Accelerate People

Qualification Specification

Accelerate People L4 EPA for Data Analyst ST0118/AP03

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Version History		
Version	**Date Amended**	**Changes Made**
1.0	Sept 2022	Document created.
2.0	January 2023	Edits to wording throughout to focus on assessment criteria.
2.1	February 2025	Document rebranded.
3.0	February 2025	Edited gateway requirements to accommodate change in policy for English and Maths requirements.

Accelerate People

Contents

Qualification Objective

The level 4 Data Analyst apprenticeship is one of a suite of apprenticeships that have been designed by industry employers to meet a range of job roles across different industries and sizes of business.

Accelerate People are an end-point assessment organisation (EPAO) for the digital apprenticeship standards that are defined by the Institute for Apprenticeships & Technical Education (IfATE). The apprenticeship standard and assessment plan can be found on the IfATE website.

As part of this apprenticeship all apprentices are required to complete an independent end-point assessment (EPA). The purpose of the EPA is to independently assess that any apprentice on this standard is competent in a relevant job role and can evidence meeting all the assessment criteria relating to the knowledge, skills and behaviours (KSB) outcomes.

The Level 4 Data Analyst Apprenticeship

Role Profile:

This occupation is found in any employer in any sector that uses data to make business decisions. Data analysts may work in various departments within a single employer, (for example finance, sales, HR, manufacturing, or marketing), and in any employment sector, public or private, including retail, distribution, defence, banking, logistics, media, local government etc.

The broad purpose of the occupation is to ascertain how data can be used in order to answer questions and solve problems. Data analysis is a process of requirement-gathering, inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, informing conclusions and supporting decision-making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names. In today's world, data analysis plays a crucial role in making decisions more evidence-based and helping organisations operate more effectively.

For example: a data analyst may investigate social media trends and their impact on the organisation. In retail, a data analyst may break down sales figures to make recommendations on product placement and development. In HR a data analyst may investigate staff retention rates, in order to decide on recruitment strategy. In a hospital,

a data analyst may investigate wait times for different departments, in order to provide a better service to its patients.

In their daily work, an employee in this occupation interacts with internal or external clients. Internally, the data analyst may work with many people within their organisation, at different levels. Externally a data analyst may provide data analysis services to other organisations on behalf of their employer. Data analysts would normally be office based and work normal business hours.

An employee in this occupation will be responsible for the creation and delivery of their own work, to meet business objectives. The data analyst will be responsible for working within the data architecture of the company and ensuring that the data is handled in a compliant, safe and appropriately secure manner, understanding and adhering to company data policy and legislation. Data analysis is a fast-moving and changing environment, and data analysts need to continue to stay abreast of, and engaged with, changes and trends in the wider industry; including data languages, tools and software, and lessons learnt elsewhere.

Typical Job Titles:

Data Analyst, Departmental Data Analyst, Energy Data Analyst, Junior Analyst, Marketing Data Analyst, Problem Analyst.

Duties:

This apprenticeship standard includes duties to support alignment between the job role and the apprenticeship standard. Listed below are the duties that all apprentices must demonstrate in their apprenticeship. These duties are not assessed or graded as part of the EPA.

Duty 1: Identify data sources to meet the organisation's requirement, using evidence-based decision making to establish a rationale for inclusion and exclusion of various data sets and models.

Duty 2: Liaise with the client and colleagues from other areas of the organisation to establish reporting needs and deliver insightful and accurate information.

Duty 3: Collect, compile and, if needed, cleanse data, such as sales figures, Digital Twins etc. solving any problems that arise, to or from a range of internal and external systems.

Duty 4: Produce performance dashboards and reports in the Visualisation and Model Building Phase.

Duty 5: Support the organisation by maintaining and developing reports for analysis to aid with decisions, and adhering to organisational policy/legislation.

Duty 6: Produce a range of standard and non-standard statistical and data analysis reports in the Model Building phase.

Duty 7: Identify, analyse, and interpret trends or patterns in data sets.

Duty 8: Draw conclusions and recommend an appropriate response, offer guidance or interpretation to aid understanding of the data.

Duty 9: Summarise and present the results of data analysis to a range of stakeholders, making recommendations.

Duty 10: Provide regular reports and analysis to different management or leadership teams, ensuring data is used and represented ethically in line with relevant legislation (e.g. GDPR which incorporates Privacy by Design).

Duty 11: Ensure data is appropriately stored and archived, in line with relevant legislation e.g. GDPR.

Duty 12: Practice continuous self-learning to keep up to date with technological developments to enhance relevant skills and take responsibility for own professional development.

Entry Requirements

Qualifications

Apprentices aged 16-18 on their apprenticeship start date, without level 2 English and maths, will need to achieve this level prior to taking the EPA. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Apprentices aged 19+ on their apprenticeship start date, without level 2 English and maths, are exempt from achieving this prior to taking their EPA; this exemption is by prior agreement between the apprentice and employer.

Experience

There are no pre-requisite knowledge, skills or understanding requirements defined for entry onto this qualification.

EPA Requirements

To successfully complete the level 4 Data Analyst apprenticeship apprentices must achieve at least a pass in both EPA assessment methods. This EPA consists of two discrete assessment methods which have the following grades awarded.

Assessment Method 1 (AM1): Project with presentation and questioning.

- Fail.
- Pass.
- Distinction.

Assessment Method 2 (AM2): Professional discussion with portfolio.

- Fail.
- Pass.
- Distinction.

All assessment methods must be taken within a six-month period, otherwise the entire EPA will need to be re-sat/re-taken.

EPA Gateway

For this apprenticeship all apprentices must spend a minimum of 12 months on programme, of which a minimum of 20% must be spent undertaking off-the-job training, before being eligible to undertake the EPA.

Before starting the EPA, an apprentice must meet the following gateway requirements:

- The employer is satisfied that the apprentice is working at or above the occupational standard.
- Apprentices must have compiled and submitted a portfolio of evidence to underpin the professional discussion.
- Apprentices must have achieved English and Maths qualifications in line with the apprenticeship funding rules.

Apprentices may request additional time if they require a reasonable adjustment. Information on how and when to apply is contained within the reasonable adjustments policy.

Once the apprentice is ready to enter gateway the following must be submitted to progress:

- Gateway form:
    - Demonstrating where evidence has met the outcomes listed on the standard.
    - Demonstrating where the knowledge has been completed and uploading evidence of any certificates, if applicable.
    - Confirming the preferred date for each assessment method.
    - Advising Accelerate People if the apprentice requires any reasonable adjustments to be made during the EPA.
- Confirmation signatures that the apprentice is ready for the EPA.
- Evidence of:
    - Maths and English qualifications at Level 2 or above (or acceptable equivalent as specified in the entry requirements section), **or**
    - Confirmation that the apprentice is exempt from achieving English and Maths qualifications.
- The apprentices completed electronic portfolio (for AM2).

The gateway form along with all documentation must be uploaded before the EPA can commence. Failure to upload any of the required documentation may delay the EPA start date.

Knowledge, Skills and Behaviours

There are no mandatory vendor qualifications or knowledge modules for this apprenticeship. Apprentices are expected to be able to demonstrate competence against the assessment criteria specified within the assessment plan. The assessment

criteria are based on the following KSBs, which apprentices are expected to be competent in before entering gateway.

Knowledge

K1: Current relevant legislation and its application to the safe use of data.

K2: Organisational data and information security standards, policies and procedures relevant to data management activities.

K3: Principles of the data analysis life cycle and the steps involved in carrying out routine data analysis tasks.

K4: Principles of data, including open and public data, administrative data, and research data.

K5: The differences between structured and unstructured data.

K6: The fundamentals of data structures, database system design, implementation and maintenance.

K7: Principles of user experience and domain context for data analytics.

K8: Quality risks inherent in data and how to mitigate/resolve these.

K9: Principal approaches to defining customer requirements for data analysis.

K10: Approaches to combining data from different sources.

K11: Approaches to organisational tools and methods for data analysis.

K12: Organisational data architecture.

K13: Principles of statistics for analysing datasets.

K14: The principles of descriptive, predictive and prescriptive analytics.

K15: The ethical aspects associated with the use of and collation of data.

Skills

S1: Use data systems securely to meet requirements and in line with organisational procedures and legislation, including principles of Privacy by Design.

S2: Implement the stages of the data analysis lifecycle.

S3: Apply principles of data classification within data analysis activity, flexing approach as necessary.

S4: Analyse data sets taking account of different data structures and database designs.

S5: Assess the impact on user experience and domain context on the data analysis activity.

S6: Identify and escalate quality risks in data analysis with suggested mitigation/resolutions as appropriate.

S7: Undertake customer requirements analysis and implement findings in data analytics planning and outputs.

S8: Identify data sources and the risks, challenges to combination within data analysis activity.

S9: Apply organisational architecture requirements to data analysis activities.

S10: Apply statistical methodologies to data analysis tasks.

S11: Apply predictive analytics in the collation and use of data.

S12: Collaborate and communicate with a range of internal and external stakeholders using appropriate styles and behaviours to suit the audience.

S13: Use a range of analytical techniques such as data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data.

S14: To collate and interpret qualitative and quantitative data and convert into infographics, reports, tables, dashboards, and graphs.

S15: Select and apply the most appropriate data tools to achieve the best outcome.

Behaviours

B1: Maintain a productive, professional, and secure working environment.

B2: Shows initiative, being resourceful when faced with a problem and taking responsibility for solving problems within their own remit.

B3: Works independently and collaboratively.

B4: Logical and analytical.

B5: Identifies issues quickly, enjoys investigating and solving complex problems and applies appropriate solutions. Has a strong desire to push to ensure the true root cause of any problem is found and a solution is identified which prevents recurrence.

B6: Demonstrates resilience by viewing obstacles as challenges and learning from failure.

B7: Demonstrates an ability to adapt to changing contexts within the scope of a project, direction of the organisation or Data Analyst role.

Assessment

AM1: Project with Presentation and Questioning

The apprentice will conduct their project and submit an electronic based report and presentation to the EPAO after a maximum of 8 weeks of the EPA start date. Apprentices will prepare their project report and presentation once they have passed the gateway. Following submission of the project, the presentation with questioning will take place with an independent assessor.

Project Report

Whilst completing the project, the apprentice should be subject to normal workplace supervision.

The project may be based on any of the following:

- Patterns/trends and predictions.
- Presenting statistical analysis results to inform decisions.
- Optimising data models using statistical measures.
- Other relevant project ideas are permitted.

The project report has a maximum word limit of 3,500, with a tolerance of plus or minus 10% (anything outside of this will be marked as a failure). Appendices, references, diagrams and/or video clips of up to 10 minutes in length are not included in this total (the video clip must be a file that can be uploaded, not a link to a video). The project

must map (in an appendix) how it evidences the relevant KSBs for this assessment method as per the table below.

As a minimum all project reports must include:

- An introduction.
- The scope of the project (including key performance indicators).
- Project outcomes and how the outcomes were achieved.
- A project plan.
- Consideration of legislation, regulation, industry and organisational policies, procedures and requirements.
- Analysis.
- Research and findings.
- Recommendations and conclusions.

Presentation with Questioning

Apprentices will prepare their presentation once they have passed the gateway and will submit an electronic-based presentation to the EPAO after a maximum of 8 weeks of the EPA start date, typically at the same time as they submit the project report.

The presentation will be based on the project and will cover:

- A summary of the main aspects of the project.
- Context/implications/recommendations from the project.
- Practical application of knowledge, skills and behaviours.
- Business recommendations/outcomes of the project, including visualisations.
- Any follow-on outcomes.
- Actions and next steps.

The presentation with questioning will focus on the content of the project report. The questioning is a structured conversation with an independent assessor and is designed to draw out the best of the apprentice's competence and excellence and covers the assessment criteria assigned to this assessment method.

Key points:

- Presentation with questioning will take place online via video conferencing.
- Apprentices will need access to the internet and a working webcam.
- The apprentice must have access to a quiet room and, unless reasonable adjustments have been requested for additional support, be alone in the room.

- Apprentices must have photographic identification (ID) to verify their identity, if they do not produce any ID then the presentation with questioning will be cancelled.
- Apprentices are required to outline details of visual aids to be used and specify any equipment required for the presentation.
- The presentation with questioning will last for 40 minutes, the presentation will last 20 minutes, and the questioning will last for 20 minutes, with the independent assessor having the discretion to increase the time of the questioning by up to 10% to allow the apprentice to complete their last point.
- A minimum of 8 questions will be asked based on both the project report and the presentation, and will be formed based on the evidence and grading requirements in the table below.
- Apprentices are allowed access to their project report and presentation throughout the questioning.
- Questions will only be based on the evidence submitted for this assessment method.
- Apprentices will have 10 days' notice of the presentation with questioning date.

AM2: Professional Discussion with Portfolio

Portfolio

Training providers must work with the employer and apprentice to select the best evidence completed during the whole of the apprenticeship. All evidence should be real work tasks, and be clear, well documented and demonstrate competency against the assessment criteria listed in the assessment plan.

Typically, portfolios will contain ten discreet high-quality tasks covering a range of different assessment criteria in each, although it is expected that there will be overlaps of assessment criteria in each task. Evidence sources may include:

- Written accounts of activities that have been completed.
- Photographic evidence and work products (annotated).
- Work instructions.
- Safety documentation.
- Technical reports.
- Drawings.
- Company policies and procedures as appropriate to the activities.
- Progress review documentation.

- Witness testimonies.
- Feedback from colleagues and/or clients.
- Video clips (maximum total duration 10 minutes); the apprentice must be always in view and identifiable.
- This is not a definitive list; other evidence sources are possible.

Where apprentices have worked on confidential or secure tasks, they should write high level statements about these tasks, but not upload any restricted information or data. Apprentices should be prepared to discuss further details during the professional discussion.

Any employer contributions should focus on direct observation of performance (for example witness statements) rather than opinions. The evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer and apprentice confirming this.

The portfolio should **not** include any methods of self-assessment or standalone knowledge statements. Any demonstration of knowledge must be in context of a specific work-related task.

Portfolios should be in an electronic format which must be submitted to Accelerate People at gateway. Paper-based portfolios will not be accepted. If an apprentice uploads a video clip this must be a file that can be uploaded with their portfolio. A link to a video will not be accepted and will not be used as part of their evidence.

Professional Discussion

The professional discussion will take place at least two weeks after the portfolio has been accepted at gateway.

- The professional discussion will take place online via video conferencing.
- Apprentices will need access to the internet and a working webcam for the entire duration.
- The apprentice must have access to a quiet room and, unless reasonable adjustments have been requested for additional support, be alone in the room.
- Apprentices must have photographic identification (ID) to verify their identity, if they do not produce any ID then the professional discussion will be cancelled.
- The discussion will last for 60 minutes with the independent assessor having the discretion to increase the time of the questioning by up to 10% to allow the apprentice to complete their last answer.

- A minimum of 10 questions will be asked and will be formed based on the evidence and grading requirements in the table below.
- Apprentices are allowed access to their portfolio throughout the discussion.

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Assessment Criteria

AM1

KSB	Pass Criteria	Distinction Criteria
K3, K4, K8, K9, K11, K12. S1, S2, S3, S4, S6, S7, S8, S12, S15. B3, B4.	Operates data systems in compliance with all organisational and legislative requirements including principles of Privacy by Design. (S1) Outlines and applies the principles of data analysis lifecycle to the steps of data analysis. (K3, S2) Describe the principles of data including open, public, administrative and research data and how they relate to the data used within the project. (K4) Demonstrates a reasoned application of the principles of data classification. Explains where any flexibilities in application have been applied and their purpose. (S3) Identifies quality risks in data analysis and outlines methods to mitigate, escalate and/or resolve them. (K8, S6) Outlines and applies the principles for defining customer requirements and implements findings in data analytics planning and outputs. (K9, S7) Demonstrates how data from different sources is combined and prepared for data analysis setting out how they identified the risks and challenges inherent in	Evaluates the outcomes of data analysis and suggests alternative tools/methods which would be of benefit to all stakeholders. (K8, K11, B4) Analyses the requirements of the customer to produce a data analysis plan which provides an optimum solution. (S7) Demonstrates the use of data sets with different data structures and database designs to solve problems or improve the accuracy or efficiency of data analysis. (S4)

KSB	Pass Criteria	Distinction Criteria
	combining data within the project. (S8) Describes the tools and methods used by their organisation for data analysis and identifies which were used within the project with reasoning for the choices made to achieve the best outcome. (K11, S15) Analyses data sets taking account of different data structures and database designs. (S4) Outlines the choice of organisational data architecture. (K12) Communicates and collaborates with all relevant stakeholders and adapts communication style to meet audience and situational requirements. (S12) Describes how they work independently and collaboratively detailing their impact on the work of others. (B3) Acts independently to establish logical and analytical solutions such as exploring new data sets or resolving issues within the data. (B4)	

AM2

KSBs	Pass Criteria	Distinction Criteria
K1, K2, K5, K6, K7, K10, K13, K14, K15.	Explains how current, relevant legislation impacts on the safe use of data and how their role contributes to a productive, safe, and secure working environment. (K1, B1)	Critically evaluates the risks and benefits of predictive analytics. (K14, S11) Compares and contrasts visual data representation approaches and how

KSBs	Pass Criteria	Distinction Criteria
S5, S9, S10, S11, S13, S14. B1, B2, B5, B6, B7.	Explains the relevant data policies and procedures for the organisation, and identifies the data standards to be reached. (K2) Describes the fundamentals of data structures and database system design and explains how they are implemented and maintained. (K6) Explains approaches to combining data from different sources to improve accuracy and/or efficiency and/or maximise benefits to the organisation and/or customer. (K10) Describes impact on user experience and domain context on data analysis. (S5) Explains the differences between Structured and Unstructured data. (K5) Explains the ethical aspects associated with the collation and use of data and justifies why this is important. (K15) Describes the relevant tools or techniques used for working with the data systems architecture in their organisation. (S9) Explains and applies the principles of statistics for analysing datasets. (K13, S10) Identifies and explains challenges in their work and how they overcame them, providing an outline of lessons learned. (B6)	they aid understanding by stakeholders. (S14) Evaluates the benefits and risks inherent in combining data from different sources. (K10)

KSBs	Pass Criteria	Distinction Criteria
	Explains how they have applied analytical techniques for data mining and time series forecasting and other modelling techniques. (S13) Identifies areas of work where they adapted to changing contexts within the scope of a project, direction of the organisation or Data Analyst role. (B7) Explains the principles of descriptive, predictive and prescriptive analytics and demonstrates how they have been applied within their own data analysis practice. (K14, S11) Demonstrates data analysis activities involving the collation and interpretation of qualitative and quantitative data and displays results using visual representations. (S14) Explains the principles of user experience and domain context for data analytics. (K7) Describes how they have appropriately adapted their activities to meet minor, unexpected changes at work. (B2) Describes how they have ensured the true root cause of any problem is found and a solution is identified which prevents recurrence. (B5)	

Grading

Each assessment method is graded individually and combined to give an overall grade. Assessment criteria do not appear in more than one assessment method, therefore an assessment criteria failed in one assessment method cannot then be demonstrated in the other assessment method. All EPA methods must be passed for the EPA to be passed overall.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Project with Presentation and Questioning	Professional Discussion with Portfolio	Overall Grading
Fail	Any grade	**Fail**
Any grade	Fail	**Fail**
Pass	Pass	**Pass**
Pass	Distinction	**Merit**
Distinction	Pass	**Merit**
Distinction	Distinction	**Distinction**

Re-sits and Re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take at the employer's discretion. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

A re-sit does not require further learning, whereas a re-take does. Apprentices should have a supportive action plan to prepare for a re-sit or a re-take.

An apprentice who fails one or more assessment methods, and therefore the EPA in the first instance, will be required to re-sit or re-take the failed assessment method(s) only.

The timescales for a re-sit/re-take are agreed between the employer and EPAO. A re-sit is typically taken within two months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within four months of the EPA outcome notification.

All assessment methods must be taken within a six-month period, otherwise the entire EPA will need to be re-sat/re-taken.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to a higher grade.

The overall grade awarded for this apprenticeship standard is not capped, meaning that an apprentice can still achieve a maximum EPA grade of distinction if any assessment method needs to be re-sat or re-taken.

Specimen

All specimen materials, such as an example project, can be accessed by registered training providers from the knowledge area on ACE360.

Accelerate People

Accelerate People are an independent EPAO specialising in digital apprenticeship EPAs. If you have any questions or queries relating to this qualification specification or EPA, please contact us using the details below.

Registered training providers with Accelerate People can access further guidance material on the knowledge base on ACE360.

Contact Details:

Email: info@accelerate-people.co.uk.

Visit: www.accelerate-people.co.uk Registered training providers with Accelerate People can access further guidance material on the knowledge base on ACE360.

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Accelerate People