



Australian Government

Department of Education, Employment and Workplace Relations

MTMBUS803A Analyse data for business decision making

Release: 1

MTMBUS803A Analyse data for business decision making

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the statistical skills and knowledge required to support decision making for a business or business unit.
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Application of the Unit

Application of the unit	This unit applies to leaders or managers who require data analysis and decision making skills and techniques to help manage their day-to-day work. They will be assembling or obtaining raw data and processing that data in order to analyse and interpret it in such a way that sound decision making can occur.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and access data sources available to the business	1.1. The data collection requirement of the business question or issue is scoped and defined. 1.2. Data sources are identified and assessed for accessibility and reliability. 1.3. Data is researched and/or collated from sources in accordance with legislation, policies and guidelines. 1.4. Accuracy and appropriateness of the data is evaluated. 1.5. Data is recorded in the desired format in accordance with professional, business and task requirements.
2. Apply data analysis and decision making techniques to analyse business data	2.1. Data is collected, stored and retrieved using software in accordance with legislation, policy and guidelines. 2.2. Spreadsheet tools are used to retrieve data and present it in suitable formats. 2.3. Graphical data is displayed in accordance with graphical presentation principles. 2.4. Quantitative and/or qualitative analysis is performed to obtain required outcome. 2.5. Analysis and descriptive tools and techniques are used appropriately given the nature of the information and the required outcomes. 2.6. Limitations in the methodology are identified and described, as appropriate. 2.7. Summary statistics are calculated from the given data set in accordance with the business requirement.
3. Produce information for business decision making	3.1. Data summaries and trends are interpreted according to accepted standards. 3.2. Statistical tests are interpreted and explained. 3.3. Data is interpreted in such a way as to inform business decision making. 3.4. Data is presented in tables, charts and maps so that the reader does not misconstrue it. 3.5. Glossaries, technical notes and referencing are included with the data, where required. 3.6. Reports are prepared and presented that include statistical concepts, tables, charts and maps in accordance with organisational policy and procedures. 3.7. Findings are presented in a way that is most appropriate for the audience. 3.8. Charts are used appropriately in presentations for the variables being charted and in accordance with accepted

ELEMENT	PERFORMANCE CRITERIA
	<i>standards.</i> 3.9. Assumptions on which the interpretation is based are communicated in accordance with audience needs.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- analyse and interpret data
- identify sources of data, collect data, follow analysis procedures and explain results
- apply decision making skills
- negotiate effectively
- collect data and produce reports
- use problem-solving, initiative and enterprise skills to produce information for business decision making
- use research skills to identify and collect data
- manage risk

Required knowledge

Knowledge of:

- relevant legislation, codes of practice and standards
- use of statistical data for business decision making
- methods of presenting data
- methods of describing data
- risk and uncertainty
- interval estimation
- hypothesis testing
- comparing group differences
- simple linear regression and correlation
- multiple regression
- time-series analysis

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- knowledge of how to:
 - differentiate between different types of data
 - differentiate between inferential and descriptive statistics
- application of linear regression and correlation analysis techniques
- knowledge of the strengths and limitations of results produced by each statistical technique (error correction and hypothesis testing)
- provision of advice for business decision making based on the results of statistical analysis.

Context of and specific resources for assessment

Assessment must ensure:

- access to an actual workplace or simulated environment
- competence is consistently demonstrated over time, and over a range and variety of complex tasks/projects and situations
- access to resources normally used in the workplace such as organisational policies and procedures, relevant legislation.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate
- series of workplace activities and projects developed and implemented as part of the organisation's business development and management
- review of applied projects and learning activities such as reports and case studies
- direct observation of contextual application
- oral or written questioning to assess knowledge.

EVIDENCE GUIDE**Guidance information for assessment**

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example, with other units in the qualification in which this unit is packaged.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Data sources may include:

- Australian Bureau of Statistics (ABS) data
- government agency sources.

Legislation, policies and guidelines may include:

- state/territory and federal legislation and regulations, such as:
 - financial management Acts
 - privacy legislation
 - Equal Employment Opportunity (EEO) and anti-discrimination legislation
 - Occupational Health and Safety (OH&S) legislation
- ethics and accountability standards
- risk management standards
- fraud control standards
- knowledge management standards
- organisational policy, procedures and protocols.

Software may include:

- database tools
- spreadsheets
- web-based tools (e.g. online survey tools)
- statistical packages.

Graphical presentation principles may include:

- understanding graphical literacy of audience
- scaling
- sample representativeness

RANGE STATEMENT	
	reporting results in formats appropriate to analysis.
Analysis techniques may include:	- arranging data into a form appropriate for analysis - construction of graphs - calculation of summary statistics - implementation of statistical tests.
Summary statistics may include:	- mean - median - mode - standard deviation - standard error - relative standard error.
Accepted standards for data may include:	- showing awareness of data accuracy and reliability - identifying other related issues, such as sample size.
Statistical tests may include:	- equivalence of means and proportions - tests of association, prediction and significance.
Statistical concepts may include:	- the results of statistical tests - trends over time - statistical associations, including correlation and probability - variability - sampling error.
Presentation of findings may include:	a mix of text, tables, charts and maps.
Accepted standards for charts may include:	- appropriately labelled - appropriate scale selection - clear formatting - sourcing and referencing data sources.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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