2025 ASSESSMENT REPORT
DSD315124 DATA SCIENCE AND DIGITAL SOLUTIONS

General Comments

Data Science and Digital Solutions continued in its second year in 2025, with students submitting a wide range of folio topics for external assessment. Overall, the majority of folios were completed at a satisfactory to commendable level. However, only a small number of submissions consistently provided strong evidence across all elements required by the external assessment specifications.

It is important that candidates undertaking this course, and the teachers supporting them, read the information that follows carefully, as it provides valuable insight into common strengths and limitations observed in student work, as well as guidance on what is required to achieve successful outcomes in the major folio.

As in previous years, a number of students demonstrated strength in particular sections of the folio but did not perform as well overall. In many cases, this occurred where a disproportionate amount of time and detail was devoted to selected sections, while other required components were addressed superficially or lacked sufficient evidence.

Key Recommendations for Success

Understand Assessment Criteria

Students must be fully aware of which assessment criteria are being assessed in each section of the folio, as this directly influences how evidence should be presented. The assessment criteria provide a clear framework for what is expected, and aligning responses closely to the relevant criterion is critical to overall performance. In 2025, a number of students produced detailed and well-considered content that was not always positioned in the most appropriate section of the folio, which reduced the effectiveness of the evidence provided. For example, extended discussion or analysis intended to demonstrate data interpretation or evaluation was sometimes included in sections such as the design brief, where it could not be fully credited.

Use of Digital Tools

Many students made effective use of digital tools to support their folio development. Diagramming tools such as draw.io were commonly used to produce flowcharts, system diagrams, and process models, and this practice is encouraged. Clear visual representations assist in communicating complex systems and processes and support the explanation of design decisions. Well-constructed diagrams were particularly effective where they were clearly labelled, referenced within the text, and directly linked to the system or process being described.

Technical Writing Referencing

The strongest folios demonstrated clear and consistent technical writing, using appropriate terminology supported by diagrams, tables, and external sources where relevant. Effective technical writing was characterised by precision, logical structure, and clarity of explanation, allowing both technical and non-technical readers to follow the development of the solution. Referencing was used to acknowledge sources of information, technologies, and data, and to support claims made within the folio. Where referencing was inconsistent or poorly integrated, the overall clarity and credibility of the submission was reduced.

Folio (Digital Solutions Project)

When producing a folio, students should include the following:

Project Proposal

Criteria Assessed: 1 and 4

Although listed second in the external assessment specifications, stronger folios in 2025 often positioned the project proposal at the beginning of the submission. When used in this way, the proposal provided a clear roadmap for the remainder of the folio and assisted in establishing the scope and intent of the project from the outset. Effective project proposals clearly outlined the research problem, background context, proposed solution, project management approach, stakeholder considerations, and, where appropriate, a pitch or presentation of the idea.

Recommendations for Success:

- Clearly define the research problem with context and justification. This includes identifying a specific issue or need and explaining why it is significant and appropriate for investigation within the scope of the course.
- Provide detailed stakeholder analysis and project management considerations. Strong proposals identified relevant stakeholders, described their roles and needs, and outlined a realistic approach to managing time, resources, and project stages.
- Use a structured format aligned to the assessment criteria. Well-organised proposals supported clarity and coherence and made it easier to follow how the project would be developed across the folio.

Design Brief

Criteria Assessed:1, 2, 4, and 8

Most students submitted design briefs that were clearly structured and demonstrated an understanding of the design process. The design brief functions as a blueprint for the project, describing how the proposed solution will be developed in response to the identified problem. Stronger submissions clearly articulated design intent, constraints, target audience considerations, and relevant technical and ethical factors.

Recommendations for Success:

- Ensure clear alignment with the project proposal. The design brief should extend and refine the ideas introduced in the proposal, maintaining a logical and consistent progression.
- Include annotated diagrams or sketches to communicate design intent. Visual representations were most effective when they were clearly labelled and explicitly referenced within the written explanation.
- Clearly outline constraints, target audience, and technical considerations. This includes identifying limitations that may affect the design, demonstrating an understanding of user needs, and addressing relevant technical and ethical requirements early in the process.

Research Analysis Essay

Criteria Assessed: 3, 4, and 8

While most research analysis essays were logically structured, many submissions lacked sufficient depth and critical engagement with the research. In particular, a number of essays relied on a limited range of sources, which constrained the quality of analysis. A strong research analysis essay requires thorough investigation, critical evaluation of sources, and clear integration of research findings into the context of the proposed digital solution.

Recommendations for Success:

- Integrate a broad range of high-quality sources that are clearly cited. Stronger essays drew on a variety of reputable sources, such as peer-reviewed research, industry reports, and authoritative publications, to support their discussion.
- Critically analyse research findings rather than summarising content. Effective essays evaluated the relevance, strengths, and limitations of sources, identified patterns or gaps in the research, and explained how findings informed the project direction.
- Use data and case studies to support arguments. The use of data, examples, and real-world case studies strengthened claims and demonstrated an informed understanding of the research context.

Feasibility Study

Criteria Assessed: 1, 2, 4, and 8

Many students demonstrated an emerging understanding of feasibility, though the depth and clarity of feasibility studies varied across submissions. A well-developed feasibility study evaluates whether a proposed solution is realistic and viable, taking into account technical, economic, and operational considerations within the scope of the project.

Recommendations for Success:

- Address technical, economic, and operational feasibility in a structured manner. Stronger studies clearly examined system requirements, resource implications, and practical constraints affecting implementation.
- Use quantitative or comparative data to support feasibility claims where appropriate. Evidence such as cost estimates, performance metrics, or comparisons with existing solutions strengthened feasibility arguments.

- Clearly distinguish feasibility considerations from research analysis. Effective folios treated feasibility as an evaluation of implementation practicality, rather than an extension of background research or problem exploration.

Systems Analysis of the Systems Development Process

Criteria Assessed: 1, 2, 3, and 4

As in previous years, some students combined systems analysis with design production, which limited the effectiveness of this section. Systems analysis is intended to focus on understanding the existing environment and problem context before the development of a proposed solution. Where this distinction was unclear, analysis was often superficial and did not provide a strong foundation for later design decisions.

Students are expected to provide evidence of a structured systems analysis process, which may include:

- scribed interviews, surveys, and analysis of the existing system or context
- data analysis, including consideration of data flows and data structures
- the use of case development, early prototypes, and risk analysis
- evidence of communication with relevant stakeholders.

Recommendations for Success:

- Conduct a structured analysis of the existing environment prior to system development. This includes documenting current processes, identifying limitations or inefficiencies, and gathering clear requirements.
- Use surveys, interviews, and data analysis to support findings. Evidence drawn from stakeholders and existing data strengthens the credibility of the analysis.
- Clearly explain how systems analysis informs subsequent design decisions. Strong folios demonstrated a clear link between insights gained during analysis and choices made during the design and development phases.

Design Production

Criteria Assessed: 1, 3, and 8

This section requires students to explicitly articulate how the design was developed and refined over time. While many students presented a final design, justification for design decisions and evidence of refinement were sometimes limited. Design production should demonstrate how ideas progressed from initial concepts to a resolved solution through feedback and testing.

Recommendations for Success:

- Include clear, annotated photographs or screenshots. Visual evidence was most effective when it illustrated key stages of development and was supported by explanatory annotations.
- Provide justification for design choices, supported by feedback or testing. Stronger submissions explained why particular design decisions were made, referencing user input, testing outcomes, or constraints.
- Demonstrate the evolution of the design through iterations. Evidence of refinement over multiple stages highlighted a responsive and user-focused design process.

Testing and Prototyping

While not outlined as a standalone heading in the external assessment specifications, students are encouraged to include clear evidence of testing and prototyping within their folio. Effective submissions demonstrated how testing informed refinement and supported claims made about the performance or suitability of the solution.

Students are encouraged to provide:

- testing methodology and/or experimental design
- evidence of data collection and analysis
- refinements made in response to feedback or testing outcomes.

Recommendations for Success:

- Develop a clear and structured testing plan. A testing plan should outline the testing approach, criteria, and procedures used to evaluate the solution in a systematic manner.
- Use user or stakeholder feedback to guide improvements. Feedback was most effective where it was explicitly linked to design changes or refinements.
- Present evidence of iterative prototyping and refinement. Stronger folios demonstrated multiple stages of development, showing how the solution evolved in response to testing and feedback.

Resolved Final Design Solution

Criteria Assessed: 1

As functional applications cannot be submitted as part of the external assessment, clear visual representation of the final solution is essential. The resolved final design solution should clearly communicate the intended functionality, structure, and features of the proposed system.

Recommendations for Success:

- Include clear screenshots, annotations, and diagrams. Visual representations were most effective when they were clearly labelled and supported by concise explanations.
- Use the video submission effectively to highlight key features. A short video presentation can provide an overview of the solution and demonstrate how key components are intended to operate.
- Ensure the video supplements rather than repeats folio content. Effective videos added clarity or context without duplicating information already presented in the written folio.

Conclusion

While many students demonstrated a strong understanding in particular aspects of the folio, higher levels of achievement were generally associated with a balanced and consistent approach across all sections. Clear understanding of the assessment criteria, maintenance of a logical and coherent structure, effective use of research methodologies, and appropriate referencing all remained critical components of successful submissions.

Teachers and students are encouraged to draw on the observations outlined in this report when preparing future folios, with a focus on producing work that is comprehensive, well-supported, and clearly aligned to the external assessment specifications.