and of course the housing crisis. Arguments A and E invoke potent concepts of inequity as are evident in modern Australian society, wherein individuals who own more than one property have far more disposable income than those who own one, or rent. The prospect of government levying new taxes against these wealthier individuals to then spend on new public/social housing projects (as championed in argument B) is a genuinely exciting idea and just great public policy in the populist Robin Hood ideal; take from the rich, give to the poor. Wealth distribution has become more and more lopsided in recent decades, and this proposition is a great way to change the unfair status quo. Argument C particularly speaks to me because I, like many others of my generation, am very climate-anxious and want our governments at all levels to do more to address the ongoing and growing climate crisis. The use of existing houses in place of constructing new properties has a simple and obvious benefit to the environment and that only makes this proposition more appealing to me personally. Finally, Argument D appeals to the warm-and-fuzzy sentiment that community values are important, and in this increasingly detached, isolated period of social life, the concept of a revitalisation of community values really interests and excites me.

Of all the arguments against the proposition, only argument I appeals to me – the logistic truth that most second homes are in coastal regions, not the metropolitan areas where housing pressures are highest, undermines the supposed impact of this proposition. In saying that, housing is housing and location does not change that it could still be a home for those who need it. Arguments H, G and J seem to be utterly fallacious or at the very least slightly disingenuous; arguing that second houses are anything but a luxury is misleading and simply does not hold up to scrutiny, if owners have too many financial commitments they should sell the house , and extra taxes discouraging valuable investment is not necessarily a bad thing - people being housed should be a priority over the future of investment portfolios. Finally, Argument F makes the potent point that people should do as they like with their properties, but we already tax first homes through stamp duty or land tax - why is that not a point of contention? The government can and should do as it likes in regards to second properties.

In conclusion, having reviewed the arguments for and against the proposition, I believe that owners of housing properties that are kept vacant should have to pay extra taxes.

Criteria for assessing research-related responses

Questions 6–8 are opportunities for students to demonstrate their knowledge of the qualities of good research questions, and demonstrate detailed knowledge of the considerations used in a critique of such questions.

Responses to Question 6 were assessed on the quality of the question that the students proposed, the plausibility of their proposed data collection methods and, crucially, the connection between these methods and the question proposed.

Question 6

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Average |
| % | 4 | 12 | 24 | 27 | 19 | 12 | 3 | 2.9 |

Students were asked to devise a good research question to explore the issues dealt with in Questions 1–4 and indicate how good data might be collected to address it. It is important for students to understand what the word ‘good’ means in both parts of the question. It is possible for a student to score highly with a clearly or precisely phrased question (a good question), but if the student does not envisage a realistic way of answering the question (acquiring good data), they will not be able to score well overall. On the other hand, a simple and obvious question could score highly when an appropriate way of answering it is envisaged. Thus, what is required to score well is to understand the relationship between a proposed question and an appropriate suggested research method.

Students are encouraged to consider the clarity and focus of their question as well as the potential significance of it, evaluate who the potential stakeholders may be and thoughtfully link the wording of their proposed question to methods that would lead to a likely research conclusion and not infringe any ethical standards.

The most successful answers envisaged manageable and productive questions and proposed suitable methods for answering them. However, several students were unable to propose anything more than a formulaic response regarding their chosen methods. For example, justifying the use of a survey because it offers ‘a time-efficient way of collecting data’ or that it ‘can be easily distributed using Google Forms’ is a limited suggestion unless it also explains why a survey is the most suitable method for the question proposed and is the method most likely for producing the desired result.

Some questions and answers offered by students were devised within the scope of the Extended Investigation (with a limited timeframe), which was reasonable as they are at liberty to see this question as a reflection of their own experience as a researcher. Other students proposed methods that were more hypothetical and set within a broader academic setting. Either approach is acceptable, but if students identified the situation for which their research question was best suited, this would also help in justifying their choice of methods.

In the following two examples, the methods suggested are manageable and appropriate to the question proposed. It is also worth noting that each student acknowledges the possible limitations of their suggested approach but nonetheless suggests ways that these limitations could be overcome.

Sample response 1:

For the debate surrounding relocating medical graduates to work in regional and rural areas of Victoria, a possible research question could be: ‘How does the relocation of medical graduates for a year post-graduation affect the quality of healthcare in a regional Victorian community?’

To generate data for the proposed research question, intervention and post-intervention analysis could be conducted – surveys to the local community could be conducted prior to the experiment being conducted, which would investigate community beliefs on a) how readily accessible healthcare is in the community and b) the level of satisfaction of the healthcare received (dependent variable). Then, after a year of inserting trained medical graduates into the local township's health centres and hospitals, post-intervention analysis could be conducted with the same survey – comparing the findings to analyse whether an increase of quality of healthcare has occurred – providing findings for the proposed research question and results to inform the debate.

It is prudent, however, to acknowledge the potential for confounding variables within the research. There could be biases within the reporting of the surveys, as those surveyed could bring in their own personal subjectivity within the findings generated. To offset this, a diverse population could be selected, with analysis of the survey questions to minimalise the room for subjectivity within the questioning, also – for example, less questions like ‘Do you find that you could easily access healthcare when needed?’ and more objective questioning like ‘What is the average time between request for healthcare and an appointment you experienced? 0-2 hours, 3-6 hours, 1-2 days, etc...’ Furthermore, there could be limitations within the generalisability of the findings – variances in the towns’ population, number of medical facilities (i.e. Warrnambool has a hospital, Torquay does not), and others could limit the applicability of the results, but this could be offset through the longitudinal continuation of these studies across a number of townships – that is, after the initial experiment in one township, alternative townships could be explored in years following to ensure a diversification of the population of towns selected.

Sample response 2:

To what extent do workers productivity levels at company x improve or decline using a four day work week model, in comparison to the standard model, over a 6 month time span?

This research question would be ideal to gather information surrounding area A. A mixed method approach would be the most appropriate, firstly measuring productivity levels in the company for a set time period of six month with the standard work modes, this data could be collected via a daily survey for employees to log information regarding their productivity as well as tangible evidence for the amount of work achieved throughout their day, this should also be measured independently through a third party manually monitoring how much work employees are getting done during their day to eliminate possible bias or inaccurate results.

This process would then be repeated for the same time period of six months with a four day work week in place. The two sets of quantitative data can then be collected and compared to see if any patterns of improvement or decline in productivity rate can be discerned. Furthermore for the mixed methodology, a survey could be sent out to company x employees asking if they felt as though they were more productive during the four day work week to gather qualitative information which can then be analysed along with the previous data to get a broader scope of the results.

Ethical limitations of this practice includes getting written consent from all employees at company x for the year long study, so that they are aware that data is being collected on them, however this might skew the data as they know that their work is being measured henceforth they try to do more, as well as having a small scope of only company x so conclusions cannot be made for all types of companies. Funding for this study would be accessible, hiring on a small group of people to collect and analyse data on company x. The likelihood of this research reaching a conclusion is high, as it is a ‘to what extent’ question.

Question 7

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | Average |
| % | 7 | 40 | 44 | 9 | 1.6 |

Question 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | Average |
| % | 5 | 29 | 39 | 27 | 1.9 |

These two questions involved analysis and assessment of five research questions in terms of how manageable they would be in practice. Students needed to choose one question from Question 7 and one research question from Question 8 and consider the clarity and focus of the question, the ways in which appropriate research methods could be employed, and the likelihood of obtaining an answer through research. They could also think about potential ethical issues as well as crucial practical issues such as resourcing.

Questions 7 and 8 assessed how well students critically evaluated their selected question with particular reference to practicality and the broader issue of manageability. Marks were awarded to students who could clearly identify and explain the limitations or strengths within the option that they selected.

Again, students are encouraged to avoid formulaic and generalised observations that have little relevance to the question that they are discussing and to focus on the specific issues likely to be directly relevant to it. As in Question 6, it is possible to evaluate manageability within the context of Extended Investigation study, with limited resources, or it could be assessed in the broader context of a professionally conducted research project with suitable resources.

There is no ‘correct’ choice from the five research questions under consideration. Students are not assessed on their choice but on the reasoning that they demonstrate for making that choice. It is envisaged that a high-scoring response could be developed for any of the options provided.

In the following examples, each student clearly explains the issues inherent within their selected question and elaborates upon them, pointing out the ways in which the question could be managed successfully or highlighting its severe limitations due to inherent practical difficulties.

The following is an example of a high-scoring response to Question 7, in which a question was evaluated in terms of how it would be the most manageable.

The most manageable of the above questions would be question C. All of the terms used in the question are easily defined and quantifiable; ‘minor crimes’ as being summary offences, ‘community service’ as a non-custodial sanction that requires the individual to complete work or tasks, and ‘re-offending’ as being convicted of a subsequent offence. This question is manageable as all the relevant data (recidivism rates, the frequency of community service as a sentence etc) are relatively easy to acquire through government and corrections statistics. Furthermore, the notion of ‘effectiveness’ as a key concept is easy to quantify as it simply can be identified by a low rate of reoffending. The researcher may incorporate the personal experience or beliefs of those involved in the process such as lawyers, magistrates, parole officers and convicted persons (providing naturally that ethical guidelines and methodology are respected) in order to consolidate their contextual understanding of the issue and effectively interpret the numerical quantitative data that they will require. Furthermore, a plethora of academic literature and public debate around the issue exists and is easily accessible, particularly in the context of debate regarding the age of criminal responsibility. This may be incorporated into the researcher's findings and allow them to accurately and effectively approach their method of data analysis.

The following is an example of a high-scoring response to Question 8, in which a question was evaluated in terms of how it would be the least manageable.

Amongst the variety of research questions, research question D would be the least manageable in practise. Although the research question does not assume that there are any effects of advertising campaigns of 'eSafe and eSound' on protecting the elderly from online fraud. It is difficult to produce a conclusion due to it being difficult to measure and due to the likelihood of multiple variables affecting the collection of data and the results produced. Due to the study seemingly to be heavily reliant on qualitative data, it would need to be analysed by the researcher without any bias and with proper measure beyond merely the words of participants. Not only may this produce unreliable data but there could be a wide range of extraneous variables that may further affect the data. This may include hours spent watching television, access, location, knowledge on campaigns and much more. Furthermore, the population group selected is a difficult sample to work with. Although an age range isn’t provided, it is likely that elderly ages 60 and above don’t have access to television or don’t watch television often. Even so, the researcher must also consider that the usage of television with streaming channels has greatly decreased since the release of mobile devices and streaming platforms that don't implement ads such as Netflix and Stan. Therefore, there may be a lack of data being provided to the researcher, further decreasing the reliability of the study. Essentially, research D is the least manageable in practise due to the complex nature of measuring variables and convenience of variable accessibility.

Question 9

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | Average |
| % | 12 | 38 | 35 | 16 | 1.6 |

Question 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | Average |
| % | 11 | 34 | 39 | 15 | 1.6 |

In these two questions, students were asked to produce a strong argument, with justification, for penalising a sporting club for the antisocial behaviour of its fans, and then present an argument against it. When considering both sides of an issue, students should understand that their arguments will always be strengthened by the careful use of elaboration and evidence, as well as coherent reasoning.

Many students seemed to find these two questions difficult. As they are the least scaffolded parts of the test, they present a different challenge to all previous questions. Students should note that good responses to either side of this argument were possible without accurate use of real-world evidence, and errors of factual detail in an otherwise plausible response were not penalised. Throughout the test, it is always the quality of reasoning and the logical cohesion of an argument that is rewarded.

The instructions asked students to explain why they believe they have presented a strong argument in a concise and precise way. This could be done implicitly, as in this high-scoring response to Question 9.

Sporting clubs should be penalised for the unacceptable behaviour of their supporters because this would encourage the sporting club to discourage this behaviour. Sporting clubs have a level of prestige and influence over their fans that other forms of law enforcement do not have, by giving sporting clubs an incentive for their fans to be respectful, as they will be penalised if fans are destructive or violent, this may prompt a more public campaign on behalf of the sporting clubs against this type of behaviour, therefore discouraging the violence and destructive behaviour amongst fans. Furthermore, when sporting clubs are not penalised for negative behaviour amongst their fans, this can lead to an environment in which racism, discrimination and violent aggression amongst fans, which can be prevalent at sporting matches, is excused in order to preserve the club's reputation, therefore in order to minimise the discrimination and abusive behaviour that can be seen amongst sporting fans, clubs must be penalised for their actions. While some may argue that clubs are not responsible for their fan's actions, the clubs represent the fans opinion and support of that sporting team, therefore when fans act poorly and clubs ignore this behaviour, it is implied that the clubs are on the fans side of the behaviour.

The second part of each question could also be approached more explicitly as in this high-scoring response to Question 10.

Sporting clubs should not be penalised for spectators' destructive or violent behaviour as they cannot be held responsible for what other people choose to do and it will not see any actual change in spectator attitudes. Sporting clubs and team members hold no power over their supporters as they do not advocate for such behaviours and do not participate in such behaviours without being penalised themselves. Spectators who participate in violent and destructive behaviours should be the ones who are penalised if change is wanted. In order to achieve a peaceful sporting match environment, the people who are doing wrong should be the ones who are fined or banned from games - rather than punishing the players or sporting clubs. In having to face the consequences of their actions personally, this can discourage them from being destructive as people are inherently more likely to learn from their mistakes after facing the consequences of them.

This is a strong argument as it focuses on the motivations behind the penalties and calls it redundant. As the goal is to end destructive or violent behaviour by spectators, this method is made redundant when acknowledging how little it affects those committing the acts. Calling on a sense of justice, this argument acknowledges who should be penalised and why it would make the most effective change to achieve the main goal: to have a peaceful sporting match.