



Australian Government

FSKNUM033 Collect, organise and analyse complex statistical data for work

Release: 1

FSKNUM033 Collect, organise and analyse complex statistical data for work

Modification History

Release	Comments
Release 1	This version first released with FSK Foundation Skills Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to collect and organise data, present the data graphically (including grouped data), calculate measures of central tendency and spread, and analyse the results to draw conclusions. It includes extracting and analysing highly complex statistical information, undertaking workplace statistical investigations, and communicating statistical information.

An individual performing these tasks works autonomously and accesses and evaluates support from a broad range of sources as needed.

This unit applies to individuals who use, or are preparing to use, numeracy skills to complete workplace activities. This includes existing workers and individuals preparing for employment through vocational education and training. This unit should be integrated and contextualised with vocational training to support achievement of vocational competency.

This unit is aligned to, but does not fully address, the Australian Core Skills Framework (ACSF) numeracy core skill indicators .09, .10 and .11 at level 5 in the workplace and employment domain of communication.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Numeracy

Elements and Performance Criteria

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Extract and interpret complex statistical data	1.1 Identify workplace issue requiring investigation and describe specifications and sources of data collection for workplace task,

Element	Performance Criteria
and information	including being aware of audience of data and purpose of collection 1.2 Extract relevant complex statistical data and information from spreadsheets or other sources of raw workplace data required to support analysis 1.3 Analyse and interpret key features of complex workplace graphs and charts
2. Undertake statistical investigation using highly developed problem solving processes	2.1 Select method of solution from an expanded range of highly developed mathematical problem solving strategies and processes to complete workplace task 2.2 Develop a hypothesis for the workplace issue being investigated 2.3 Select a method to collect workplace data and collect relevant data sample 2.4 Collect, order and collate data into a table or spreadsheet or other appropriate software 2.5 Represent statistical data in appropriate graphical formats for analysis 2.6 Calculate summary statistics 2.7 Check and reflect on mathematics used, outcomes, and workplace implications of findings using evaluation techniques
3. Communicate information from statistical investigation	3.1 Use formal and specialised written mathematical representation and symbolism to document, interpret and communicate statistical thinking, problem solving process, outcomes and implications 3.2 Use specialised mathematical and general language to discuss, explain and interpret the statistical processes, results and implications

Foundation Skills

This section describes language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Technology	• Uses scientific calculators and spreadsheets for analysis of data

Mapping Information

Supersedes and is equivalent to FSKNUM33 Collect, organise and analyse statistical data for work.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=f572fe10-a855-4986-9295-3852c771f178>

Assessment Requirements for FSKNUM033 Collect, organise and analyse complex statistical data for work

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- perform a broad range of multi-step mathematical problem solving processes with statistical data and information to complete sophisticated workplace tasks, including:
 - collecting, organising, displaying and analysing statistical data on at least one occasion to meet a workplace purpose, including:
 - using appropriate methods to collect data
 - using ungrouped and grouped data
 - calculating summary statistics, including:
 - measures of central tendency (mean, median and mode)
 - measures of spread (including standard deviation)
 - percentiles
 - representing data in appropriate graphical formats to illustrate the data and its features
 - interpreting data, including:
 - data trends
 - data validity and reliability
 - identification of any misleading information
 - using relevant technology such as CAS calculator, spreadsheets or other mathematical or workplace software
 - making estimations to check problem solving outcomes and determine appropriate accuracy required for task
 - critically reviewing mathematic processes and outcomes obtained, and evaluating real-world implications.
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Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- relevance of data to the workplace
- data collection methods and types of data relevant to workplace
- types, features and uses of a range of graphs and statistical representations
- differences between grouped and ungrouped data
- measures of central tendency (mean, median and mode)
- measures of spread including standard deviation
- purpose and use of relevant technology such as CAS calculator, spreadsheets or other mathematical or workplace software
- developed estimation and assessment processes
- implications of calculations and results for workplace tasks
- specialised and formal mathematical written language and symbolism required to document, interpret and communicate statistical analysis relevant to workplace task
- specialised mathematical oral language relevant to workplace task.
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Assessment Conditions

Competency is to be assessed in the workplace, a workplace simulated environment or a vocational training context.

Assistive technologies can be utilised to assist with oral and written communication.

Skills must be demonstrated independently using highly complex texts and tasks that reflect those typically found in a workplace.

The following resources are to be made available:

- a scientific calculator
- data utilised in the performance evidence
- own familiar support resources.

Assessors must:

- satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards, and
- have sound knowledge of the ACSF and performance features of the ACSF level being assessed, and
- have demonstrable expertise, knowledge and skills in the vocational contextualisation and assessment of the core skill, numeracy, and
- have completed the following or equivalent:
 - TAESS00009 Address Foundation Skills in Vocational Practice Skill Set; or
 - a higher level education qualification, such as:
 - TAE80113 Graduate Diploma of Adult Language, Literacy and Numeracy Practice (and its equivalent TAE70111); or

- Bachelor of Education, Graduate Certificate or Graduate Diploma of Education, or higher. This may include qualifications relating to TESOL, adult education or vocational education.

Links

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