2020 Research Project A and B Subject Assessment Advice

Overview

Subject assessment advice, based on the 2020 assessment cycle, gives an overview of how students performed in their school and external assessments in relation to the learning requirements, assessment design criteria, and performance standards set out in the relevant subject outline. They provide information and advice regarding the assessment types, the application of the performance standards in school and external assessments, and the quality of student performance.

Teachers should refer to the subject outline for specifications on content and learning requirements, and to the subject operational information for operational matters and key dates.

The engagement of students with the Research Project continues to grow and this is evident not only in the authentic nature of the research questions which are becoming even richer and more complex focus areas for investigation, but also in the expertise in the teaching, learning and assessment within this subject. Evident in 2020 was that teachers and students have gained even more confidence in utilising a breadth of research methodologies, including the use of video conferencing for conducting meaningful qualitative research; in the time of Covid19, students utilised the technology at hand to conduct meaningful qualitative research that moved beyond superficial emails. If suitable as a research methodology, students are also engaging in carefully managed experimental research by conducting their own trials or creating surveys where focus groups and sample size are a part of the research process in order to ensure the gathering of valid and reliable data. Across all assessment types, the standard of student evidence continues to improve; predominantly, students are engaging with the essence of real and ethical research and consequently, Research Outcomes are more in-depth, complex and insightful and students are contributing to these fields in an authentic way.

Significant improvements in regard to the teaching of this subject have been made and in light of these, further suggestions regarding continuing to enhance student engagement with this subject are provided:

* Teacher provided templates continue to have both advantages and disadvantages in this subject. In general, templates should be used carefully, especially in evidence for Assessment Type 1: Folio. There are many students who require some element of scaffolding to provide evidence of the assessment design criteria, however, it has been noted that teachers who provide templates which limit opportunities for students to show rich evidence of their learning often also (unintentionally) limit the capacity for an authentic student voice when responding to the research conducted. Some templates do not even address the assessment design criteria and students on the most part only end up summarising information rather than analysing (D2) and providing any real awareness of knowledge and/or skills developed (D3); teachers *need to ensure that templates allow for meaningful student engagement*.
* The continued use of technology in order to conduct research and display key findings is very positive and in 2020, in order to gain meaningful data, has predominantly been used with great success. The documentation and analysis of research is increasingly of a diverse nature and students are obviously comfortable not only using apps and smart devices to record their investigative journey, but also to produce refined, sophisticated, and engaging outcomes. It was pleasing to note students increasing engagement with social media and its various platforms as a tool for the collection of valid and reliable data when appropriate to the topic.

Question choice

An increased range of questions that were clear, manageable and researchable were explored and there has been a notable increase in those that had a practical application or were specific to the student’s area of personal interest (e.g. career, sport, entrepreneurial, etc.). Students who demonstrate an element of personal investment for their research are significantly more successful as they help develop a skill, provide a valid answer to a contemporary issue or demonstrate true creative and/or critical thinking skills.

The more successful questions commonly:

* were focused, clear, specific, accessible, and ethical
* were in a field where there was an opportunity to really contribute to the existing research
* were safe and manageable and could be achieved within the timeframe
* were consistently refined; students should be reminded that their research question, should and will evolve which is the nature of real research
* allowed for a range of research methodologies to be utilised
* provided scope for an answer that has a degree of complexity and insight.

School Assessment

Both Research Project A and B assess Assessment Type 1: Folio and Assessment Type 2: Research Outcome, according to the same standard with identical assessment design criteria and performance standards. Therefore, the evidence of learning from students in a Research Project A or a Research Project B class should be assessed identically. The only difference between the two subjects is that the evidence for assessment for Assessment Type 2: Research Outcome for Research Project A is a maximum of 1500 words, if written, compared to 2000 words for Research Project B (10 minutes and 12 minutes, respectively, for an oral presentation, with equivalents for multimodal forms).

It has been noted that there was a markedly bigger and successful engagement with Research Project A this year, especially for those projects where the shorter word count in the outcome is more suitable. Students who had a very focused and contained project are often advantaged by enrolling in Research project A and crafting a response in the shorter word count/multimodal allocation.

Assessment Type 1: Folio

Moderators once again noted how important the appropriate selection of evidence for the 10 pages (as described in the Research Project Subject Operational Information) is to showcase the journey of a student through their project and allowing them to achieve against the specific features in this assessment type. Better responses continued to be those which provided balanced evidence against all the specific features; these responses tended to present a tight snapshot of the research undertaken and the research processes used in order to come to a resolution to the research question.

Specific features: Planning (Research Project A and Research Project B)

P1: Consideration and refinement of a research question

The more successful responses commonly:

* provided evidence of both consideration and refinement of their proposed question and in doing so students demonstrated an understanding of the complexity of developing a research question; the research being conducted can manifest in significant changes being made to the question. Such students often addressed consideration of their question by detailing why they felt it needed researching along with an exploration of all of the dimensions involved in the topic and an explanation of why they only focused in on specific dimensions
* focused on research questions that were not only succinct and resolvable but also provided opportunities to explore the question from various perspectives. these questions enabled students to achieve higher grade levels in other specific features, such as D2 and D3, due to the opportunity for stretch and rigour
* provided evidence of the continual emerging refinement of the research question along with an explanation of the reasons for the refinement which tied into the unfolding research being conducted; these students justified their decisions made and it was ongoing (not just evidenced in the proposal and a lotus diagram). Some students provided such a record in table form with sections for reasons and implications while other students used reflections and journals to highlight such refinement throughout the folio
* included a diagram (lotus, brainstorm, mindmap, etc) or explanation, identifying key turning points in the evolution of the research question and a detailed rationale for the refinements that were beneficial and highly valid to the research.

The less successful responses commonly:

* presented pages of material on topics which were totally unrelated to the one they researched. This was quite common with lotus diagrams which encouraged students to explore all the directions they might like to take in their project. While these are very useful as an initial teaching tool, moderators commented that they often took up at least one page of the folio, limiting students’ opportunities to achieve against the specific features. Teachers and students should be aware that the initial brainstorming of ideas to determine a research question does not provide appropriate evidence regarding the planning process for the particular research question that is the focus of the investigation
* focused on questions which were one dimensional and so tended to call for a compilation and description of information, which then limited student achievement in other specific features; these questions often commenced with such as, “What do you need to become a …” or “How do you….” A well worded question should encourage depth and breadth of research
* featured questions to which the answers were already well documented, or the student had completed limited research as they already had come to a resolution to the question due to their prior knowledge. This also limited students’ ability to develop D2 and D3
* were closed questions and provided a yes/no answer that prevented higher-order analysis or evaluation or were too broad (e.g. “To what extent... “) and subsequently unmanageable
* were ethically inappropriate due to focusing on unsafe situations, abuse/trauma, dangerous experimentation, etc.
* limited the question refinement to an explanation of why topics were changed rather than focusing on the actual evolving research question. This often took the form of a recount of the first months of the project
* only provided limited development of planning other than a superficial and incomplete lotus diagram, brainstorm or planner that was generic and repetitive.

P2: Planning of research processes appropriate to the research question

The more successful responses commonly:

* provided detailed and explicit ongoing evidence of planning: lotus diagrams, timelines, mind-maps, brainstorms or charts; these were obviously dynamic documents that were constantly added to and provided a clear overview of the student’s management of the research conducted
* provided clear, targeted and question specific planning of research methods most appropriate to the research question. They also documented how this planning was adjusted over time along with the reasoning why, which helped them also meet other criteria such as D1 and D2
* reflected on the planning at a range of critical points throughout the project and made targeted adjustments to their planned methodology that were well reasoned and often in response to other research as it was uncovered; students explained why the chosen research methodology was proving to be appropriate or explaining why it needed to be altered
* provided evidence of their planning throughout the entire 10 pages (e.g., evidence of experimentation, observation, field trips, or face-to-face interviews) often including a sound and considered explanation of why the research process was used including an awareness of the ethics of pursuing a certain research methodology, rather than simply listing their possible research processes
* planned particular processes that they could identify as increasing the validity and reliability of the research as a whole.

The less successful responses commonly:

* used a research methodology that was provided for a whole class and was not appropriate for their specific research question. Other students provided generic evidence of the development of the research which could have been for any question, rather than the specific and most appropriate research methodologies for the answering of the research question
* failed to do any research to fully understand the particular research method they were utilising and so invalidated the data they were generating
* highlighted a concern for using a particular research methodology due to ethics, but chose to pursue that line of research
* recounted processes rather than exploring, designing, and justifying all aspects of the research processes used, showing an awareness of what research methodologies were being engaged with and why
* spent a considerable amount of the 10 pages (3 or 4 pages) on topic consideration and/or generic planning and overused graphic organisers that became repetitive; this restricted the amount of evidence that could be provided for D1-D4.

Specific Features: Development (Research Project A and Research Project B)

D1: Development of the research

The more successful responses commonly:

* provided evidence of being very resourceful in utilising specific research methodologies (both primary and secondary) that would assist in resolving the research question (e.g., field trips, video conferencing, experimentation, online forums, personal interviews, transcripts, surveys, etc.)
* included effective evidence and succinct examples of thorough and resourceful development of the research incorporated and there was variety in the range of sources (both primary and secondary) accessed. Students also were able to cross-reference both primary and secondary data in order to add to the depth of their argument
* provided a rationale for certain sources being utilised in order to produce a valid resolution to the research question; students explored the validity, reliability, credibility and currency of the information and rationalised its significance to their research
* identified the way in which ethics was shaping their research process and subsequent findings. These responses were insightful, showing a nuanced understanding of the ethical issues specific to their research question and displayed more than a cursory application of simplistic, generic ethical considerations such as plagiarism and confidentiality
* were able to present a number of sources of information; successful students often presented a diverse range of research methodologies giving comprehensive coverage of all aspects of their question (these students did not limit themselves to one source per page, instead they made comprehensive links between sources and rationalised the significance of particular processes)
* provided explicit evidence of the development of the research, with students coming back to the development of their understanding and progress in finding a resolution to their research question
* outlined the growing depth in their understanding of their topic/question as it revealed itself to them; this was often found in many places across their 10 pages
* identified and understood, results that invalidated or supported other data and clearly explained why this was so

The less successful responses commonly:

* did not have a range of sources and predominantly relied on downloads from the internet (e.g., screen shots and URLs), without commentary or analysis; these students were really only ‘collecting information’ which is in the D grade band of the performance standards
* included limited bibliographies that were brief and only really repeated what had already provided as evidence on other pages
* provided surveys, graphs, images, etc. that displayed little evidence of how they assisted in the development of the research
* failed to show how one aspect of the research methodology linked to another or explain why a certain process was undertaken
* provided many secondary source analyses (often taking up 8 of the 10 pages) which were commonly completed on a template that did not allow the student to show how the research was unfolding and developing.

D2: Analysis of information and exploration of ideas to develop the research

The more successful responses commonly:

* insightfully engaged with the data produced through their research. This took many forms — some students formulated diagrams to represent their exploration of ideas while others explored the meaning of what they were finding while reflecting on the validity and reliability of their conclusions. This tended to reveal an authentic student voice, one in which the student was engaging personally with the data or information that was being collated in light of their research question; these students were not summarising the information, they were analysing and exploring the ideas being developed
* engaged with the credibility, and currency of sources in an insightful manner, which went beyond qualifications of the author and date of release and so demonstrated a real engagement with the information being analysed and revealed a development in a student’s knowledge and or/skills pertaining to their research question
* showed evidence of analysis of not only both the source and the information that it contained, in relation to their research question but also understood the concepts of validity and reliability as related to their research and demonstrated how they were engaging with these concepts to strengthen their own research. This was often evident in journal notes, interview, and survey question formulation and in documented changes to their research question
* fully explored emerging ideas in responses/sources/experiments/observations and often cross-referenced these to other key findings where they chose to test the validity and reliability of these ideas through additional research and were able to draw conclusions from the data
* were aware of their own possible biases as a researcher and the impact of these
* systematically examined the information they were finding by breaking it into its component parts and exploring interrelationships and meanings, thereby demonstrating new awareness, evidence or thinking relating to the research.

The less successful responses commonly:

* included slabs of information (i.e. downloaded excerpts from texts, transcripts from personally conducted interviews, survey tables and graphs); often, the material provided had not been engaged with (e.g., through annotations or a paragraph providing a snapshot of analysis), expecting the information to speak for itself
* included large sections of material which was theoretical or speculative, such as sets of interview questions for interviews that were never undertaken or questions for a survey where the results were negligible. While this can still show some degree of analysis or planning, (especially if the implications of the missed interview are explored), by devoting large sections of the folio to this not only limits the student’s ability to meet this criterion at the higher-grade bands but detracts from an authentic student’s voice
* used the concepts of validity, reliability and bias interchangeably with no real evidence of understanding of the terminology
* used templates which only encouraged an analysis of the author of a source rather than an analysis of the information itself (i.e., often focused simplistically on author qualifications and release date) or were restrictive in the amount that could be written in regard to actually analysing a text (e.g., one or two sentences); these responses tended to be superficial and limited, therefore hindering a student’s ability to meet the assessment design criteria at a high level
* summarised information or provided simplistic annotations, indicative of gathering information and therefore omitting any analytical thinking; transcribing whole interviews regardless of the relevance of the content is such an example
* interpreted analysis to mean, “How I feel about this source,” rather than the systematic examination and evaluation of the data or information.

D3: Development of knowledge and skills specific to the research question

The more successful responses commonly:

* clearly showed that they were developing emerging ideas from the research they were undertaking rather than simply compiling vast quantities of information. These ideas were more than just dot points, they were evident in extended reflections showing a true ‘exploration’ and ‘development’
* clearly highlighted new knowledge and skills gained along with the implications of these for the research; most significantly these were in journal entries or major critical reflections where students focused on, “Where to from here…” or, “From the research undertaken into...I now understand…and need to investigate…. “These students clearly showed how they identified areas in which their knowledge was lacking or needed consolidation through cross-referencing, and took steps to then gain depth and insight
* engaged in an insightful manner with the sources and focused more on the quality of the key points arising from each source rather than lengthy summaries
* went beyond generic research skills and focused on the skills which were relevant to their research question. While in some cases these were practical or technical skills, in other cases they were approaches or thinking styles specific to the discipline in which their topic was situated
* provided reflections that were able to pull together the threads of their research and show the development of key-findings by cross-referencing information and comparing. This also assisted with making evident how the research was enabling the student to come to some form of a resolution to their research question
* demonstrated the development and growth of knowledge and skills in several ways, including exploring ideas through extended reflections, development of interview questions that had been annotated and revealed growth of subject knowledge or documentation of experimentation through graphs, tables, photographic evidence, or conceptual diagrams
* evaluated the success of their findings by obtaining feedback, which they reflected on, thereby providing evidence that there had been growth in their knowledge and skill development
* clearly identified new and very specific skills which often related to the disciplines in which the research was undertaken.

The less successful responses commonly:

* focused on knowledge which only had a loose relationship to the topic being examined
* ignored skill development altogether or demonstrated poor skill development — this was often evident in the use of research skills such as survey design which resulted in surveys that were poorly constructed and so of limited use in generating any useable data
* were not able to link sources and identify further research opportunities
* did not show understanding of validity, reliability and credibility and used the words interchangeably
* listed generic statements of learning and/or recount of the research that had been conducted; these statements did not reveal the development of any knowledge or skills, nor did they provide evidence of being able to find any resolution to the research question
* only provided evidence of knowledge that was simplistic and ‘empty’ in regard to the complexity of the research that had been undertaken and the rationale for research processes that had been used
* showed that they lacked knowledge in their topic area.

D4: Understanding and development of one of more capabilities

The more successful responses commonly:

* examined only one or two capabilities, which tended to lead to a stronger series of reflections and insights, as the students were able to provide a consistent application concerning the growth of knowledge and understanding
* made explicit links between their chosen capability and the research undertaken; the capability was constantly referred to and became an intrinsic component of shaping the intention and direction of the research
* clearly showed both an ‘understanding’ and a ‘development’ of their chosen capability or capabilities; both should be addressed. Such students often included a final reflection on the development of their capability over the project as well as highlighting moments of insight into their capability throughout their folio
* provided explicit evidence and examples of the development of the capabilities; it was more than just a generic, repetitive summary of superficial engagement with the capability, either throughout the 10 pages or in a few more detailed reflections
* made evident that they had used the chosen capability as a lens through which the entire research was conducted.

The less successful responses commonly:

* used templates which called for a reflection on the chosen capability with every source/research event examined. These were often extremely brief and superficial: “I developed my literacy capability by reading this academic journal which contained difficult words...”
* only focused on development, but not directly showing understanding of what the capability meant and what it included. Provided simple statements with little real evidence of growth in awareness of the nature of the capability and its contribution to the development of the research
* addressing the chosen capability/capabilities only in the proposal, making it difficult to demonstrate development of either the capabilities or the student’s understanding or were repetitive in their reflections regarding the capability; what was written in the proposal for some students was then cut and pasted at intervals, throughout the 10 pages
* showed limited or simplistic understanding of what the chosen capability meant; such responses often resorted to generic statements, for example, “I will ask permission when I interview someone about …” in reference to the ethical understanding capability, or, “I will be reading magazine articles and taking notes …” in reference to the literacy capability
* attempted to respond to all the capabilities rather than providing awareness that one or two capabilities, when explored in-depth, has a place in the Research Project as it has the potential to refine, define, guide and/or provide parameters for the research.

Assessment Type 2: Research Outcome

With the increased confidence that teachers and students now have in regard to the use of various technologies and knowing that the Research Outcome can be presented and substantiated in a variety of modes, moderators noted that the final product for many students was a complex, engaging and rich resolution to their research question. The formatting, synthesis, and depth of substantiation for the Research Outcome continued to develop in 2020 and this is becoming a real strength of the subject. Students are increasingly considering their intended audience when deciding on their mode of presentation. Highly successful responses often contained an answer to the research question at the outset, which was continually referred to throughout, leading to an informed conclusion as well as clear and detailed synthesis supported by substantiation showing engagement with appropriate sources, comparisons between perspectives, and balanced weighing-up of the evidence. Key findings were often clearly and easily identifiable within the material and the resolution to the research question flowed from them.

Question design continues to shape success in this subject. Questions which were very focused and specific, generally allowed for more insightful synthesis and a better-quality outcome. In contrast, questions that were very broad tended to lead to outcomes which were a screed of generic information and/or facts. Students who embraced continual question refinement, even when it meant discarding some of the conducted research, generally produced an outcome with more depth and moved up through the grade bands — particularly in S1. Students who achieve at the higher level are aware that the outcome is the resolution to the question and subsequently, part of the synthesis is being aware of what material is valid and reliable evidence and what needs to be omitted.

Moderators commented that many vocationally focused projects were increasing in diversity and relevance — moving from questions such as, “How do I become a ...” to research questions that were an important aspect of the vocation, such as, “What is the reality of PTSD for front line workers such as paramedics?” Pleasingly they often also utilised action research and expertise that they were able to access in conjunction with their industry experience.

Students who failed to produce a resolution to their question or who outlined information with little critique or insight were less successful.

Specific Features: Synthesis (Research Project A and Research Project B)

S1: Synthesis of knowledge, skills, and ideas to produce a resolution to the research question

The more successful responses commonly:

* had a well-crafted research question which allowed for the exploration of competing ideas and perspectives, rather than a simple resolution, allowing for greater depth and insight in the Outcome
* clearly identified an appropriate audience to target in relation to the research question and used language/format appropriate for the audience
* prioritised and drew out meaning from the findings which were more prominent in the research rather than providing a superficial recount of all findings identified in the folio
* exhibited great discernment in the selection of sources, where highly targeted and relevant sources of information were used
* made explicit the connection between ideas and sources, showing some originality of thought
* pointed to the deeper significance of the Outcome by putting it in a broader context or by exploring how the question resolution provided a solution to an issue or contributed to the understanding of an important or unique phenomenon
* meaningfully engaged with their research and with their own voice came to a resolution to the question
* used appropriate and well-phrased subheadings to assist the reader in following their arguments
* clearly articulated each key finding and then weighed evidence from a range of sources and perspectives, which supported the assertion of the prominence of the finding to the research
* provided evidence to highlight why the most important ideas were more significant than others
* accessed a wide range of sources and then brought together the common threads from this diverse range of perspectives to provide strong evidence for the ideas and knowledge that they were presenting
* provided a well delineated conclusion that linked back clearly to the question and also revealed the implications of the answer to their question; the conclusion was well supported with strong substantiation from multiple references
* crafted the outcome to allow clear identification as to which parts of the argument (or which pieces of research) are most useful or most important
* utilised graphs, diagrams, key quotes, images and so on, to contribute to the synthesis of their key findings.

The less successful responses commonly:

* attempted to answer quite convoluted questions, with a number of disparate elements, making a coherent answer difficult to construct
* restricted the capacity to provide insightful key findings by selecting a poor choice for the mode of their presentation
* did not do enough research to allow exploration of their question to allow for a relevant and detailed resolution to be formed
* provided a collection of information or a series of facts and recount (summary of information) rather than a synthesis of the material
* demonstrated only a partial resolution to the research question by including material that did not address the question
* poorly organised their findings which led to a confusing and poorly structured Research Outcome
* provided personal opinions regarding the research question rather than evidence based from sources
* ignored important findings in order to arrive at a predetermined conclusion (which may not have aligned with the key findings of the research)
* included images and data that were not referred to (and in some cases not relevant) and therefore did not support or enhance the line of argument and/or validity of the research
* confused synthesis with a restating of identified information or facts without identifying any relationships, ideas or significance
* occasionally had an extremely high word count, meaning that the latter portion of the Outcome was not included in the assessment. This was often where resolution of the research question became clear, meaning that achievement against S1 was more limited
* did not conclude at all, which meant that there was limited or no evidence of a resolution to the research question.

S2: Substantiation of key findings relevant to the Research Outcome

Students in S2 are being asked to ‘prove’ how they came to the resolution to their question, therefore, students who use a vast range of sources in order to consistently and thoroughly substantiate their findings, generally achieve at a higher level. If the Research Outcome is in a format that is a product, then substantiation needs to either be integrated into the product or in a separate document.

Evidence of substantiation can be effectively provided in a number of ways and it is more than just the use of footnotes which is more of a focus on citation rather than substantiation. The subject outline calls for the use of a consistent referencing system throughout — it does not mandate any particular system, however students are encouraged to use a system that may be common in the discipline in which their project is based.

The more successful responses commonly:

* provided multiple relevant references (correctly referenced), and perspectives to validate their key findings which further strengthened the substantiation
* used a consistent, clear, referencing system throughout (and this included multimodal presentations where students utilised pop-ups or verbally articulated where they had gained the information within the content of their presentation)
* provided clear key findings presented with evidence of linking between sources identified and using phrases such as, “this perspective supported by...who claims…”
* used references to ‘map the discipline’ they were working in, showing the moderator that they were aware of the depth and breadth of the field in which their project was based
* understood that every claim, argument or opinion put forward needed to be substantiated (supported or justified) with credible evidence from research or other authoritative sources
* engaged with action research and tested theories which often included multi-dimensional approaches that integrated to provide strong, authentic and original substantiation (e.g., time-logs from experimentation, data collection from observation, photographic evidence from fieldwork and graphs from experimentation)
* used graphs, tables, images, etc. and referred to these visual elements; these elements became an additional layer to the level of substantiation
* selected evidence with which to substantiate and of a form that had high credibility for their chosen research topic. They understood that this is different for different projects and depends on the qualities of the evidence that are valued in that particular discipline.

The less successful responses commonly:

* provided little to no substantiation (and this included multimodal forms of outcomes). Some outcomes were purely videos from external sources without any student commentary or introduction or reports that only had evidence from three or four sources; these were limiting in regard to the depth of insight provided within the Research Outcome
* provided a collection of facts and figures with recount and then a footnote. Substantiation is more than a list of footnotes at the end of each fact-dominated sentence, instead it is providing an insightful statement gleaned from synthesising the research undertaken and then providing the evidence to support the claim
* included whole slabs of material which were substantiated from one source which just amounted to a paraphrasing of the source and so limited achievement in both S2 and S1
* revealed that very little research had been conducted as the same few sources were used consistently throughout the outcome
* contained substantiation that was confined to a URL at the end of a paragraph or even a page. When this was done, sources were not contextualised and consequently the line of evidence to support the statements being made was lost
* did have some outstanding products had been created that were highly authentic, but the substantiation of the development of the product was not clearly articulated; more often than not it was implied rather than being overt
* included a reference list at the end but never referred to any of the material within the actual outcome or the outcome included references with no reference list.

S3: Expression of ideas

Expression of ideas is more than just correct grammar and punctuation. Moderators noted that the most successful responses also made use of subheadings, graphs, or diagrams to support the clarity with which the resolution to the question was presented. Students who used sub-questions as headings seemed to address specific key findings in detail that assisted in the answering of the question.

This specific feature calls for expression of ideas not of information. Therefore, in order to achieve at the highest levels, students needed to have strongly defined and clearly articulated ideas that they are articulating in order to resolve their question. Those students who presented Outcomes that were focused significantly on information rather than ideas, were therefore less successful in this area even when this material had great clarity and expression.

The more successful responses commonly:

* used language most appropriate to the discipline in which their project was based
* provided well-articulated evidence that succinctly addressed the research question (clear sub-headings that addressed the question, assisted in this)
* included an introduction (in whatever form was most appropriate for the project) to pre-empt what the marker could expect in the Outcome, thereby facilitating clarity
* provided a conclusion at the end of the outcome, demonstrating clear evidence of resolving the question
* considered their target audience which added to the clarity of the Research Outcome
* successfully integrated most appropriate images/video/diagrams to aid in the expression of their ideas and referred to said material.

The less successful responses commonly:

* used language and expression which not only made it hard for the moderator to follow the arguments being presented but it also demonstrated a lack of understanding
* overuse of high-level language which did not address the question
* were poorly formatted or presented (no sub-headings or breakdown of content and just a running narrative) and simplistic in style (e.g., multimodal presentations, such as Prezi/PowerPoints/Google slides, with limited content and substantiation that were fact driven)
* included graphs, tables or images that were never alluded to and therefore did not assist in being able to support the outcome with any real clarity.

Assessment Type 3: Review (Research Project A only)

The Review continues to diversify in format, with an increasing number of teacher-student discussions presented as the external component of Research Project A this year. In addition, multi-modal formats incorporating power-points were common as were audio recordings. However written reports were most popular, with the vast majority of students achieving the 1500-word limit. In some cases, markers reported that teachers were interjecting in discussions and limiting students' chances to respond, thereby also limiting their chance to achieve against the specific features.

It was clear that many students had been aided by teacher designed scaffolding in this task, giving them strong direction in addressing the specific features. However, in some instances, teacher designed templates were misleading and did not focus on the specific features being addressed thereby disadvantaging students in this assessment type. Any suggested headings are most useful when they relate directly to the specific features being assessed. Markers reported that in many cases students were presenting material that was actually designed to meet the specific features required for the Evaluation in Research Project B. This limits the student’s ability to be successful, particularly in R1 as the requirements for reviewing the knowledge and skills developed throughout the project, are very different from those required in E1 which is an evaluation of the research processes used. It is understandable that the two versions of Research Project will be taught in the same class, however clear delineation of the different requirements for the external task is necessary.

The purpose of the summary preceding the Review, is to allow the marker to gain an overview of the student’s project, which provides useful context for the material to follow. Many students included a well-formulated summary for just this purpose, however others saw the summary instead as a chance to recount personal experiences of the project (including changes in personal circumstances and teacher allocation). Many summaries also significantly exceeded the 150-word limit or were not included at all. Students are reminded that this summary forms part of the assessment, particularly in S3 – Expression of Ideas, and so should be crafted appropriately with this specific feature in mind. Similarly, a discussion of outdated specific features (such as the capabilities developed) also acts to reduce the active word count for the student as it does not address any of the current specific features being assessed. Including the explicit research question being addressed (on a cover page or in the header or footer) also assists the marker.

The structure of the Review in Research Project A is very achievable for all students as it utilises a discussion response style, which is often quite familiar to students who have undertaken the SACE. It was very pleasing to see a much more diverse selection of students undertaking the subject this year along with many more achieving in the upper grade bands in this assessment type.

Specific Features: Review (Research Project A only)

R1: Review of the knowledge and skills developed in response to the research question

The more successful responses commonly:

* explicitly outlined the ways in which key knowledge relating to their chosen topic had grown and developed throughout their project and illustrated this with appropriate examples
* discussed both knowledge and skills developed in response to their research question often using distinct subheadings for each
* highlighted theoretical and/or practical skills associated with the discipline they were working in and clearly explained how these skills were attained and developed through the course. Better students then went further and connected these skills clearly to the development of the research question and their success in conducting their research. Many students focused on outlining the development of research skills only, while more successful students were very explicit in explaining the impact that the development of these research skills had on their project
* made clear exactly how far knowledge and skills had been developed by including words (such as ‘before’, ‘after’, ‘having completed’, ‘prior to this’) as well as qualifiers (‘most’, ‘somewhat’, ‘to an extent’). More successful students showed that they could identify the impact that the development of their knowledge and skills had on the research by using descriptions such as ‘became clearer’, ‘as a consequence of’, ‘suddenly made sense’, ‘was unclear until’ and so on
* showed an ability to differentiate the knowledge and skills that were most significant in developing key findings and so a resolution of their question. They illustrated this with appropriate examples
* clearly showed the relationship between the development of knowledge and skills to corresponding development in the validity and reliability of their key findings. Other more successful students emphasised the link between gaining particular knowledge and skills and the resulting change in direction in their research, giving examples
* outlined how developing knowledge of the ethics involved in researching, impacted the form and direction that their research took
* showed an ability to prioritise key knowledge, rather than presenting a discussion of all knowledge gained in a chronological fashion. Students who recognised the meaning and value of their significant findings were able to better convey this development of new learning.

The less successful responses commonly:

* did not address R1, or did so only in a fleeting manner, as they instead presented material directed at E1 (which is actually part of the subject RPB). This hindered students’ success as the assessment criteria for the Evaluation is different to the Review. As a result, students used their word count discussing research processes rather than new knowledge and skills developed
* limited their active word count by directly addressing the development of the capabilities. This has not been part of the RPA subject outline since 2013 and is not required
* recounted their research project in its entirety rather than reviewing skills and knowledge. This often involved discussion of topics considered but then later rejected along with the reasons why, which limited their chance of providing evidence against the specific feature of R1
* did not balance the word-count across the three specific features of R1, 2 and 3, often addressing specific feature R1 (review of knowledge and skills) extensively and giving only cursory treatment to R2 and R3. In some cases, R3 was not addressed at all
* recounted the knowledge gained in a chronological fashion, rather than prioritising critical new knowledge that allowed development of their project. At times some students would recount everything they learnt and almost submit another outcome instead of a review. This impacted on their success
* focused mainly on the development of practical skills which were only loosely connected to the research topic or focused entirely on superficial and often generic research skills only. Many students omitted any focus on the skills which were specific to their topic
* outlined and evaluated sources used in the outcome, rather than reflecting on the knowledge and skills gained
* detailed their research methodology, in the manner required in E1 in the Evaluation — other students did a combination of R1 and E1
* Included many “empty sentences”. These are generalised sentences that any student could write which contain no detail or specific examples of the knowledge and skills under review e.g. “My knowledge and skills grew as I did my research project and this helped me come up with many important key findings”
* relied on teacher-generated templates which often contained sections that were not relevant to their particular research question.

R2: Discussion of decisions made in response to challenges and/or opportunities

The more successful responses commonly:

* clearly outlined the specific actions that they took when faced with challenges and/or opportunities. They tended to briefly outline the challenge and/or opportunity, and state the decision made in response. They then focused on how their decisions influenced the resolution of their question through examining its impact on their research development illustrating this with clear, relevant examples
* could recognise and included the impact of opportunities as well as challenges faced
* utilised rich research methodologies that often resulted in easily identifiable, authentic challenges and opportunities. This included experimentation, observation and action research as well as the use of experts located all around the world. This often resulted in powerful and rich discussion in R2 showing the interconnection between question choice and methodological approach which is in turn reflected in the ensuing Reflection
* explicitly showed how the decisions made when faced with challenges and/or opportunities during the research development, directly linked to the key ideas of their research
* discussed how the validity and reliability of their research was impacted by the decisions they made
* furnished their discussion with examples regarding the appropriateness of the decision by reflecting on the consequences — both positive and negative. More successful students often identified ways the project could have been enhanced if an alternative decision were taken
* went beyond challenges that may have been experienced by all students (such as Covid, time management, availability of sources, workload, and so on) and focused on those specific to their project. This often meant that the corresponding decisions discussed were more sophisticated and nuanced, and therefore contained greater depth.

The less successful responses commonly:

* recounted the challenges and/or opportunities themselves in detail, rather than the decisions made
* neglected to mention any decisions at all and described actions taken in response to opportunities without any justification or reflection on the impact
* omitted any discussion of the impact their actions (in response to challenges and opportunities) had on the resolution of their research project
* did not go beyond generic responses regarding challenges and opportunities as a result of teacher scaffolding. This often focused on the Covid situation, time management, difficulty in deciding on a focus for the project and sourcing information and experts not replying to emails. At times, these scaffolds did not align with the 2020 subject outline
* discussed challenges only, often ignoring significant opportunities
* focused their discussion only on superficial issues of time management/being disorganised/internet not working/sites being blocked/missing school which are experienced by many students. Often, a generic and superficial response to these ‘challenges’ was produced. It would be preferable for students to attempt a more positive way of using these insights i.e. “I tend to be disorganised so I ...”. In this way it may be more than simply outlining a largely irrelevant deficit
* lacked clear subheadings or had ‘Challenges and Opportunities’ as a subheading and did not talk about decisions at all.

R3: Reflection on the quality of the Research Outcome

The more successful responses commonly:

* discussed the Outcome in response to the target audience and provided key evidence of how they were successful/unsuccessful
* focused on reviewing the quality of the Outcome rather than the process of making it
* utilised a range of varied qualifiers in their reflection on the quality of the outcome realistically emphasising both its strengths and omissions
* linked any discussion of the form that the outcome took with its purpose and their goals
* discussed the relevance and significance of their findings in light of what they set out to do. Such students were able to clearly articulate the features that influenced the overall value and worth of their Research Outcome, including the extent to which the question has been answered
* often included evidence from key stakeholders about the worth of their outcome
* provided clear examples of the quality of their outcome, such as use of sources, lack of bias, use of specific terminology or information
* considered (honestly) how well the question had been answered. These responses were also free of generalisations
* highlighted the successes and limitations of the Research Outcome and the pertinence of the findings, and thereby conveyed an understanding of the quality of the Research Outcome
* reviewed the clarity of the final piece along with a focus on the suitability of its form
* successfully and appropriately used the vocabulary of qualitative judgments. Such students used words like: quality, value, worth, significance, importance of, reliability, strengths, limitations
* considered different perspectives and so were realistic about who their outcome would be useful for.

The less successful responses commonly:

* discussed the quality of their outcome in terms of it being finished and meeting a word count, rather than in terms of what key findings it contained and how well it addressed the question
* made simplistic or exaggerated comments about the quality of the Research Outcome, including a sole focus on how it was personally meaningful
* dealt with this specific feature very briefly — often as a result of devoting the majority of the allocated word-count to specific feature R1. This also occurred in many teacher led discussions where no engagement with R3 was apparent
* focused on features of the Research Outcome such as its length, layout and physical structure. These are only useful when qualified appropriately
* often examined the process of their learning and often only briefly mentioned the outcome
* outlined what they could have done rather than reflecting on the quality of the Outcome they did produce
* reviewed the entire project, particularly how they conducted their research rather than focusing on their Outcome and how they were able to provide a resolution to their research question
* only had a short concluding paragraph about the Outcome rather than discussing it in depth or reviewed the overall research process without focusing specifically on the Outcome
* omitted any material directed at R3 altogether.

Specific Features: Synthesis (for Research Project A)

S3: Expression of ideas

The more successful responses commonly:

* constructed an informative summary giving a clear overview of the project including a brief description of the methodology used thus providing relevant context for the marker
* expressed themselves in a fluid and logical manner ensuring that that their meaning was clear
* used paragraphs to good effect allowing them to organise their information logically and to communicate ideas accurately and coherently
* were organised under appropriate headings that related directly to the 2020 subject outline and so served to organise the review, aiding clarity
* used a range of vocabulary, including varied qualifiers
* justified aspects of their discussion by utilising appropriate examples
* made use of the drafting and editing process to ensure effective communication
* used correct terminology to their advantage
* were explicit and not repetitive.

The less successful responses commonly:

* did not section their Reflection by using paragraphing or pauses in oral presentations to signpost change of idea/theme
* relied on terms or acronyms that had not been introduced thereby obscuring meaning
* expressed ideas with little thought given to organisation or clarity
* wasted word count on repeated information
* used very informal language that at times obscured meaning
* did not include the research question anywhere, thereby resulting in the marker having to guess at the meaning of aspects of the reflection
* presented mostly the teachers’ scaffolding questions, rather than their own input
* expressed ideas that were not being assessed
* recounted their experience through the whole research process rather than focusing on the assessment criteria and so did not utilise the word count effectively.

Assessment Type 3: Evaluation (Research Project B only)

While the number of instances of reflections on the capability continues to decline, it must be reiterated that any evaluation of capability development is not an assessable component. Inclusion of this evidence hampers the capacity of students to provide evidence against the specific features on which they are actually assessed.

Specific Features: Evaluation (Research Project B only)

E1: Evaluation of the research processes used, specific to the research question

While it is not a specific feature of this assessment type, markers noted that students who had developed stronger Research Questions were able to provide more successful Evaluation evidence.

The more successful responses commonly:

* evaluated a specific selection (2-3) of processes with in-depth, judgement statements
* understood that research processes were actions which elicited data
* provided explicit examples of resources engaged with as part of the research processes to illustrate usefulness or limitations
* used approximately a third of the word count for this specific feature to avoid impacting on the depth of the E2 and E3 specific features
* linked the success of the research process directly to the student’s research question and its specific nuances, framing evaluation of the strengths and limitations of process(es) without being contradictory
* accurately used research terminology (i.e. validity, credibility, reliability) to evaluate the use of processes, linking ideas of qualifications, experience etc. to justify
* discussed research processes relatively, drawing comparisons between the effectiveness and usefulness of each process through ranking
* applied a range of qualifiers to rank their usefulness and limitations, such as ‘most useful’, ‘most reliable’, ‘less effective’, ‘pertinent’, ‘critical’, etc. with examples that related directly to their own question.

The less successful responses commonly:

* recounted the research processes in chronological order with few judgements or any evaluative discussion
* discussed irrelevant processes such as planning or basic actions i.e., highlighting sources
* did not specifically discern processes, instead offering a general overview of learning, or recount of the research undertaken
* did not provide specific examples of resources engaged with
* used broad terms without clarification i.e., ‘Internet research’
* used terms such as ‘validity’, ‘reliability’, ‘bias’, and ‘credibility’ interchangeably, or misused such words
* misunderstood research methodologies and provided inaccurate, or incorrect assessments i.e. citing all government resources as being without bias
* made judgments without providing supporting evidence
* featured broad statements about generalised processes such as ‘using the Internet’.

E2: Evaluation of decisions made in response to challenges and/or opportunities specific to the research processes used

While markers have noted continued improvement in the evidence submitted for this criterion, evidence was not always clearly aligned with the specific criteria being assessed. Teachers are directed to the support materials on the SACE website which provide specific and detailed advice for this specific feature.

The more successful responses commonly:

* made the decisions the central focus of discussion and identified this in the topic sentence
* only focused on key decisions with measurable impact
* provided a very brief summary of the challenge or opportunity, without making it the main focus of discussion
* provided a link between the decision made and the research processes
* provided specific evaluation of how the decision had impacted upon the breadth and/or depth of the research
* linked their decision to an effect on the Outcome findings
* linked their decision to an effect on the validity or reliability of research undertaken
* discussed how the decision impacted upon the quality of the outcome and/or the resolution of the question
* provided explicit judgment of the decision and its effectiveness in overcoming a challenge or capitalising upon an opportunity
* used language such as ‘pertinent’, ‘timely’, ‘important’, ‘useful’, ‘powerful’, ‘useless’, ‘ineffective/effective’
* referred to both positive and negative ramifications, with consequences weighed in a balanced manner
* provided specific examples of actions that were undertaken as part of the decision
* did not combine E1 and E2 unless clearly stipulating how the process and decision were linked
* used approximately one third of the word count to allow for equitable demonstration of evidence of all performance standards
* where relevant, explained how the decision had helped or hindered further research or led to new thinking or findings.

The less successful responses commonly:

* focused on the challenge or opportunity, instead of the decision
* recounted a series of decisions, without evaluating their significance
* identified decisions made without linking them as a response to a problem or opportunity
* discussed general hardships (time management, loss of data, motivation, shyness) rather than challenges pertaining to the generation of data
* discussed the decision broadly without reference to the specific research processes
* did not evaluate the decision by the impact that it had upon the broader research outcomes
* repeated statements that had already been referred to in the E1 section
* focused overly on what they could have or should have done without any overt links to the challenges or opportunities.

E3: Evaluation of the quality of the Research Outcome

Markers have noted a significant improvement in student evidence, with a much clearer focus on discussing the resolution of the question. Teachers are reminded to review the performance standards when developing templates or scaffolds to ensure that guidance relates to the appropriate assessment criteria.

The more successful responses commonly:

* explicitly evaluated the success of the Research Outcome by explaining how well the question was resolved, providing evidence to support this judgment
* evaluated the outcome in sections, referring to specific sections, focus areas or paragraphs
* compared sections to allow for nuanced assessment of strengths or limitations
* clearly outlined the features which impacted on the quality of the Research Outcome including aspects such as:
* quality of the sources used
* originality of the findings
* forms of substantiation used
* suitability of the findings for the intended audience
* depth and breadth of the research
* range of perspectives included
* clarity of the findings
* effect of the credibility, validity or reliability of source material
* conciseness of the argument.
* clearly articulated the intended purpose of the Research Outcome and used this as a criteria for evaluation
* clearly articulated appropriateness of the resolution for the intended audience
* recognised the limitations of their research with links to validity, reliability and bias
* weighed up strengths and limitations of their Research Outcome to provide balanced judgments
* focused specifically on the Research Outcome, not the wider research process
* used specific examples from the Research Outcome to support evaluation
* had a balanced understanding of the usefulness of their Research Outcome.

The less successful responses commonly:

* overly focused on the value of the Research Outcome to themselves or made generalisations about its usefulness that were overstated
* focused heavily on the new knowledge gained, without linking this to how this knowledge acquisition assisted in the resolution of the question
* recounted evidence from the Research Outcome without evaluating its pertinence, use, or effectiveness in resolving the research question
* discussed irrelevant features such as capability development, changes to be made if the outcome were to be redone, the limitations of the word-limit, and time-management challenges
* focused on the design or format of the Research Outcome, rather than the quality of their resolution to the research question
* focused on the Research Project as a whole, recapping research processes without explaining how the Outcome was impacted
* provided contradictory statements when evaluating features of the Research Outcome.

S3: Expression of ideas

Markers noted that this section was typically well done. Templates and scaffolds can limit student voice and should be used carefully. Despite increasing frequency of evidence, students are not required to highlight key words throughout their work.

Markers also requested that student use appropriate fonts and font sizes to aid clarity.

The more successful responses commonly:

* used clear subheadings and topic sentences to aid clarity
* ensured that sections were clearly demarcated by appropriate headings
* organised information clearly into sections or paragraphs
* carefully edited their work to aid clarity
* used subject specific terminology with accuracy.

The less successful responses commonly:

* needed to include their research question
* needed to include a Summary section
* used conversational or incomplete writing styles
* repeated content across paragraphs
* used research specific terminology incorrectly
* discussed irrelevant aspects that did not meet the performance standards
* used an introduction or conclusion to recap key ideas.