2022 VCE Extended Investigation written Externally-assessed Task report

General comments

The advice provided in this document is an overview of the assessment process and trends within student work in 2022. Given the individual nature of student reports and the particular demands of specific research methods, there continues to be a range of ways students can demonstrate skills and knowledge within each criterion. The examples within this document should be seen as some, but not all, of the ways that students may demonstrate knowledge and skill at a given level. It is also important to note that the most important overriding factor in assessing a report is the way that a student has gone about presenting a coherent, critically analysed and logical investigation. Their choices should not be based solely on the examples provided in this document, or on choices made in other research reports or investigations. What is successful in one report may not be logical or consistent with the aims of another investigation, and will not necessarily lead to the same result. Choices with regard to method, report structure, participants, literature and findings are all individual to a student’s investigation. The most successful reports explain and justify these decisions as they come to a conclusion about the central research question.

The clarity of students’ research questions was improved overall in 2022 and allowed for a more articulate research process and report in many cases. It continues to be important that the question is well scoped, and sits at the heart of the student’s research. The most successful reports demonstrate a coherent narrative linked to the research question in all sections of the report, and use the research question as the basis for justifying decisions throughout the work.

In 2022 there were some noticeable shifts in method across reports, with an increasing dominance of systematic literature reviews. As in previous years, it is important for teachers and students to note that no one method is likely to yield a more, or less, successful investigation. It is essential that the method(s) a student selects match with the intent of their question and will result in the most informative and useful data. Those students who are most successful in undertaking a literature review engage with this as a critical process. A literature review as method is not merely a synthesis of existing knowledge. It requires the use of an analysis framework and process much like any other method, where the literature functions as ‘data’ to be sorted, analysed and categorised in order to produce conclusions about the research question. This is also distinct from the literature review section that many students include in the earlier part of their report. Students who successfully employ this method are able to explain and justify an analytical process and framework through which their data has been processed, and use the literature to come to distinct conclusions about their area of research. While a literature review is perceived by some as an ‘easy’ methodological choice, this is not the case. It requires rigorous and extensive reading and in some cases the analysis of very large amounts of data.

Teachers and students are also encouraged to further clarify expectations regarding referencing, as there are increasing errors in attribution of academic sources and understanding of how to correctly quote, paraphrase or synthesise information. Further specific advice regarding this is contained in the comments regarding Criterion 6.

Specific information

Each written report is assessed individually against the criteria. Comments regarding achievement levels as outlined below are for illustrative purposes only and do not constitute all aspects of a student’s work that may contribute to achievement.

High–Very High

In the highest ranges students continued to demonstrate a well-developed level of critical thought and comprehension that tied all the aspects of their investigation together, demonstrating a highly detailed understanding of their research area. It was clear that these students have made conscious decisions about how each element of their investigation links to their research question, and that these decisions added value and complexity to their work.

Students in the high ranges continued to demonstrate extensive engagement with authoritative academic literature, including critical analysis and synthesis of this material. At this level students should have been consistently connecting their analysis to literature in every section of the report. They should have engaged with an extensive range of existing research and consistently support their own position throughout the report with this. This included the discussion of their method and analysis of results.

The method and analysis of data in these reports was critically presented and again tied to the overarching purpose of the study. The choices made by these students in the discussion of their method and findings were deliberate and reflected critically on their work. The suitability of a method and the ways in which different data-collection tools, participants or ethical considerations come to bear on a student’s investigation were clearly and confidently set out. These students were able to explain the connection between different forms of data, where multiple tools had been used, and critically reflect on the methodological choices they had made. They made careful decisions about the most effective way to represent their data and accompanied this with a clear discussion of trends and key findings. Often it was evident that students had synthesised and grouped their data according to these findings and considered how individual questions may be linked in order to create a more comprehensive sense of their research. Students at this level were able to make a connection to existing thought in their research field, consider any limitations to their findings and explore the possible implications and interpretations that stem from this.

As would be expected, the writing style and fluency of students in the high ranges demonstrated evidence of extensive drafting, editing and refining so that the final report was a considered and carefully worded piece that reflected the time and energy students have put in over the year.

Medium

At this level students presented a clear investigation; however, in some cases the central research question may have contained too many variables or was too broad to allow in-depth research. There were some instances where it was clear that the students had selected methods that did not allow them to fully explore their question and come to a detailed understanding of the research area.

These reports were often characterised by more generalised discussion of ideas and missed opportunities to critically explore concepts in detail. While a level of critical analysis may have begun to emerge, it was not consistent throughout the report. In addition, consistent connections between ideas and the research question may have been absent, or needed greater detail to demonstrate the student’s understanding of areas of commonality and divergence in existing literature. The range of sources a student engaged with may have been more limited, although still predominantly academic in nature, or may have been more heavily reliant on non-academic sources, such as newspaper articles or websites. As a result of these issues, reports in the mid-range tended to lack the specificity and depth required to reach the upper ranges.

These reports tended toward summary rather than critical analysis and engagement. This was evident in a range of sections, for example in the description of the methodological choices within these investigations. This resulted in some reports reading as procedural descriptions and meant that the implications of the student’s choices, and their overarching rationale in light of the research question, were not as clearly defined. Students at this level should be encouraged to strike a greater balance between the explanation of choices and justification and critical analysis of this in light of the research question. In some cases, these investigations also needed greater clarity regarding the way that different forms of data collection worked together. For example, where a student conducted a survey and interviews there may not have been a discussion of how these two forms of data worked together to respond to the question.

When discussing findings, midrange reports began to synthesise data, but had one of these issues:

* They needed to synthesise more, so that data was dealt with more systematically and thematically, rather than question by question
* They needed to identify key trends more clearly rather than listing large sections of statistics or interview excerpts with limited discussion.

Some students needed to consider the most appropriate forms to support the identification of key trends and ensure that data and tables were explained in terms of key trends. At this level there were often general and brief links to existing literature, but this area of work needed greater development to allow a more fully realised conclusion to be presented.

The majority of these reports were clearly structured, and applied the expected academic writing conventions. There were noticeable slips in expression within these reports and evidence that greater proofreading and accuracy of language was needed. In some cases these issues impacted the clarity of meaning. Alongside this, students at this level sometimes missed connections between ideas within sections of their report, and their report contained sections that did not clearly link together, so that the reader was required to create the links themselves.

Finally, a number of reports at this level contained errors in referencing. This resulted in inconsistent referencing or incorrect reference lists. This trend was of concern in 2022 and particular attention to correct academic attribution is encouraged moving forward.

Low–Very Low

The number of students in the low–very low category continues to diminish each year, indicating a continued improvement in students’ work and their understanding of the task. Student work at this level has little critical engagement. These reports were descriptive, more likely to be brief or missing sections, or contained significant issues in the conduct of the investigation. While students at this level attempted to explain aspects of their investigation, their reports demonstrated sustained errors in expression, structure and depth of ideas. Where they engaged with academic literature, this was extremely brief or focused on a very small number of sources only. Websites, media sources, blogs and other less authoritative sources were relied on more heavily at this level, and referencing issues were evident across the reports.

Large sections of these reports were solely descriptive and did not contain reference to research regarding established academic methods. At the lowest end of this band students may not have fully completed their report and there may have been whole sections missing. Similarly, the discussion of data and findings in these reports was brief, may have included sections of raw, unanalysed data without discussion, or was confused and not relevant to the central research question. As a result, the findings and conclusion to the investigation often lacked coherence, depth or links to the central research question. In some cases it was evident that students had run out of time in the latter half of their report, which compromised their work and overall result. It is important that students spend considerable time analysing and sorting data in order to understand their results and present a logical conclusion to the investigation. Consideration needs to be given over a period of time to the most appropriate forms of data representation, the key pieces of data to be used to illustrate findings and the most important findings to the investigation itself. Consideration of these issues begins in the early stages of a student’s investigation and should carry through the entirety of their work. These are aspects that take revision, testing and in some cases multiple drafts, especially when more than one data set is involved.

A further issue in these reports was the clarity and coherence of writing and academic conventions. Reports at the lower levels displayed areas of inconsistent voice and tone, issues in spelling and grammar, and sections where the flow of ideas was not clear. In particular there were issues with the application of academic conventions in these reports, including evidence of referencing, the use of a referencing system, accurate attribution of academic references both in text and in a reference list, and in the use of subheadings and sections.

Advice to students and teachers

This year there was evidence that greater attention is required in students’ understanding and application of referencing and attribution conventions. There were a number of students who did not demonstrate a clear understanding of these academic conventions. Teachers and students are reminded that while there is no one referencing style preferred, a consistent style and accurate attribution of sources is expected. Understanding the differences between paraphrasing, quoting and synthesising information, and how to correctly reference existing literature in each scenario, is an area that needs consistent attention throughout the year. Without the consistent application of referencing, and the correct attribution of sources throughout a report, it becomes difficult to discern students’ own thinking from existing academic literature and issues of plagiarism become apparent. This issue can impact not only students’ demonstration of knowledge (Criterion 1) but also their understanding of academic conventions (Criterion 6).

In addition to this, a particular area of note was the trend for students to use a standard method structure in their report. It is important that just as each investigation is unique, so too is the explanation and justification of the methodological choices made within the student’s work. There were instances in 2022 where students included methodological information that wasn’t at the heart of their investigation, or gave too much weight to some aspects of their method at the expense of other areas. For example, a student completing a systematic literature review does not typically need to spend considerable time discussing ethical implications of their method; however, a student conducting interviews or engaging in a sensitive topic would be expected to do so in greater detail.

Finally, as Extended Investigation continues to develop as a VCE study, students now have access to a wide range of example reports from previous years. While these are no doubt useful as tools to understand styles of writing, possible report structures and referencing approaches, they should not be taken as a measure of achievement, nor should they be used as templates for future students. It is expected that each report is unique and that, while a somewhat consistent report structure may be apparent across years, the content within each report is individualised to each research question and topic. Drawing on past reports, and indeed on writing structures presented by teachers in the classroom each year, is a useful support for students to develop their own structure and content. It should not be a prescriptive template used by a group of students to complete their work. This ultimately impacts on students’ ability to demonstrate their knowledge (Criterion 1) and in some cases the discussion of their method and findings (Criteria 3 and 4). Templates, however they are presented, should be considered a starting point to guide independent student writing.

Assessment criteria

The following are some general comments regarding achievement in each criterion. They should not be seen as an exhaustive list of features, as each report is unique and decisions regarding both the writing and marking of the report are founded on how the report unfolds in relation to the central research question.

Criterion 1 – Knowledge and understanding of the research area

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Average |
| % | 0 | 0 | 1 | 2 | 5 | 15 | 20 | 17 | 17 | 15 | 9 | 7.0 |

As in previous years, the demonstration of strong knowledge requires students to engage with all key concepts within their question. This is where students who have questions that contain multiple parts or a significant number of variables may have greater difficulty demonstrating a depth of understanding, often due to the volume of information they are trying to cover. It is also where students who elected to combine their literature review and introduction, or to remove the literature review altogether, may have had greater difficulty in demonstrating high-level knowledge.

The assessment of a student’s knowledge of their research area in part relies on accurate and consistent referencing. It is important that it is clear which areas of the report are the student’s own thoughts and analysis, and which stem from the existing body of literature. Without accurate academic attribution, this distinction becomes problematic and can in some cases limit a student’s ability to achieve in this criterion. In part this can be because a student has not referenced the materials they have used and thus has not demonstrated a consistent and thorough engagement in the existing body of knowledge.

Criterion 2 – Analysis and evaluation of argument and evidence

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Average |
| % | 0.2 | 0.8 | 1 | 4 | 12 | 17 | 19 | 16 | 14 | 13 | 5 | 6.4 |

Critical analysis continues to be the area that often differentiates a strong report from one that scores in the mid ranges. A student’s ability to consistently critically engage with their work and the existing literature associated with it demonstrates their mastery of the field, however small, and the ability to make links between areas of knowledge. From the outset it is worth reiterating that it is very rare that students can legitimately claim that there is little or no research on a topic. Claims such as this are often an indication that the student needed to research more widely and more critically, and substantially engage with their field of knowledge. Students who succeed in this criterion are able to discern the most important trends in existing research and present these with clear links to the research question. Students who are still developing this skill are more likely to deal with pieces of literature individually and are more descriptive in their recounting of key knowledge.

The strength of a student’s critical thinking skills, built up across the course of the Extended Investigation year, are often evident in this criterion, as they are in Criterion 4 in the analysis of their own data. Those students who are able to apply the components of critical thinking knowledge and skills from that Area of Study to their own investigation are most successful in this criterion.

Criterion 3 – Response to the research question

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Average |
| % | 0.2 | 0.4 | 0.4 | 3 | 12 | 16 | 20 | 17 | 15 | 11 | 4 | 6.4 |

The cornerstone of each investigation is the central research question, and it is expected that students are consistently refining and working to understand the question through their investigation. In 2022, the majority of students presented questions that were considered, precisely worded and well thought through. They supported this with a clear method that was, on the whole, suitable for responding to the question they set out.

In 2022 there was a narrowing of student’s methodological choices and an increasing number of students relying on a systematic literature review as their primary data collection tool. While this in itself is not problematic, it is important that the method selected is the most appropriate choice to respond to the central research question and yields useful data. When undertaking a systematic literature review, some students see this approach as largely descriptive. It is expected that no matter what method is adopted, students are able to critically engage with data. In the case of a systematic literature review, this includes exploring the process of selecting, analysing and synthesising literature. An exclusion and inclusion criterion is one avenue of addressing this, but also needs to be accompanied by an analysis framework or criterion when literature is later read and synthesised. Extensive reading and critical analysis of literature is expected to be achieved with this approach, and students should be prepared to clearly outline the framework they have used to analyse their material. Students who undertake a systematic literature review and only focus on a very small sample of literature, or who briefly describe a process of reading articles as their method, have greater difficulty scoring highly in this criterion. As reports at this level explain their method, it is expected that students have done more than read and summarise existing literature. They need to add their own level of analysis and synthesis to this material to come to a finding.

Criterion 4 – Synthesis of findings and evaluation of the investigation

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Average |
| % | 1 | 1 | 0.2 | 3 | 11 | 16 | 19 | 16 | 16 | 13 | 4 | 6.4 |

At the core of this criterion is a student’s ability to analyse data, and it is ultimately this skill that is a determinant of success in Criterion 4. This skill has strong links to the critical thinking area of study within this VCE study. Understanding links between ideas, identifying patterns and trends, and using this as the basis of a cogent and coherent argument rely on critical thinking. Spending time across the year developing these skills will pay dividends in the analysis of a student’s data. Students need to make conscious decisions about what data is the most relevant and what is the most effective way to display this to the reader. It is essential that students identify clear trends and do not simply merely list statistics or quotes. Teachers are encouraged to support students in the data analysis process by exploring different avenues for understanding and representing their data, and in particular the most appropriate trends to emphasise in light of a research question.

There are some reports that presented data either without synthesis or without any explicit analysis. In these cases, students tended to have included graphs or other visual representations of numeric data, or tables of information listing qualitative data, without actually presenting any accompanying analysis of what each graph demonstrated, the trend that was emerging or the relevance of the data to answering the central research question. It is expected that as students present data they explicitly analyse this and identify key trends for the reader. Higher-range responses in this criterion presented logically sequenced data that demonstrated key trends directly related to the central research question. They explored their findings in detail and engaged with academic literature to discuss the meaning of their results.

Criterion 5 – Clarity and effectiveness of writing

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Average |
| % | 0 | 0 | 0.2 | 1 | 9 | 11 | 21 | 16 | 19 | 14 | 9 | 7.0 |

It is expected that students present a well-edited, polished piece of writing that uses precise language and makes deliberate choices about the best way to communicate ideas. At the most basic level it is expected that students demonstrate a strong grasp of spelling, grammar and punctuation, and that their ideas develop logically both within and between paragraphs. Reports are assessed with an understanding of the typical time commitment expected of students, and to this end a well-written and developed report is expected. There is no expectation that a report is free from all errors, which would be unrealistic; however, there is an expectation that the report is developed, refined and presented as effectively as possible given the length of time students are afforded to work on their investigation and final report.

Criterion 6 – Observance of report writing conventions, including citations and bibliographic referencing of sources

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Average |
| % | 0.2 | 0.4 | 1 | 1 | 5 | 13 | 20 | 17 | 18 | 15 | 9 | 7.0 |

Criterion 6 focuses on a student’s understanding of the structural conventions of a research report including the referencing and academic citations used to attribute ideas to others, and the structure of the report as a whole. In 2022 it was evident that some students required further support in understanding and applying the conventions of referencing to their work. While the majority of reports displayed a sound understanding of referencing, there are some developing trends that suggest greater emphasis on the differences between paraphrasing, quoting and synthesising information is needed. Understanding how to demarcate a student’s own original thoughts and synthesis of material from the existing ideas of others is an essential skill that must be developed across both the coursework component of Extended Investigation and the drafting of the final report. Failure to consistently develop this skill and apply it to the final report can impact a number of criteria where the distinction between students’ own ideas and the ideas of others is of importance.

It is also expected that all students use academic conventions including subheadings and other sequencing structures to guide the reader through each key component of their work. Students were generally proficient in doing so in 2022, and the majority of reports were clearly structured and sequenced for the academic reader. More successful reports used headings at multiple levels as well as chapter introductions and conclusions.