

GENERAL COMMENTS

The Extended Investigation oral presentation provides an opportunity for students to present and defend their research as well as celebrate their achievements and critically reflect on their individual research journey.

In 2014 students demonstrated a good understanding of the requirements of the Extended Investigation oral presentation. They were generally well prepared for the presentation and the questions/challenges that followed.

The oral presentation has two sections: the presentation of the research investigation and a questions/challenges section. Both sections contribute equally to the student's score. The oral presentation runs for 15–20 minutes. Students are encouraged to limit their oral presentation to 10 minutes, to allow sufficient time for questions/challenges. Assessors will indicate when students have reached the 10-minute mark, at which point students may be asked to conclude their presentation and respond to questions.

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 the criteria when developing the structure of their presentations. It is important that the differences between the criteria for the oral presentation and written report are understood, and each criterion for the oral presentation is evident in students' presentations.

A number of students chose to use visuals, usually Powerpoint, to support their presentation. While there is no specific assessment criterion relating to the use of presentation aids, they often assisted students to explain complex concepts or terminology in their research area. If visuals are to be used it is important that students and teachers are aware of the following rules. Students may use presentation software and/or posters but no additional electronic media (for example, sound and video files) are permitted. Also, no additional props (for example, laboratory equipment, costumes, scientific models or simulations) are permitted. Refer to the study design for further information. It is also essential that students have rehearsed their presentation with, and without, their visual so that, in the event of technical difficulties, they are not unduly disadvantaged and can proceed with their presentation.

While no marks were awarded for presentation style, students could use speaker notes and were expected to engage with the requirements of an oral presentation, including eye contact and knowledge of their prepared presentation. The majority of students used speaker notes, in the form of small cue cards, to support their presentation. However, some students' cards were too small and these students at times struggled to read their own notes. In preparing for the oral presentation it is important that oral presentation techniques such as speech structure, signposting and presentation strategies are reinforced.

An important element of the presentation is the student's ability to explain complex concepts and information to a non-specialist audience. Students should consider using metaphors or examples to support the discussion of abstract concepts or complex processes, particularly in scientific studies. The style of language used by students is also important. While this is a formal presentation, and a degree of sophistication is expected, students need to be comfortable and familiar with the language they are using. Considering elements such as the length of sentences, the complexity of ideas within paragraphs and the clarity of key ideas is an important aspect of this task.

SPECIFIC INFORMATION

Authentication

The oral presentation is important in the authentication of student work. It further supports the authentication of all written reports submitted by students prior to the oral presentation. In particular, the oral presentation allows assessors to, if necessary, identify potential authentication issues on the basis of the material presented. Issues surrounding authenticity are identifiable, particularly in the student's discussion of existing literature, where the voice of the student's presentation and their familiarity with the field are markers of independent study, and in the methodology, where undue assistance from mentors or an over-reliance on data drawn from existing empirical research, rather than generated by the student, can be identified.

Each oral presentation is assessed individually against the criteria. Comments regarding achievement levels are provided below. These are general comments for illustrative purposes only and do not constitute all aspects of a student's work that may contribute to achievement.

Very high

Presentations scoring in the highest band were insightful and professional. Students presented their research and responded to questions/challenges with confidence, demonstrating an excellent understanding of the research process. A hallmark of these presentations was the criticality with which students presented. They comprehensively explored the literature in their field, noting areas of congruence and disagreement, and made extensive reference to the way that their own work contributed to this field. In doing so these students drew on an extensive range of quality, authoritative literature. The significance of the research was plainly emphasised throughout the presentation and the student demonstrated a level of original thought and contribution to the field. These students also comprehensively outlined their method and continuously justified their methodological choices. Exceptional students in this achievement band were also able to make links between their own method and other work in the field, using this to support their research design.

Oral presentations in this range were well structured, making extensive use of signposting and summary to support the audience's engagement with their work. While highly appropriate for a non-specialist audience, these presentations were also sophisticated and engaged with the complexity of terms and concepts. When used, visuals not only supported understanding but added further complexity to the ideas presented. In responding to questions/challenges, students were able to clearly defend their research and the choices they had made throughout the process. They consistently linked their responses to a range of quality literature. In addition, they engaged critically with the process and outcomes of their investigation, discussing in detail areas such as limitations and the implications of this for their work.

High

Student presentations in the high achievement band demonstrated a sound understanding of the research process and a solid knowledge of their research field. These students presented clearly, and generally with confidence. They presented a detailed discussion of their research method and existing literature. In doing so, high-scoring students engaged with a range of reliable sources that were relevant to their research area. They began to engage critically with these sources, identifying some gaps in the literature and attempting to make connections to their own work. These students engaged with the significance of their work; however, could have done so in more detail and with greater links to existing research. In discussing their method, these students outlined the key aspects of their study and identified some limitations, although this may have been brief. They were able to come to a clear outcome in their investigation and support this with relevant findings. In discussing these findings some connections were made to existing literature, although these could have been explored in greater detail or the studies were not the most relevant in the field.

The oral presentations in the high range were well structured. The students made some use of communicative features to support the audience's engagement with the work. While still appropriate for a non-specialist audience, there were some elements of these presentations that required further clarification or elaboration to demonstrate a depth of understanding. In addition, some technical language or unclear expression hampered the understanding of complex ideas and processes. In responding to questions/challenges, these students were able to clearly justify their research choices and elaborate on key ideas. They needed to expand this discussion by drawing more consistently on existing literature throughout the questions/challenges section in particular.

Medium

Students whose oral presentations were in the medium achievement band demonstrated a solid understanding of the research process and their selected area; however, gaps were evident in their work. These students engaged generally with some research in their field; however, the sources were either lacking in relevance or were not authoritative. For example, a student may have demonstrated an over-reliance on websites rather than academic journals and research papers. Other students engaged with relevant literature but used only a very small number of sources from the available material on their topic, leading to a narrow understanding of the research area. In discussing their method and findings, students presented an informative, but descriptive, summary of key aspects of their work. These presentations would have benefited from additional use of existing literature to support the student's methodological choices and findings, alongside a more critical analysis of their project. In discussing their findings students clearly engaged with the research question; however, needed to synthesise and develop their results. They tended to list a large number of findings and needed to signpost the most significant features of their work. In addition, while some connections to literature may have been made, students relied heavily on a small number of sources or did not clearly explore the implications of their findings in light of the existing research they identified.

The structure of these presentations was generally sound; however, there were sections that were not coherently structured and where specific connections to the student's own work were not evident. In adapting their work for a non-specialist audience these students engaged with a range of technical terms; however, did not consistently explain these terms, which meant that parts of their work were unclear. When responding to the questions/challenges presented by assessors, students were sometimes able to elaborate on their ideas and used some relevant supporting evidence. With prompting they were able to critically reflect on some aspects of their investigation; for example, they were able to identify a limitation of their work, but were not able to clearly explore the implications of this for their work.

Low

Students who scored in the low achievement band engaged inconsistently with the research process and demonstrated a limited development of ideas. They still engaged with the key areas of the research; however, presented a largely descriptive summary in their discussion of existing literature, method and key findings. As such, these presentations often demonstrated a limited understanding of their research field and the demands of a research project. An over-reliance on existing data, rather than the generation of new information or findings sometimes further hampered these projects. A particular issue in this achievement range was the development of the literature review. Students engaged with a limited range of sources, which were inconsistent in quality and relevance. They summarised some key points from the literature; however, there was no critical engagement with the implications of this for their own study. Supporting evidence was also lacking in the discussion of their method and the significance of their study. Students nominated aspects of their method and reasons for the significance of their work but did not elaborate on this information or provide any justification of their choices. As a result, there were many gaps in the student's ability to explain their research process. For example, a student may have nominated that they completed a survey but did not identify the number or details of participants, nor if ethical issues were involved.

As a result of these issues presentations were often short of the expected length. They lacked clarity and coherence in the structure and explanation of ideas. Where technical terms were required, these were not explained clearly, demonstrating a limited ability to adjust content to suit a non-specialist audience. As such, the meaning of key ideas and concepts was often unclear. In responding to questions/challenges, students provided short responses that began to elaborate on their work. They did not consistently link to existing literature or engage with their work critically, demonstrating a limited ability to justify their research choices or engage with the implications of their work.

Very low

Students who scored in the very low band demonstrated a very limited understanding of their research area and the research process. Their presentations were typically lacking in relevant literature, did not put forward a clear research question and/or method and generally lacked synthesis. There was some mention of the significance of the project; however, this was either a brief statement or was not applicable to the student's work. A further issue often existed with regard to findings. Students did not present any findings as a result of their investigation or presented findings that did not fit the data they had collected. Their work consisted of a brief, highly descriptive summary.

The structure of these presentations was a significant issue, as was the student's ability to adjust their language for a non-specialist audience. These presentations were often disorganised, and brief, with the student only speaking for between 1 and 4 minutes, and often contained an unclear structure. These students relied heavily on technical terms without explanation, leading to issues in understanding the key ideas and concepts within their work. In responding to questions/challenges, students were unable to elaborate on ideas and gave short, sometimes one-word, answers that had no connection to existing research in the field.

Advice to students and teachers

- Students should carefully structure their presentation, and practise responding to questions, so that they are well prepared for the oral presentation. Practising their presentation on a range of audiences, particularly those unfamiliar with their research area, is valuable.
- Teachers and students should ensure that in the early stages of research they critically engage with the question development process and the appropriate choice of methodological framework; for example, considering the use of qualitative data in a science-based research project or the use of mixed methods in the investigation of historical attitudes and perceptions. It is vital that the question and the chosen methodology, and method, are well matched as this will impact on the student's ongoing success in their investigation.
- There is no one methodology or method that is preferred; however, all research projects must have a clear framework and data collection approach that contributes new insights into the field.
- While this is an oral presentation, students are still expected to engage with existing literature in their field throughout their presentation and in response to questions/challenges. These sources should be reputable and relevant to the research question.

Assessment criteria

To further assist students and teachers, comments regarding each criterion are provided below.

Criterion 1 – Knowledge and understanding of the research area

In order to demonstrate knowledge and understanding of their research area students are expected to engage with existing literature in their field, their chosen research methods and data collection. They should explore, in good detail, the significance of their work and the key aspects of their research.

Students should clearly present the background to their investigation, with many drawing on a range of existing research. Strong responses also dealt with the significance of the research to the broader community and the contribution they had made to existing research. When presenting background information and existing research on their investigation, strong students explored areas of congruence and conflict in existing research and situated their own work in the ‘gap’, outlining how their work contributed to the field. Weaker responses summarised existing research without critical engagement.

Students generally presented a balanced discussion of all aspects of their work, spending equal time outlining their literature review, methodology and data. Strong students presented a critical engagement in all three areas, particularly justifying research choices and examining areas of bias, conflict or existing theory.

When discussing methodology, students were expected to outline the process of data collection and the tools used to facilitate this, regardless of the style of their investigation. If students use a method that is a synthesis, or reproduction, of what previous researchers in the field have already determined, they needed to justify why this was the most appropriate method for their work and how it led to a significant project. High-scoring students dealt critically with these areas, with students justifying their methodological choices. Where research was conducted using human participants, high-scoring students also dealt with issues such as sample size and ethical considerations. Low-scoring students only mentioned that data was collected, without discussion or justification of the method or links made between the data and the research question.

A number of students engaged in literature review as a core component of their methodology. While engaging with, and systematically reviewing, existing literature is an important aspect of each investigation, students need to be aware that summarising the findings of others, particularly without critical engagement and interpretation, can be problematic. High-scoring students who chose to focus their work on a literature review were able to articulate a clear interpretive framework for their analysis and the way that this led to new insights in their research area. If this method is to be undertaken as the primary source of ‘data’, it is imperative that students are able to articulate the relevance of this method and its ability to lead to new and significant findings.

Criterion 2 – Defence of research findings and understanding of audience

In defending their findings, students were expected to discuss the relevance of their work and to justify their findings in light of their research question. Presentations must be well structured, coherent and free from jargon. In the discussion of their findings, strong students signposted key findings and used key statistics or data to support this. These students also engaged with existing literature, discussing how their findings supported or refuted existing research and addressed their research question. Low-scoring students either did not present clear findings or data collected as part of the investigation, simply listed numerous statistics without discussion or did not engage with other research in their field.

Overall, students presented their investigation with clarity and enthusiasm. They were confident in their knowledge and able to clearly articulate their ideas. A few students simply read their written report; however, the majority had adjusted their work to suit the demands of an oral presentation. Students who had highly specialised areas of research needed to be able to explain terminology appropriate to an educated lay audience. Strong students achieved this by weaving definitions into the body of their presentation, as each new term or concept was encountered. Low-scoring students usually listed or read all of their key terms at the start of their presentation.

Criterion 3 – Responses to questions and challenges

Students were generally well prepared to answer questions and challenges from the panel. In preparation for this section, work on question techniques and responses should be undertaken in class. In particular, it is important for students to consider how they will provide in-depth responses and incorporate evidence.

The most effective responses in this section were not highly scripted and linked all ideas back to the students’ investigation. These students were able to clearly answer questions, drawing on a range of evidence. They justified their choices and clarified the reasoning behind the design, conduct and outcomes of their investigation. Low-scoring

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students either did not directly address the question itself, explained ideas without justification or reasoning, or briefly recounted aspects of their presentation. Students should note that when asked to justify choices, particularly with regard to their methodology and findings, they are expected to engage with existing literature and have clear, well-thought-out reasons for their decisions. High-scoring students were able to draw on existing methodology research and previous research in their field of interest. Low-scoring students did not do so or cited advice from mentors or teachers as to their reasoning.

It was therefore important for students to use evidence to support their discussion, either existing research that they had engaged with or findings from their own study. Students also need to develop strategies to deal with questions that they found difficult to answer. If a question is unclear or students have not investigated a particular area, they should be advised to clarify the question with the assessors before responding. If a student feels that they have already responded to a question, they should also have strategies to summarise and reinforce their information.

While the questions/challenges section is designed to illuminate aspects of a student's work that may not have been fully explored in their presentation, students should not rely on specific questions being asked and leave out important information as a result.

Criterion 4 – Reflection and evaluation

The reflection and evaluation aspect of the oral presentation supports students to critically reflect on their investigation and its outcomes. This criterion does not require students to present an extended analysis of what they personally liked or disliked about their research or the study.

Stronger students in this criterion were able to explore the limitations of their work and discuss issues such as bias, ethical concerns, further areas of investigation, triangulation of data, problems encountered during the research process or contradictory findings. In order to achieve high marks for this criterion, students should have engaged with these areas as applicable to their investigation. This necessitates reflection on the method, data analysis and key ideas from literature.

Low-scoring students in this criterion began to engage with some of the above limitations but either listed these without explaining their impact, or cited time constraints in class or the word count as their key limitations.