Open Awards Qualification Unit

This unit forms part of a regulated qualification.

1 Unit Details

Unit Title:	Understanding Quantitative and Statistical Methods for Logistics
Unit Reference Number:	H/618/7522
Level:	3
Credit Value:	4
Minimum GLH:	32

2 Learning Outcomes and Criteria

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand key numerical measures, graphs and diagrams	1.1 Interpret statistical diagrams, including bar charts, cumulative frequency diagrams, scatter diagrams, pie charts, histograms and line graphs
	1.2 Calculate averages, including mean, median and mode
	1.3 Calculate standard deviation, using mean and standard deviation to compare data sets
2. Understand methods of data collection and handling	2.1 Describe methods for data collection
	2.2 Describe the main methods by which data is sampled
	2.3 Explain the difference between biased and unbiased data and suggest reasons for bias
	2.4 Determine the mean, median and modal values for a set of data
	2.5 Determine whether data has positive, negative or zero skew

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3.	Be able to organise and present data	3.1 Organise types of data as qualitative, quantitative, discrete and continuous
		3.2 Construct suitable charts/diagrams for presenting data to others
4.	Be able to calculate and interpret probability	4.1 Calculate probabilities, including single, independent, mutually exclusive and conditional probability
		4.2 Interpret probabilities using diagrams including Venn, Tree and two way tables
5.	Understand the use of the inter-quartile range	5.1 Draw box plots to determine inter-quartile range
		5.2 Interpret box plots to comment on skew in data
6.	Understand the use of standard deviation and standard error	6.1 Calculate the standard deviation of a data set
		6.2 Use the standard deviation to determine the standard error
		6.3 Use tables to determine the 95% confidence interval of a data set
		6.4 Draw conclusions from standard deviation, referring to the original problem

Learning Outcome 1 - Indicative Content

Learners should consider the following types of graphs and charts including:

bar charts; pie chart, line graph, cumulative frequency diagrams, scatter diagrams; holograms and histograms

Types of Averages should include mean, median and mode and standard deviations.

Learning Outcome 2 - Indicative Content

Learners should consider various methods of data collection including qualitative, quantitative, discrete and continuous.

Learning Outcome 4 - Indicative Content

Learner should consider tools to calculate probability including tree, venn diagram and two way tables.

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