

LEVEL 2

UNIT 17: Using data analysis software

L/615/1386

Guided learning hours: 60

Essential resources required for this unit: Any software supporting data analysis.

This unit is internally assessed and externally moderated by OCR.

UNIT AIM

Everyone and every business uses data. Whether it is the brain calculating the speed of a car, a business forecasting sales or a manufacturer identifying colours for new products based on historical customer preferences. The data used must be grouped, sorted, validated and processed to make it understandable and useful. Software is used to analyse this data and provide businesses with the ability to carry out the necessary actions to convert it into business information.

This unit will enable you to understand the difference between data and information and the quality of the data, which data needs to be analysed for a given business need and how to carry out the analysis and present the findings and recommend the use of your analysis model for future analyses and decision making.

This unit is optional in the Award in Digital Business and is mandatory in the Certificate in IT. It is also a mandatory unit in the Digital Business Practitioner pathway in the Diploma.

TEACHING CONTENT

The teaching content in every unit states what has to be taught to ensure that learners are able to access the highest grades.

Anything which follows an i.e. details what must be taught as part of that area of content. Anything which follows an e.g. is illustrative, it should be noted that where e.g. is used, learners must know and be able to apply relevant examples in their work, although these do not need to be the same ones specified in the unit content.

For internally assessed units you need to ensure that any assignments you create, or any modifications you make to an assignment, do not expect the learner to do more than they have been taught, but must enable them to access the full range of grades as described in the grading criteria.

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
<p>1. Understand the data used by business</p>	<p>1.1. Types of data stored, i.e.:</p> <ul style="list-style-type: none"> • text • characters • images • numbers • lack of formal organisation <p>1.2. Sources of data, i.e.:</p> <ul style="list-style-type: none"> • internal (e.g. financial reports, market analysis) • external (e.g. government, suppliers, trade bodies) <p>1.3. Purpose of data, i.e.:</p> <ul style="list-style-type: none"> • operational support (e.g. monitoring and controlling activity) • analysis (e.g. to identify patterns or trends) • decision making (e.g. operational, tactical, strategic) • marketing and sales • communication <p>1.4. Characteristics of data, i.e.:</p> <ul style="list-style-type: none"> • reliability • validity • relevance • time frame • accessible • quality • cost-effective • appropriate. <p>1.5. The impacts of poor data on business, i.e.:</p> <ul style="list-style-type: none"> • monetary costs, i.e.: <ul style="list-style-type: none"> ○ time ○ poor decision making (e.g. reduced profits, loss of sales, etc.) ○ excessive costs (e.g. selecting expensive raw materials, systems, delivery methods) • reputation, i.e.: <ul style="list-style-type: none"> ○ poor quality of service to clients ○ loss of client confidence or respect ○ loss of markets

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
<p>2. Be able to select software to analyse data for business purposes</p>	<p>2.1. Types of software used to analyse quantitative data i.e.:</p> <ul style="list-style-type: none"> • spreadsheets • databases • specialist software (e.g. SPSS, Minitab, QDA Miner, Solver) <p>2.2. Business uses for data analysis, i.e.:</p> <ul style="list-style-type: none"> • business intelligence (e.g. efficiency of business processes, decision making) • cost management • forecasting • staffing • market share • sales • time management • customer satisfaction <p>2.3. Features within software, i.e.:</p> <ul style="list-style-type: none"> • spreadsheet (e.g. mean, median, range, forms, reports, queries, external data, financial, functions, formulae) • database (e.g. queries, reports, relational tables) • specialist software e.g. (forecasting, visualisations) <p>2.4. Functions, e.g.:</p> <ul style="list-style-type: none"> • range of presentation styles such as graphs, charts, tables, reports • data analysis such as pivot tables and scenarios • data organisations such as sorting, querying and filtering • other business forecasting facilities
<p>3. Be able to use software to analyse data for business purposes</p>	<p>3.1. Considerations for data selection, i.e.:</p> <ul style="list-style-type: none"> • purpose to business • extent of data (subsets) • source of data • characteristics required for sourced data • justification. <p>3.2. Use an appropriate range of features for proposed software, e.g. (tables, queries, forms, reports, linked data, charts, graphs, formulae, functions, etc.).</p> <p>3.3. Documentation formats, i.e.:</p> <ul style="list-style-type: none"> • charts • graphs • tables • reports • video
<p>4. Be able to present the results of data analysis to the client</p>	<p>4.1. Methods of presentation, i.e.:</p> <ul style="list-style-type: none"> • written report • graphs and charts • presentation • forecasts. <p>4.2. Using an analysis model,(i.e. support decision making.)</p>

GRADING CRITERIA

LO	Pass	Merit	Distinction
	The assessment criteria are the Pass requirements for this unit.	To achieve a Merit the evidence must show that, in addition to the Pass criteria, the candidate is able to:	To achieve a Distinction the evidence must show that, in addition to the pass and merit criteria, the candidate is able to:
1. Understand the data used by business	P1: Outline types and sources of data used by business		
	P2: Describe the characteristics of data	M1: Explain how poor data can impact on a business	
2. Be able to select software to analyse data for business purposes	P3: Select software to analyse data for a specified business need	M2: Review the features and functions of the selected software	
3. Be able to use software to analyse data for business purposes	P4: Select data for analysis for a specified business need		D1: Justify the choice of selected data for a specified business need
	P5: Analyse the selected data for a specified business need	M3: Document the outcomes of data analysis	
4. Be able to present the results of data analysis to the client	P6: Present the outcomes of data analysis to the business.		D2: Recommend use of the analysis model to support future business decision making

SYNOPTIC ASSESSMENT AND LINKS BETWEEN UNITS

When learners are taking an assessment task, or series of tasks, for this unit they will have opportunities to draw on relevant, appropriate knowledge, understanding and skills that they will have developed through other units. See section 6 of the Centre Handbook for more information on synoptic assessment.

This unit and specific LO	Name of other unit and related LO
LO1: Understand the data used by business	<p>Unit 1: Essentials of IT LO5: Know about the benefits of using IT in business</p> <p>Unit 2: Essentials of cyber security LO1: Know about aspects of cyber security LO2: Understand the threats and vulnerabilities they can make LO3: Understand how organisations/individuals can minimise impacts from cyber security incidents</p> <p>Unit 5: Creating business solutions LO2: Be able to designs solutions to meet business needs LO3: Be able to present business solutions to stakeholders</p> <p>Unit 6: Participating in a project LO2: Be able to contribute to a project</p> <p>Unit 8: Using emerging technologies LO1: Know about the technologies currently emerging LO2: Be able to explore how emerging technologies can support business needs</p> <p>Unit 16: Using social media channels for business LO1: Know the social media channels used in business LO2: Be able to select social media channels to meet business needs</p> <p>Unit 18: Creating visual business products LO1: Know about creating visual products for business</p>
LO2: Be able to select software to analyse data for business needs	<p>Unit 1: Essentials of IT LO2: Know about software components LO5: Know about the benefits of using IT in business</p> <p>Unit 2: Essentials of cyber security LO1: Know about aspects of cyber security LO2: Understand the threats and vulnerabilities they can make LO3: Understand how organisations/individuals can minimise impacts from cyber security incidents</p> <p>Unit 5: Creating business solutions LO2: Be able to designs solutions to meet business needs LO3: Be able to present business solutions to stakeholders LO4: Be able to use IT applications to meet business needs</p>

This unit and specific LO	Name of other unit and related LO
	<p>Unit 6: Participating in a project LO2: Be able to contribute to a project</p> <p>Unit 16: Using social media channels for business LO2: Be able to select social media channels to meet business needs</p> <p>Unit 18: Creating visual business products LO1: Know about creating visual products for business LO2: Be able to select software and hardware for creating visual products for business needs</p>
LO3: Be able to use software to analyse data for business needs	<p>Unit 1: Essentials of IT LO5: Know about the benefits of using IT in business</p> <p>Unit 2: Essentials of cyber security LO1: Know about aspects of cyber security LO2: Understand the threats and vulnerabilities they can make LO3: Understand how organisations/individuals can minimise impacts from cyber security incidents</p> <p>Unit 5: Creating business solutions LO2: Be able to designs solutions to meet business needs LO3: Be able to present business solutions to stakeholders LO4: Be able to use IT applications to meet business needs</p> <p>Unit 6: Participating in a project LO2: Be able to contribute to a project</p> <p>Unit 7: Pitching the product LO2: Be able to pitch a product to internal stakeholders</p> <p>Unit 18: Creating visual business products LO3: Be able to create visual products to meet a business need LO4: Be able to improve visual products to meet a business need</p>
LO4: Be able to present the results of data analysis to the client	<p>Unit 1: Essentials of IT LO5: Know about the benefits of using IT in business</p> <p>Unit 2: Essentials of cyber security LO1: Know about aspects of cyber security LO2: Understand the threats and vulnerabilities they can make LO3: Understand how organisations/individuals can minimise impacts from cyber security incidents</p> <p>Unit 5: Creating business solutions LO2: Be able to designs solutions to meet business needs LO3: Be able to present business solutions to stakeholders LO4: Be able to use IT applications to meet business needs</p> <p>Unit 6: Participating in a project</p>

This unit and specific LO	Name of other unit and related LO
	LO2: Be able to contribute to a project Unit 7: Pitching the product LO2: Be able to pitch a product to internal stakeholders Unit 18: Creating visual business products LO3: Be able to create visual products to meet a business need LO4: Be able to improve visual products to meet a business need

ASSESSMENT GUIDANCE

LO1 Understand the data used by business

P1: The learner should outline the sources and types of data used by business and the formats this may take. They may choose to research data within an identified business or by theoretical businesses and where it comes from and how it could be used. By researching and thinking about larger businesses they are familiar with, such as retail and social media, learners will still be able to identify the data and types. The evidence could be in the form of a report, leaflet or blog.

P2: The learner must describe the characteristics which are important when deciding what data is appropriate for a particular business need, using examples. They should consider different scenarios as to when different characteristics are more important than others. The evidence could take the form of a presentation, a leaflet or recorded oral presentation.

M1: The learners must explain how poor data can impact on a business. This could be an extension to P2 using examples to aid the explanation of the effect that the wrong choice of characteristics and poor data can have on business.

LO2 Be able to select software to analyse data for business needs

P3: The learner must select software to analyse data for a specified business need around a given scenario which requires them to select a specific software program to use to analyse the data for the identified business. Learners must have a choice of software from which to select to enable them to justify their choices in LO3.

M2: The learner must review the features and functions of the selected software for use in the data analysis for the business need. This could be a presentation, table or report examining the features and functions of the software selected in P3 and how they support the analysis.

LO3 Be able to use software to analyse data for business needs

P4: The learner must select data for analysis for a specified business need and should have access to data which enables them to select the subset of data which they will then analyse to meet the identified business need. The evidence will be the selected data file.

D1: The learner must justify the choice of selected data for a specified business need. The evidence could be an extension of the evidence for P4 and should demonstrate why the choice of the data subset will enable the desired business outcome. The evidence could be presented as a separate report, table or presentation or a continuation of the format used in P4.

P5: The learner must analyse the selected data for a specified business need. The evidence could be annotated screenshots of the analysis, a screen capture video of the steps in the analysis, copies of functions, macros and formatted data.

M3: The learner must document the outcomes of data analysis carried out in P5 and evidence may be presented as a report, a presentation, audio/visual presentation.

LO4 Be able to present the results of data analysis to the client.

P6: The learner must present the outcomes of data analysis to the business. The evidence could be a presentation to the business, a report or a webinar.

D2: The learner must recommend use of the analysis model to support future business decision making. This may be a follow on from the evidence for P6 but must clearly make recommendations on how the model created can support the business in making business decisions in the future. The evidence may be incorporated in to P6 or be presented separately as a report or presentation with detailed speaker notes.

Feedback to learners: you can discuss work-in-progress towards summative assessment with learners to make sure it's being done in a planned and timely manner. It also provides an opportunity for you to check the authenticity of the work. You must intervene if you feel there's a health and safety risk.

Learners should use their own words when producing evidence of their knowledge and understanding. When learners use their own words it reduces the possibility of learners' work being identified as plagiarised. If a learner does use someone else's words and ideas in their work, they must acknowledge it, and this is done through referencing. Just quoting and referencing someone else's work will not show that the learner knows or understands it. It has to be clear in the work how the learner is using the material they have referenced to inform their thoughts, ideas or conclusions.

For more information about internal assessment, including feedback, authentication and plagiarism, see the centre handbook. Information about how to reference is in the OCR Guide to Referencing available on our website: <http://www.ocr.org.uk/i-want-to/skills-guides/>

MEANINGFUL EMPLOYER INVOLVEMENT - a requirement for the Technical certificate qualifications

These qualifications have been designed to be recognised as Technical certificates in performance tables in England. It is a requirement of these qualifications for centres to secure for every learner employer involvement through delivery and/or assessment of these qualifications.

The minimum amount of employer involvement must relate to at least one or more of the elements of the mandatory content. This unit is mandatory in the Certificate in IT, and also in the Digital Business Practitioner pathway of the Diploma size qualification.

Eligible activities and suggestions/ideas that may help you in securing meaningful employer involvement for this unit are given in the table below.

Please refer to the *Qualification Handbook* for further information including a list of activities that are not considered to meet this requirement.

Meaningful employer engagement	Suggestion/ideas for centres when delivering this unit
1. Learners undertake structured work-experience or work-placements that develop skills and knowledge relevant to the qualification.	Work-placement can take a variety of forms such as paid or unpaid work. Local businesses may be able to provide opportunities for learners to participate in the data analysis process.
2. Learners undertake project(s), exercises(s) and/or assessments/examination(s) set with input from industry practitioner(s).	Local businesses may be willing to provide projects, based on their own organisations, which learners will then develop. Employees of the company may engage directly with learners as the “client” or “stakeholder” others may just provide the project but expect that the assessor will act as the “stakeholder” and only seeking further clarification from the company.
3. Learners take one or more units delivered or co-delivered by an industry practitioner(s). This could take the form of master classes or guest lectures.	It may be possible for a local company to allow one of their own staff, leave of absence to work with learners on a unit such as data analysis. Larger employees often have schemes in place which encourage engagement with the local community.
4. Industry practitioners operating as ‘expert witnesses’ that contribute to the assessment of a learner’s work or practice, operating within a specified assessment framework. This may be a specific project(s), exercise(s) or examination(s), or all assessments for a qualification.	The practitioner will provide feedback on the quality of the work; this may be verbally to the assessor who will have to take detailed notes, a written report by the practitioner or an audio or audio/visual recording. The assessor will need to explain what is required of the user for this unit and ensure that the practitioner understands the assessment requirements and the level.

You can find further information on employer involvement in the delivery of qualifications in the following documents:

- [Employer involvement in the delivery and assessment of vocational qualifications](#)
- [DfE work experience guidance](#)

To find out more

ocr.org.uk/it

or call our Customer Contact Centre on **02476 851509**

Alternatively, you can email us on **vocational.qualifications@ocr.org.uk**



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