Unit title:	Planning Data Analysis
SQA code:	J6V8 48
SCQF level:	8
SCQF credit points:	7

History of changes

Publication date: September 2022

Version: 01

Version number	Date	Description	Authorised by

© Scottish Qualifications Authority 2022

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Unit template: January 2022

Unit title:	Planning Data Analysis (SCQF level 8)

Unit purpose

This is about individuals understanding business problems and planning activities to deliver data analysis solutions successfully and securely. It also involves delivering data insights and supporting data driven decision making.

Learning outcome

To identify and characterise the business problem and formulate this into data analysis solution tasks and delivery plans in line with legislative and organisational requirements.

Performance requirements	**Knowledge and understanding**
1. Identifying and agreeing on business problems and their scope. 2. Capturing business needs from stakeholders to clarify the purpose of the data analysis and help inform decision making. 3. Formulating the research and business questions the data seeks to answer. 4. Prioritising and planning activities for required data collection, processing, analysis, and reporting activities. 5. Planning data security at each stage of data processing, including data access and privacy. 6. Planning to acquire data access from internal and external sources and implementing mitigations when data is inaccessible. 7. Planning to collect and integrate necessary data source including surveys securely. 8. Performing risk assessments of data analysis activity. 9. Conducting Data Protection Impact Assessments (DPIA) to identify and minimise risks relating to personal data processing activities. 10. Planning and implementing privacy by design to ensure data protection in data processing procedures.	1. The role of data in the context of the digital world. 2. How to identify and clarify business problems an organisation faces and reformulate them into data analysis problems. 3. The context and value of business data, what data is about, what is in a dataset, how the values relate to each other, and how it is being used. 4. The range of stakeholders within an organisation that may require interactions with data, and their motivations, including customer, manager, client, peer, technical and non-technical. 5. How to capture data requirements for a piece of analysis. 6. How to develop and maintain collaborative relationships within data project teams and stakeholders. 7. How to select the data analysis methods to be used based on the type of data available, the nature of the business problems and the results required. 8. The industry standard quantitative statistical analysis techniques and how to select these, including average, mean, mode, median, regression, correlation, variance, and frequency. 9. The opportunities for applying machine learning algorithms, the main types available and how to select them.

Performance requirements (continued)	Knowledge and understanding (continued)
11. Operating as part of a multi-functional team and contributing to problem design, project planning, data collection and handling, and analysis and outcomes reporting with colleagues.	10. The legal and regulatory requirements, including those related to data protection, data security, intellectual property, data sharing and privacy. 11. The ethical use of data including privacy during the whole cycle of data handling, processing, and analysis. 12. The importance of and methods for data anonymisation to ensure privacy and Intellectual Property Rights (IPR) protection.

Additional information about the unit

Assessment (evidence) requirements:

There should be a mix of **product**, **performance** and **knowledge** evidence for this unit.

Evidence should be sourced from routine work activities. **Simulation is not permissible in this unit.**

The evidence should be produced as a by-product of normal work activities. The evidence should relate to the learner's work role. For example, the risk assessments carried out should relate to data analysis activity undertaken in the workplace.

Examples of product evidence include business needs analyses and risk assessments. An example of performance evidence is observation of the learner operating as part of a multi-functional team and contributing to problem design, project planning, data collection and handling, and analysis and outcomes reporting with colleagues. An example of knowledge evidence is written evidence that the learner knows quantitative statistical analysis techniques and how to select these.

It is unlikely that the learner will be the only contributor to the production of some of the evidence required for this unit. For example, they will normally work as part of a multi-functional team in many activities, in which case the specific role of the learner should be clearly identified.

Further guidance on the assessment (evidence) requirements for this unit, and other units, can be found in the Assessment Guidance document.

Guidance on instruments of assessment:

It is anticipated that most evidence will be generated as a by-product of routine workplace activities carried out as part of the learner's job role. However, there may be occasions when activities must be undertaken to satisfy specific performance requirements or demonstrate specific knowledge and understanding.

It may be possible for one type of evidence to imply another. For example, working as part of a multi-functional team and contributing to problem design, project planning, data collection and handling, and analysis and outcomes reporting with colleagues (performance evidence), may demonstrate a wide range of knowledge and understanding (knowledge evidence). Combining assessment (evidence) in this way is encouraged. However, it is vital that each piece of evidence is clearly related to performance requirements and knowledge and understanding.

Professional recorded discussion and / or personal reflective statements can be used to demonstrate knowledge and understanding.

Additional information about the unit (continued)

Details of the relationship between the unit and relevant National Occupational Standards (if appropriate):

This unit is related to the following National Occupational Standards:

ESKITP802301: Assist in Delivering Routine Data Analysis Studies.

ESKITP802401: Design and Implement Data Analysis Studies.

ESKITP803301: Assist in Delivering Data Driven Business Insights.

https://www.ukstandards.org.uk/

Details of the relationship between the unit and other standards or curricula (if appropriate):

Assessment requirements specified by a sector or regulatory body (if appropriate):

Please refer to the Overarching Assessment Strategy for Competence-based Qualification and the associated sector-specific guidance relating to Digital Technology (Diploma in Digital Technology at SCQF Level 8) produced by SQA Accreditation (2022).

Simulation is not permissible in this unit.

Meta-skills signposting:

This unit aligns to the following meta-skills:

- Critical thinking
- Curiosity
- Focusing
- Integrity
- Sense making