# 2021 ASSESSMENT REPORT
## SDI315117 – STUDENT DIRECTED INQUIRY

## PART A: FEEDBACK FOR STUDENTS AND TEACHERS

The external assessment folios consist of the Inquiry Folio and an Inquiry Presentation. The Folio comprises four (4) parts. These parts are the Inquiry Proposal, the Inquiry Executive Summary, the Inquiry Report (sometimes called 'the product') and the Inquiry Presentation digital file supporting the Presentation at the practical oral examination.

The files including the presentation slides are uploaded to TRACS as a compressed/zipped file which has a size limitation of 100 megabytes. Additional evidence in the form of appendices to the Report are not examined externally; however, there are occasions when the candidate's own work for the practical exhibition or multimodal performance or the audio or video materials to be provided at the oral examination may need to be physically sent to TASC by the scheduled date, prior to the oral/practical marking period.

The External Assessment Specification in the last section of supporting documents in course documentation provides the minimum word limits for each part and the maximum word count for the Inquiry. It is important for candidates to document their word count for each folio to enable monitoring of the size limitations. The overall word limit of 15,000 words does not include the cover, title page or table of contents, the acknowledgements, the reference list or bibliography, any additional material in appendices, or the communications log.

## SUBJECT EXPERT OR MENTOR DECLARATION FORM

The declaration form is provided in the External Assessment Specification in the last section of supporting documents in course documentation. This requirement is in addition to the TASC External Assessment Rule 4 (a-b) requirement of the Candidate Declaration Form completed by the student and the responsible teacher, as the work requirements section of the course states clearly the need for a "verified acknowledgement of quality of subject matter by subject expert(s)."

Course coordinators or teachers need to ensure that the candidate's external mentors or subject expert(s) use the Subject Expert Pro-forma Declaration to complete a statement to indicate an acknowledgement that they:

- understand the work requirements for their consultation, and that
- the folio content is the identified student's own work; and
- the folio complies with TASC's rule for Academic Integrity.

When community mentors or subject experts are invited to assist students in their inquiry, the teacher retains their signed form for each subject expert and submits to TASC within the TRACS zipped file upload, on the scheduled date, prior to the TASC practical/oral examination period.

## INQUIRY PRODUCT AND PRESENTATION

Students are allocated a maximum of 30 minutes to present their report with an extra 10 minutes for assessment panel questions. Candidates can aim to fully utilise both their maximum word count for the Inquiry Product and their maximum time allowed for the Inquiry Presentation. Excellent achievements by students involved their demonstration of their understanding of many of the Criterion Elements that are covered in the course teaching of the mandatory content and applications through their report, their presentation, and even in their reflections or communication logs. The mandatory content can be represented in the written form in many ways, such as summarised in a table form, or added as appendices.

### Criterion 1: apply self-directed, transdisciplinary inquiry skills

A transdisciplinary focus transcends, crosses or dissolves the boundaries between disciplines (e.g., historical, scientific and technological, mathematical, or STEM, humanities, aesthetics, philosophical or religious), in a context of real-world problems, issues or themes to develop new learnings.

It is important to note that listing a few linear subject or learning areas in a table and making no further, or scant, reference to them again does not receive a "C" rating for this criterion. For example, just listing areas such as "writing the report" as English or Literacy or Language, using ICT skills as Technology, or collating a survey or a table as Mathematics, or doing research in Psychology is not an adequate coverage of the level of critical thinking or creative thinking that constitutes a "transdisciplinary" focus.

The exacting nature and intent of this Level 3 course is to investigate knowledge *linking* two or more disciplines, or to intermesh the different knowledge sets and ways of thinking, such as 'scientific thinking" or "ways of seeing". It is important to spend the mandatory content teaching time, early in the academic year, understanding the transdisciplinary nature of human inquiry and how research can transcend the traditional subject study or the classic discipline boundaries in order to construct realistic or create new meanings in more natural contexts; and then, using these new knowledge sets to solve authentic world issues or complex problems.

### Criterion 4: apply ethical understanding throughout all phases of the inquiry

An ethical approach to collecting and compiling information throughout all phases of the inquiry involves assessing other research reports or evidence:

- in a review of existing literature (print and digital) or community expertise,
- observing several different discipline protocols and ethical guidelines in conducting social research, such as surveys with reliable tools and samples, and
- following all Harvard* referencing conventions, not only in the reference or bibliography lists but how information is reported throughout the body of the documentation.

- providing valid results and conclusions through either quantitative or qualitative research methods that can withstand scrutiny, be reliable and replicable, and are compatible or have a 'line of sight' back to the research question; and
- providing a verifiable set of communications through the Reflective Journal to indicate a process of reflection throughout the year on the effectiveness or fine-tuning a research question or the methodology; any changes to the proposal, information sources or data collected;
- finally, the success in reporting outcomes that aligned with the research question and problem-solving,
- to show how the conclusions and recommendations apply to or answer the research question.

Students who did well on this criterion showed a deep understanding of the value of a literature review. Further, to have demonstrated an understanding of the value of the referencing conventions such as Harvard* to enable standard in-text citations to honestly acknowledge others' thinking. Candidates doing well on this criterion also provided clear styles of tabulating data or devising figures and tables in their results section; provided an indication the size of their survey population; provided effective analyse and synthesis of their results; and included their ethics consent forms for the information of those participating in surveys.

**Criterion 5: apply personal and social capabilities in the process of inquiry**

The students who did not perform as well as they may have hoped were often not able to identify and approach appropriate mentors with whom to collaborate and develop the self-directed elements of their inquiry, or understand, monitor, and manage the problems and risks that are likely to occur in undertaking social research. The strongest candidates identified and managed the risks, including a discussion and reporting of these processes in their Reflective Journal.

From 2022, Criterion 5 will be assessed internally only. Thereby, teachers are better placed to assess the lived experience and development of year-long communications and sustained insights with mentors through formative assessments of the Communications Log. Criterion 5 aims to recognize a learner's knowledge skills and dispositions aligned to the Personal and Social Capability that is so well-mapped in the Australian curriculum.

In the external assessment from 2022, Criterion 5 will be replaced by Criterion 3 to determine research methodologies and utilize appropriate tools and research methods. The choice and use of an appropriate research methodology or its set of research methods as well. Examples are design thinking for an IT computational based inquiry, computational thinking, systems thinking; the scientific hypothetical-deductive method for a Science or STEM based inquiry; and/or uncovering the inductive grounded theory methodology in the social sciences for an investigative research essay.

**Criterion 6: apply creative and critical thinking to analyse and synthesise reasoning and procedures**

Students' investigations which demonstrated creativity and critical thinking in the exploration of the main question; in the methodology used; and in the interpretation of findings and in the synthesis of the candidate's own learnings are important to do well on this criterion.

An approach to an inquiry might simply be to reimagine the problem creatively and then seek alternatives ways and means of solving the problem.

To do well on this criterion, there is a need to define fully a problem rather than jumping straight into an obvious, predictable or common solution, taking the time to re-imagine the problem creatively and then to seek new or alternative ways of solving the problems. Some of the most challenging and complex issues in the world at this time, such as human health, climate change or food security are often described as 'wicked' problems because they seem intractable and require critical thinking and new creative ways to take effective action.

### Criterion 7: apply metacognition to reflect on processes and transfer knowledge into new contexts

This criterion demands that candidates reflect on the processes that they have used and show their evidence for the transfer of their conclusions or knowledge to new contexts. Making a strong reflective statement in the report that examines the original research question and its stated intention and then examines what findings have occurred is important to do well. Explaining new, unintended, or extended learning is helpful too. A short summary paragraph as the conclusion of the study is not sufficient evidence. Further, the task of applying metacognitive strategies to reflect on learning and transferring knowledge into new contexts can be simply demonstrated by text types such as graphing, mapping or the tabulation of large amounts of data into a succinct written or table form. As this criterion asks that candidates reflect on the processes they have used and show evidence of the transfer of this knowledge to new contexts, successful candidates explicitly state this process in a strong reflective statement in the inquiry conclusion section or report on it in their journals.

### Criterion 8: communicate in a range of modes and contexts

To do well on this criterion, candidates need to demonstrate a full year of study with written and oral communications. They need to use their maximum word count to reflect a year's work, to use the entire 30 minutes for presenting, and 10 minutes for questions, and then discuss their decisions for written, oral, digital, or multimodal communication modes. Oral communications need to reflect understanding of the research terminology and methods, ethical conventions, validity, and reliability of study outcomes at the Level 3 standard, and not be reliant upon vernacular language.

## THE MARKERS' CONCERNS ON STUDENT WORK CAN BE SUMMARISED

1. Having a superficial scope for transdisciplinary learning or skimming over inter-disciplinary areas can be a problem. A successful inquiry involves dissolving the boundaries and silos of current knowledge and ways of thinking between conventional disciplines and using appropriate references from different disciplines in the literature review.
2. Simply reading a script of the Executive Summary from cue cards is not the best way to present. Given a year-long study and immersion, often with subject mentors or experts, knowing the material well enough to speak about it and not reading or reciting a written component is encouraged.

3. Several candidates spent their presentation time in an unstructured conversation on their personal story, perhaps recalling internships in the previous year's course of study or future career pathways. Therefore, candidates needed to demonstrate that their personal narrative could be a research method, using participant-observation techniques or tools to control subjective bias to do well on this criterion.

4. Students need to proceed with caution if the 1st, 2nd, or 3rd interviewee does not support the inquiry question. Insufficient raw data means changing the approach! Frequently, candidates had too many questions hindering a sharper focus. Some reported that they had 'given up,' approached possible participants and were unsuccessful, and did nothing further. Successful candidates seek out other options for gaining the data, or they refine their question.

## THE MARKERS' COMMENDATIONS

1. Students who showed new learning through their mastery and use of language that was consistent, appropriate and well-defined.

2. Students who addressed the criteria and explicitly referenced them in the presentation or written work, e.g., "the ethical processes that I needed to consider were…"

3. Students who kept their eye on their research question throughout the inquiry, even if not easily resolved and then aligned their results, analysis, and conclusions sections to reflect on the inquiry question.

4. Students who used and reflected on their full range of communication modes – email, interviews, face-to-face discussions, phone conversations or website/blog feedback to interrogate a problem seriously and extensively.

5. Students who kept the ALL the criteria close at hand and asked themselves if they were addressing them and kept in mind how to discuss and manage these in both the written report and presentation.

6. Students who reflected on the research methods discussed in the class or class online teaching component of the mandatory content of the syllabus to apply creative thinking, critical thinking or metacognition to their quantitative analyses. Examples were adhering to principles of ethical research, creative use of VENN diagrams or mind maps to define the transdisciplinary study, using SMART goals or SWOT analyses, or multimodal representations of data and evidence.

* Harvard referencing convention is the ***default*** as it is the common convention and academic solution to manage a transdisciplinary approach. Note, the Harvard method does not mix or duplicate footnotes and in-text citations, and therefore, need also to contrive a numbered reference list for the footnotes on every paragraph as well as a bibliography of sources quoted, not just consulted. The Harvard style enables a simple flow of writing with in-text citations to enable academic integrity effortlessly. It provide clear direction and styles for making contents lists, tabulating data or devising figures and tables in a results section, or to analyse and synthesise results effectively without resorting to lengthy footnotes. Other referencing conventions may be considered more relevant, such as MLA8e or APA7e, but they should stand the most important and practical test of being relevant to more than one discipline, such as English/Languages and Life/Natural or Health and Behavioural Sciences respectively.