

# 2021 VCE Extended Investigation oral Externally-assessed Task report

## General comments

The Extended Investigation oral presentation affords students the experience of presenting and defending the research they have completed over the course of a year. It comprises two sections: the presentation of the investigation and response to questions and challenges. Students present for 7–10 minutes, after which they are asked questions for a further 8–10 minutes.

Assessment of the oral presentation is based on knowledge and understanding of the research area; defence of research findings and understanding of audience; response to questions and challenges; and reflection and evaluation. Students are strongly encouraged to use these four assessment criteria when developing the content and structure of their presentations.

Most students were enthusiastic about their topics in 2021 and seem to have enjoyed the process of exploring an area of interest. Overall, students were able to adapt well to the continued impact of COVID-19, expecting and anticipating periods of restrictions and remote learning, and planned their investigation accordingly.

The highest-scoring presentations impressed with their conceptual understanding of the research process, their thoroughness and awareness of possible flaws in either design or conduct of the project, their adaptability in the face of COVID-19 restrictions (for example, taking the experiment home, adjusting the timeframe, improvising equipment), and their ability to articulate quite complex ideas and field questions effortlessly.

Not all students appeared to have a clear understanding of the assessment criteria. For instance, some responses that did not score well expounded on information in the field without discussing methodology, results, key findings, and reflecting on limitations.

Although teachers are expected to guide and support the student over the course of their investigation (especially during the research question stage), it is important that students have ownership of their research and are able to direct their investigation and make decisions regarding their research question, literature and methodology. In some presentations, some students may have been so *heavily* guided by their teachers that they often lacked detailed knowledge of their research field and struggled to respond to questions.

## Advice for teachers and students

Most students in 2021 thoroughly prepared their oral presentation and kept successfully to the 10-minute time limit for the first part of the presentation. Some students rushed to fit all their material in, making it, at times, difficult to follow.

- Extended Investigation questions and methods must comply with responsible and ethical research guidelines, as outlined in the *VCE Extended Investigation Study Design*. A number of presentations should have undergone a more rigorous review prior to commencement as students presented content or used language beyond that which is deemed appropriate for school students.

- It is important that students are made aware of speech structure, signposting, language choices and presentation techniques. While presentation style is not an assessed criterion, students should be aware of the impact of speaking too quickly or without engagement with the audience.
- Teachers and students must understand the difference in purpose between the two components of the externally assessed task (written report and oral presentation). Refer to the criteria and assessors' reports to assist in determining the unique demands and components of each task.
- Students are encouraged to rehearse their oral presentations, including responding to questions and challenges. This will help students show a deeper knowledge of the material and talk about it with ease.
- It is recommended that students save their presentations in PowerPoint format. Presentations saved as a PDF often did not display correctly on the screen.
- Students are reminded to remove all personal information (name, school, etc.) from their presentation. In 2021 many students introduced themselves by name, referred directly to their school or had their name on their presentation.
- Students generally used cue cards effectively, however, some simply read a transcribed version of their written report. Students are encouraged to use dot points or their visual presentation as prompts.
- Students are advised to read more widely and use the research and theory actively within their research and presentations.
- Students are reminded not to leave their project to the last minute but to be methodical and begin their project in a timely fashion so there is time for effective data collection.

## Specific information

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

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

## 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	6	11	12	19	18	18	9	7	6.5

In order to demonstrate knowledge and understanding of their research area, students are expected to engage with the full detail of their investigation. This includes the focus and significance of their research area and question, background research in the field and their chosen data collection method(s). Both the presentation and questions and challenges sections are used to assess against this criterion.

It is important that the methodology be well understood – for example, what is convenience sampling / mixed method / semi structured interview / focus group – and why one is a better fit than another.

Presentations that scored highly adopted a serious, systematic and academic approach to their investigation. These students engaged with specific researchers or research fields, identified ideas or theories to work with and then deployed appropriate methodologies relevant to the research area. They displayed a deep engagement with the literature and an understanding of the relationships between key concepts, and clearly identified areas of convergence and divergence in the literature. Although most students embedded references throughout their presentation, students who were able to discuss in detail the methodological approaches taken by other researchers, the strengths and limitations of other studies as well as what the literature actually found, generally scored more highly.

Students who found a discordance or debate within the existing literature, and understood that a ‘debate’ does not necessarily mean a ‘gap’ that has never been explored before, seemed better able to justify the entry point and purpose of their study. As there is not enough time in the oral presentation to present every piece of research, high-scoring presentations selected key works to discuss (linked briefly and meaningfully to others) and drew out the key ideas and arguments relevant to their topic and investigation.

High-scoring presentations demonstrated how their selected data collection method enabled them to collect data that would respond to the specific demands of their research question. Many students utilised ‘systematic literature reviews’ and had explicit inclusion/exclusion criteria and a proven framework to guide their exploration. They generally had very good processes for coding and analysing their data.

Other students used research methods such as experiments, interviews and surveys. High-scoring presentations clearly articulated why their chosen methodology suited their research question. Many employed control groups and took a true ‘mixed-methods’ approach, which they defended succinctly. They explained how the various elements of their design fitted together to help them answer their research question.

Presentations that scored in the middle and lower ranges may have overlooked the current literature in both the background to the research and in connection to their own findings. A number of students took known literature, known methodology and known results and sought only to replicate them without adding anything of their own. It is important that students read widely, select an appropriate approach (for example, a theory, a model, a school of thought) and work with it throughout the research process. Doing this will assist students in explaining how their research is linked to other research.

Presentations scoring in the middle and lower ranges needed to focus further on the methodology and, in particular, the link between the methodology and the achievement of the research aims. A number of students conducted ‘systematic literature reviews’ without any real method, or conducted surveys without the capacity to reach enough participants to make informed judgments. Students whose method was identified as a ‘systematic literature review’ or ‘document analysis’ but was more similar to a collation of reading material with little critical engagement, had difficulty in explaining their method of analysis. This was one of the most significant areas of weakness. Inclusion and exclusion criteria were often defined in quite simplistic terms, such as (fictional case) ‘is about peanuts’ and ‘is not about peanuts’. Several students chose a ‘film analysis’ or ‘text analysis’ but did not follow a framework, meaning there was significant halo effect and confirmation bias that many were not aware of.

When a student does an experiment, it needs to be repeated many times with many samples and consideration of variables. Students often commented about failed experiments (which is not an issue in itself) related to cost and time, but often the limited results were due to poor planning and execution. Presentations that did not score well often conducted experiments without considering a control group or simply repeated those of other existing studies without changes.

## Criterion 2 – Defence of research findings and understanding of audience

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	0	0	2	7	12	15	17	19	15	9	4	6.3

Students are expected to discuss the relevance of their work and to justify their findings in light of their primary research question. Both the presentation and questions and challenges sections are equally used to assess against this criterion. In explaining their work to the assessors, presentations are expected to be well structured, coherent and free from jargon. Most students displayed a very real sense of enjoyment and passion for their topics. They presented with confidence and it was apparent that they had prepared well.

It is imperative that students have a process for analysing and synthesising their raw data and extracting findings from it. They need to dedicate sufficient time during the initial part of their presentation to defending their research findings. In 2021 many students did not start discussing their findings until the final few minutes of their presentation, causing their investigation findings to often be lost in the race to finish.

The adaptation of language for a non-specialist audience was done well in 2021. Students who used visuals to illustrate findings within the data they had gathered in their own studies were often better equipped in tailoring their presentation for a non-specialist audience. Some students, however, included irrelevant information in their PowerPoint that did not assist in their presentation (for example, photos that were not evidence or pertinent to findings).

High-scoring presentations used verbal hooks and cues to connect the various components of their investigation and to guide the assessors through the presentation. Students who actively defined complex terminology using scholarly, reputable sources tended to deliver presentations that were easier to follow. Some students also used metaphor, analogies or diagrams to support their definitional work. These students clearly understood the unique demands of the oral presentation and did not attempt to cover the entirety of their 4000-word report in the space of 10 minutes.

The highest-scoring discussions synthesised different aspects of data and drew conclusions based on this. They clearly and purposefully highlighted the most significant findings of their investigation, explained how their findings responded to the research question, how the findings compared to previous research and what the implications of the findings were.

Presentations that scored in the lower to middle ranges often spent a lot of time on the description and explanation of their topic and chosen methodologies, leaving them little time to defend their research findings. Presentations that went beyond the allocated 10 minutes often had to be wound up before students had completely finished all sections. Some students attempted to read out their written report verbatim, rushing through the 10 minutes and failing to engage with the assessors.

Investigations that did not score well were often more like an extended essay with limited or no data collected, which meant that the students were unable to discuss any findings. Many collected data that simply confirmed what they already thought about a given topic, or data that was skewed towards a certain outcome. When discussing the findings from their investigations, the connections made between their findings and previous literature were limited. Their conclusion or synthesis did not always match the research question being asked.

## Criterion 3 – Responses to questions and challenges

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	0	0	1	8	14	13	15	18	16	6	9	6.3

The response section is designed to illuminate aspects of a student's work that may not have been fully explored in the first part of their presentation. It is an opportunity to clarify, elaborate, reflect and evaluate the various parts of a student's research – the question, literature, method, findings, limitations and reflections. If students are asked a question about challenges they encountered (for example the impacts of COVID-19), difficulties they had to overcome or what they would do differently, they can show that they not only know the topic, but also understand the research process. There is no need to replicate the content of the written report in the first part of the oral presentation; students can earmark content for use in response to a question – for example, in the area of data analysis.

Students should not leave out relevant information in the expectation that they will be asked a question about it, as a number of students did in 2021. Some had prepared over 25 PowerPoint slides that they referred to when responding to questions. While a few students used the additional slides to elaborate on points in the

initial presentation, others used them to launch into a pre-prepared answer that did not necessarily answer the question posed.

Students may be asked whether they considered something that they had never thought of before, such as a particular variable, or was beyond the scope of their investigation. It is important that students are able to speculate about what could or would have happened if they did consider the variable. This often separates a high-scoring response from a middle-range one.

Students with the highest-scoring responses knew their material thoroughly and fielded questions with ease. They were cognisant of the 'because' and 'how come' moments, and responded to questions with reference to both the research literature in the field and their own topic. Well-structured responses were consistently more effective in supporting the assessors in making sense of the student's research.

Many high-scoring responses drew on additional evidence and supporting arguments that had not been mentioned earlier. For example, further background research and unique references were used to elaborate on the significance of their investigation and to clarify their key findings. These students were able to discuss issues beyond the strict parameters of their investigation, displayed an enthusiasm for stretching the discussion and could elaborate on responses with ease, indicating an extensive knowledge of their investigation. They were able to tread the fine line between elaborating and clarifying their ideas and thinking while being concise, succinct and specific to the posed question.

Students whose responses did not score well had difficulty elaborating during the questioning. Their responses often repeated information from the first part of the presentation instead of making links to existing literature or data gathered through their investigation. Many students missed the opportunity during the questions and challenges section to evaluate their methodological approach and the implications the method may have had on their findings. In some cases, they were not able to provide evidence of the work undertaken and large gaps in their knowledge were exposed. Some students overly relied on their visuals in the hope that they would receive a question about their method if they did not elaborate on it earlier. This meant that basic frameworks concerning the method were not discussed until questioning, so less time was left to 'dig deeper' into other aspects of their investigation.

If a student is asked a question that requires them to expand on their work but is not covered by their investigation, they need to try and apply knowledge to a new situation and provide an opinion. Some students were unable to make these new connections when responding to questions, displaying a limited understanding of the broader implications of their investigation. This is an area that requires improvement across the range of student achievement and will assist students in their ability to reflect and evaluate the outcomes of their investigation.

## Criterion 4 – Reflection and evaluation

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	0	0.5	3	8	11	14	20	18	14	8	4	6.2

This aspect of the oral presentation requires students to critically reflect on and evaluate their extended investigation. Both the presentation and questions and challenges sections are used to assess against this criterion.

COVID-19 impacted students to varying degrees in 2021. For some, the impact was significant, though others appeared to use COVID-19 as an excuse for collecting insufficient and unreliable data. Students who were able to come up with creative solutions to the practical problems of the year were also usually able to reflect on these decisions with accuracy and insight. Students need to understand the limitations and scope of their research. It is okay for a student to not have findings, or to have research that does not work the way they had hypothesised, if they understand why it happened; this is a better approach to take than trying to extract significant findings from insufficient data.

When reflecting and evaluating, students are provided with an opportunity to further demonstrate critical thinking and conceptual clarity.

Students whose responses scored highly reflected thoughtfully and in detail on the decisions they made throughout their investigation and critically examined and evaluated their research process and findings. They often embedded their reflection and evaluation across the different stages of their investigation, from the significance of their topic and background literature to data collection decisions and the findings. It is important for students to not limit their reflection and evaluation to discussing limitations and offering suggestions for further research.

These students were also able to reflect on what they had learned, displaying qualities of an inquiring mind. For example, they were able to demonstrate why their question was important, admit that they had, or may have, made mistakes, were surprised by certain findings and that, given their time over again, they would do some things differently. They clearly understood the ethical dimensions of the research and embodied the ethics in their work, rather than merely naming potential ethical issues.

In middle and lower range presentations students often listed limitations without explaining their impact, or cited issues such as time constraints, word count and lack of organisation as their key limitations. A number of students reflected on their investigations but did not critically explore how the limitations of their own planning or their research design affected their results. In considering what they might do differently, these students took the 'more and bigger' approach (for example, more time and bigger sample size). While this is not necessarily a problem, some students were unable to explain the impact this might have on their findings. For many, reflection was not much more than telling the assessor that they enjoyed doing the research; in response to the commonly asked question 'who would find your research of value', these students struggled to reflect on where their research might fit in a broader context.

It is important that students take ethical issues seriously in their investigations and understand the ethical dimensions of their research. Stating that participants in interviews and surveys are provided with ethics forms to complete does not show a deep understanding. Examples of demonstrating a deeper understanding of ethical considerations included exploring the environmental sustainability of materials used in scientific experiments or showing an understanding of the cultural, religious and language differences of interview or focus group participants.