

PERFORM DESCRIPTIVE DATA ANALYSIS

UNIT CODE: UNIT CODE: MATH/OS/AS/CR/03/6/A

Unit description

This unit specifies the competencies required to perform descriptive data analysis. The analysis describes the basic features of the data in a study. they provide simple summaries about the sample and the measures used in the data. The unit involves, receive data from primary or secondary source, perform further clean up if from secondary source, apply descriptive statistical tools, record descriptive statistics output, interpret output and prepare report, prepared presentation tools

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function.	These are assessable statements which specify the required level of performance for each of the elements. <i>Bold and italicized terms are elaborated in the Range</i>
1. Receive data from primary or secondary source	1.1 Data is received as per the workplace procedures 1.2 Data is imported from storage database as per the procedures 1.3 Data is converted into <i>relevant format</i> as appropriate as per the <i>available software</i> .
2. Perform further clean up if from secondary source	2.1 Missing values are handled as per the procedure. 2.2 Inconsistent values are handled as per the procedure 2.3 Outliers are handled as per the procedure 2.4 New variables are created as per the clean-up needs
3. Apply descriptive statistical tools	3.1 Descriptive tools and techniques are applied as per the procedures 3.2 Percentages, ratios and proportions from the data are generated as per the procedure

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	3.3 Summary, frequency tables and charts are generated and analysed as per the data and procedure. 3.4 Ungrouped data is grouped as per the required classes size and number of classes.
4. Record descriptive statistics output	4.1 The results obtained are recorded as per the summary output. 4.2 The report is prepared as per the descriptive output
5. Interpret output and prepare report.	5.1 Descriptive outputs are interpreted as per the summaries 5.2 A report is prepared for presentation to stakeholders and interested parties as per results 5.3 Report formatting is done as per the workplace procedure
6. Prepared presentation tools	5.1 Presentation template is prepared as per the report. 5.2 Presentation tools and equipment's are prepared and assembles as per the workplace procedure 5.3 The template is presented to the relevant stakeholders as per the workplace procedure.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
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1. Available Software may include but is not limited to:	<ul style="list-style-type: none"> • Excel • R • SPSS • Stata • Minitab • GenStat etc.
2. relevant format includes but is not limited to:	<ul style="list-style-type: none"> • excel • SPSS
3. Descriptive statistical tools include but is not limited to	<ul style="list-style-type: none"> • Frequency tables • Charts • Graphs • Summaries e.g. Percentages, ratios, proportions
4. Charts may include but is not limited to:	<ul style="list-style-type: none"> • Linear Graphs • Histogram • Pie charts • Bar graphs • Scatter plot • Stemplots etc.

REQUIRED SKILLS AND KNOWLEDGE

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

Required Skills

The individual needs to demonstrate the following skills:

- Analytical Skills
- Teamwork
- Problem solving
- Decision making
- Concentration
- Attention to detail
- Able to meet deadlines
- Communication skills
- Leadership skills
- Presentation skills

Required Knowledge

The individual needs to demonstrate knowledge of:

- Computer applications e.g. Excel, Microsoft Word, PowerPoint etc.
- Generating frequency tables, charts, line graphs, histogram, stemplot, bar graphs etc.
- Descriptive statistics

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Summary and or frequency tables are generated using software of choice as per the data.</p> <p>1.2 Graphs and charts etc. are generated using a software of choice as per the data</p> <p>1.3 PowerPoint presentation is prepared as per the generated results</p> <p>1.4 The results are presented to stakeholders as per the workplace procedures.</p>
2. Resource Implications	<p>The following resources should be provided:</p> <p>2.1 Computer with software i.e. R, SPSS, excel etc.</p> <p>2.2 Projector</p> <p>2.3 Seminar, board rooms or a presentation room.</p> <p>2.4 Stationary</p>
3. Methods of Assessment	<p>Competency may be assessed through:</p> <p>3.1 Portfolio Assessment</p> <p>3.2 Interview</p> <p>3.3 Case Study/Situation</p> <p>3.4 Oral questioning</p> <p>3.5 Written Tests</p>
4. Context of Assessment	<p>Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment or During Industrial Attachment.</p>
5. Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>