Unit 18: Researching Current Issues in Aviation

Unit code: H/504/2292

QCF Level 4: BTEC Higher National

Credit value: 10

Guided learning hours: 60

Aim and purpose

The aim of this unit is to give learners an understanding of the complexities of the aviation industry, and the key issues that affect it, through research and analysis of data.

Unit introduction

In this unit, learners will develop research and self-management skills which are invaluable in employment and for those who wish to progress from level 3 into higher education.

The worldwide aviation industry is vibrant, energetic and constantly changing as a result of competition, new technologies, global incidents and worldwide economic factors. It is both proactive, in that it can stimulate economic growth, and reactive, in that it is sensitive to ever-changing global markets and the need to gain and retain competitive advantage. There are some factors, issues and events that cannot be anticipated and aviation organisations must ensure they are flexible and responsive to deal with them effectively.

This unit focuses on issues that have arisen in recent years and are currently affecting the aviation industry. Learners will gain an overview of a range of issues and the opportunity to study one in depth. Through research, learners will consider the effects of that issue on aviation, both from an industry and society perspective. Learners will develop skills appropriate to undertaking sustained and planned research, similar to those adopted in academic research.

Through this unit, learners will gain an understanding of different approaches to research and the relative merits of each of these. Through research, learners will analyse information and data and question their findings in order to develop their understanding of the effects of current issues on aviation.

Learning outcomes

On completion of this unit a learner should:

1 Understand methodology for researching complex current issues affecting the aviation industry

2 Be able to conduct research into complex current issues affecting the aviation industry

3 Understand impacts of complex current issues on the aviation industry.

Unit content

1 Understand methodology for researching complex current issues affecting the aviation industry

Research methods, for example:

- intervention
- non-intervention
- action research

Research sources:

- primary
- secondary

Research data:

- qualitative
- quantitative

Types of current issue, for example:

- relating to changes in demand for products and services
- relating to current affairs
- environmental
- health
- technological change
- economic
- legal and regulatory variations
- operational complications

The aviation industry, including:

- airports and organisations within airports, e.g. security, ground handling, retail
- airlines (full-service scheduled, low-cost scheduled, cargo, executive)
- ancillary organisations, e.g. car hire, accommodation, transport links
- general aviation

2 Be able to conduct research into complex current issues affecting the aviation industry

Research plan:

- setting of hypothesis
- terms of reference
- aims and objectives
- planned outcomes

- determining possible sources and resources
- task dates and review dates
- monitor process
- contingencies
- ethical issues
- evaluation

Sources of information, for example:

- books
- journals and newspapers
- websites
- television
- published research papers and official statistics
- questionnaire results

Referencing:

- standard system, e.g. Harvard, bibliography

Analytical techniques:

- interpreting data
- summarising data
- drawing conclusions
- presenting own and other's arguments

Appropriate media to communicate findings, for example:

- extended document
- group discussion
- presentation
- report
- appropriate media to engage audience

Appropriate conventions to communicate findings, for example:

- use of vocabulary
- grammatical expression
- emphasis
- structure
- logical sequence

3 Understand impacts of complex current issues on the aviation industry

Impacts (recent, current and future), for example:

- changes to working practices
- changes to product distribution
- development of new markets
- loss of revenue
- changing consumer demands
- additional costs and pricing
- changes to products and services
- operational changes due to legal and regulatory variation

Implications of impacts, for example:

- for the same sector of the aviation industry, e.g. airlines, airports, ground handlers
- for other sectors of the aviation industry
- for other related industries, e.g. tour operators, hoteliers
- on society, e.g. residents within the vicinity of airports, regional community using airports

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	**To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:**	**To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:**
P1 Identify current issues affecting the aviation industry [IE]		
P2 Justify the selection of a complex issue to research that is currently affecting the aviation industry		
P3 Assess appropriate methodologies for researching the selected complex current aviation issue		
P4 Propose a research plan into the issue affecting the aviation industry [IE]	**M1** Explain how the proposed research plan enables exploration of a complex current issue	**D1** Evaluate own ability to conduct research, analyse findings and present outcomes
P5 Carry out research into the issue affecting the aviation industry using appropriate sources of information [IE]		
P6 Use analytical techniques to draw conclusions from the research findings		
P7 Present research using appropriate protocols [IE]		
P8 Explain how a current issue is impacting on the aviation industry [IE]	**M2** Discuss in depth the broader positive and negative implications of the impacts	**D2** Recommend appropriate actions for the aviation industry based on research findings and conclusions
P9 Discuss how a current issue could impact on the aviation industry in the future [IE]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators

Essential guidance for tutors

Delivery

This Level 4 unit requires learners to develop the skills needed to undertake a significant research project independently. Whilst significant time will be needed for learners to undertake the research, they must develop the required skills; delivery activities should therefore focus on developing the knowledge, understanding and skills required to meet the assessment requirements.

Learning outcome 1 focuses on the theory of different approaches to research which could be used to undertake a significant research project. Learners need to be able to understand the relative merits of different approaches. The unit content will introduce learners to research terminology that may be unfamiliar. Tutor-input on each of these terms could enable learners to develop a glossary that could subsequently be used as a checklist when preparing for assessment. This activity would be predominantly tutor led and could then be followed by a discussion about research learners have already undertaken to complete other units in the qualification or other qualifications or possibly to complete tasks when working in industry. Learners could give examples of when each aspect of a methodology was used in an attempt to compile a comprehensive list. They could be given a short research task to interview learners on other qualifications to determine if other sources have been used. This survey could include a basic evaluation of the methodology used. Learners could present their findings to the class. This could be through a series of short learner-led seminars, with each group of learners considering a number of research methods. The latter activities could then be used to link to the learning required for learning outcome 2.

Learners could then start to consider the methods they will use when researching a current issue and how these could be incorporated into a plan. It may be difficult for them to fully understand the most appropriate methods to use until they have determined the issue they will research. Initial ideas of issues could be presented to learners so that they are able to fully consider the implications of those that are being considered. Tutors could present an issue and how it was researched, showing them a copy of a plan that was used. Learners could be given, or in a class or small group develop, a template for presenting their research plan. This would include all the elements of the unit content. This content will need to be discussed and possibly explained to ensure that learners understand the requirements. Learners could potentially use this template when completing assessments or tasks for other units and the methods proposed discussed and evaluated in basic terms. The production of a bibliography and the use of a referencing system such as Harvard may have been introduced and used through the delivery of other units. Learners could be referred to their induction manual or similar resource. Short activities could be presented to ensure learners fully understand how to use these systems.

The focus of the unit is to research a current issue. The issue can be something that has arisen some time ago but it must be having a significant effect during the year learners complete this unit. It may be useful to clarify with learners exactly what is meant by the term 'issue' and what is acceptable as an issue to research. Learners should not be considering specific events or factors. An issue must be something that can have an ending and be resolved. Learners could be presented with a series of terms which have the potential to be issues but are not presented as such, for example epidemics, technology, economic climate. Learners could then turn these into a hypothesis which would form the issue. For example, low-cost carriers have grown rapidly over the last two decades. They have made inter-European travel more accessible to passengers from all EU countries whilst changing their expectations. Without doubt, some regional airports have benefited from the growth, whilst major hubs may have seen a reduction in short haul traffic. It is essential that learners are able to develop and debate an argument in the presentation of their findings; the learning activities could therefore focus on discussions and debates so that learners are able to consider and present a range of viewpoints.

Learners must ultimately be able to comment on how an issue has affected the aviation industry and how it might do so in the future. The aviation industry includes airlines, airports, organisations within and around airports, ancillary organisations and also society. Learners should be encouraged to discuss the broader implications of the issue and these may be outside the aviation industry and affect related sectors such as tour operating, the hotel industry and organisations involved at destinations. Learners could be presented with issues that are no longer current so they can discuss the effect they have had on aviation. To prepare learners who have the potential to achieve at distinction level, discussions could predict responses of the industry and society to the issue followed by research into actual responses.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way of planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit and assessment requirements.
Class discussion – aviation issues currently impacting on the industry.
Introduction to research methodologies – terminology and types.
Tutor introduction to research sources – secondary.
Tutor introduction to assessing validity of resources and cross referencing.
Practise with secondary resources.
Research sources – primary.
Practise with primary sources (questionnaire design, focus group, interviewing).
Selection of current issues with potential for research.
Preparation for assignment **Assignment 1: Current Issues and Research Methods** (P1, P2, P3) **Feedback on assignment**
Research plans – components – tutor input and discussion.
Referencing and bibliographies – producing exemplar bibliographies.
Confirmation of research plans with tutor.
Carrying out independent research.
Techniques for analysis of results – interpreting data, summarising data, presenting own and other's arguments, drawing conclusions.
Selecting appropriate methods for presenting the research.
Evaluation of own research skills.
Preparation for assignment **Assignment 2: Complex Current Issue – Research and Analysis** (P4, P5, P6, P7, M1, D1) **Feedback on assignment**
Discussing the outcomes of the research and the impacts.
Considering the broader implications.
Considering actions for the future.

Topic and suggested assignments/activities and/assessment
Preparation for assignment **Assignment 3: How a Current Complex Issue Impacts on the Aviation Industry** (P8, P9, M2, D2) **Feedback on assignment**

Assessment

The assessment criteria can be grouped together to enable learners to expand on one criterion in order to gain higher grades. Where possible, learners should be encouraged, and given the opportunity, to meet the relevant higher grades at the same time as they attempt the appropriate pass criteria.

Centres should design their assessment strategies to meet a range of individual needs and the local work environment. Assessment should encourage learners to apply knowledge gained from this unit and reflect on understanding gained from other units.

P1 – P2 – P3

To achieve P1, learners should identify current issues that are impacting on the aviation industry. Some issues may not be new but are still having an effect on the industry. At least five issues should be identified.

To achieve P2, learners should select a complex current issue that is impacting on the aviation industry. Learners should justify why they have chosen this particular issue to research.

To achieve P3, learners should assess different sources, methods and data, supported by their reasons why a number of research methods could be effective. At least two methods and all sources and data from the unit content should be submitted, showing depth of reasoning and exemplification.

P4 – P5 – P6 – P7 – M1 – D1

To achieve P4, learners must propose a research plan which addresses all applicable unit content, with reference to both qualitative and quantitative sources. The plan should set out the hypothesis to be tested, the terms of reference and the aims, objectives and planned outcomes. Likely resources for the research should be given. The different stages of the research, for example the review dates, should be given. Learners should state how the research will be monitored and evaluated and their contingency plans. They should explain ethical considerations.

To achieve P5, learners must carry out the research as per their plan, using a range of sources. This requires different types of sources to be used, not merely different examples of the same type. There must be evidence of referencing of all sources using an accepted convention, this is likely to be evidenced by a bibliography using Harvard referencing or another accepted method.

To achieve P6, learners will need to use analytical techniques to draw conclusions. They will need to interpret and summarise the results of the research, synthesise the key elements of their findings and draw valid and reliable conclusions. P6 is about using techniques to analyse reliable and valid data and draw conclusions. The level of understanding of the impact of the issue will be assessed in learning outcome 3.

To achieve P7, learners will need to communicate their findings using appropriate media such as a group discussion, presentation, extended document or report. They must demonstrate that they can use appropriate conventions to communicate their findings effectively such as correct grammar and suitable vocabulary. Learners should present their findings in a structured and logical manner and show evidence that they can discuss the implications of their findings. P7 is about the techniques used to communicate the research findings. The level of understanding of the impact of the issue will be assessed in learning outcome 3.

To achieve M1, learners will need to explain why the research methods they have chosen are suitable for

research into the current complex issue they have chosen. For example, research into the emergence of online check in as a normal airline procedure, might include interviewing as the best way of reporting on the air passenger experience of check-in procedures.

D1 will be awarded where learners are able to evaluate their research techniques and their ability to analyse findings and present outcomes, recommending future improvements. For example, a learner might find that their data was unreliable, as they failed to validate their source. The recommendation would be to always validate and cross reference. They might find that their chosen research method was unsuitable, for example using a questionnaire that failed to ask appropriate questions.

P8 – P9 – M2 – D2

To achieve P8, learners must explain the impacts of their chosen researched issue on the aviation industry, currently and recently. Evidence must be clearly reasoned and explanatory, not merely descriptive at this level. Learners should explain why and how the issue has had an impact over recent years and how the issue is currently impacting on the aviation industry, related industries and society. Explanations must be reinforced by research findings and the conclusions drawn. Learners will have considered all aspects of the issue and reached a firm conclusion on their hypothesis. Learners must not include assumptions or unsupported evidence within their explanations.

To achieve P9, learners must discuss possible impacts of their chosen researched issue on the aviation industry in the future. Evidence must be clearly reasoned and justified by their research findings and conclusions. There will be a level of prediction within the discussions and this is acceptable if it is sufficiently supported by evidence from their research. For example, if the learner predicts a growth in the wider availability of flights from regional airports, there must be statistical evidence within the research findings of a growing trend and evidence from airports and airlines that planning is in place to support the predicted growth.

To achieve M2, learners will show that they are able to discuss, in depth, the positive and negative broader implications of their research through the presentation of valid and reliable conclusions. Broader implications should encompass other sectors of the aviation industry, organisations outside the aviation industry and social implications. For example, the continued growth of some regional airports will affect most sectors of the industry positively, such as air traffic control, airlines, security, ground handlers; growth will also affect organisations outside of the industry such as car hire, transport and retail. Learners should discuss how these implications will affect other sectors and organisations, for example increased sales, increase in available jobs. Evidence of negative implications should also be present in the discussions, such as local congestion and pollution and how these will affect local business and residents. Learners could include discussions relating to wider implications, for example, impacts on the major hubs as regional airports attract low cost carriers.

D2 will be awarded where there are clear, justified recommendations for actions by the aviation industry relating to the researched issue. Actions should be detailed, workable, achievable and in line with aviation conventions.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Pearson assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3	Assignment 1: Current Issues and Research Methods	Working for a research agency. Explore research methods and their applications.	Written description of methods and their uses
P4, P5, P6, P7, M1, D1	Assignment 2: Complex Current Issue – Research and Analysis	Individual research plan and research into a chosen complex current issue. Use analytical techniques to draw conclusions. Communicate the finding and conclusions.	Written research proposal Evaluation of research skills and suggested improvements for future research Process of analysis and communication of results
P8, P9, M2, D2	Assignment 3: How a Current Complex Issue Impacts on the Aviation Industry	Presentation of the results of research into the impacts and implications of the chosen complex current issue on the aviation industry.	Discussion of research findings, conclusions and recommendations

Links to other BTEC units

This unit forms part of the BTEC aviation sector suite. This unit has particular links with the following unit titles in the aviation suite.

Level 2	Level 3	Level 4
n/a	Unit 1: The UK Aviation Industry Unit 4: Inter-relationships Within the UK Aviation Industry Unit 5: Development of the UK Aviation Industry Since 1945 Unit 10: Marketing in the Aviation Industry Unit 11: E-business for Airlines Unit 12: Human Resources in the Aviation Industry Unit 14: Airport and Airline Commercial Operations Unit 17: Environmental Impacts of Aviation	n/a

Essential resources

It is essential that learners have access to a range of research tools such as abstracts, statistics, trade journals and the internet.

Employer engagement and vocational contexts

The use of guest speakers and relevant industry materials will be invaluable in enhancing delivery of this unit.

Delivery of personal, learning and thinking skills (PLTS)

The table below identifies the personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	planning and carrying out research into a complex current issue, presenting detailed analysis of results and discussing how a complex current issue impacts on the aviation industry.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Creative thinkers	selecting a complex issue to base research on and drawing conclusions from research findings
Reflective learners	evaluating research, analysis and outcomes
Self-managers	managing the research and assessment of the unit.

Functional Skills — Level 2

Skill	When learners are ...
ICT — Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	planning and carrying out research
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	storing information for their research
Follow and understand the need for safety and security practices	ongoing
Troubleshoot	as required
ICT — Find and select information	
Select and use a variety of sources of information independently for a complex task	carrying out research
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	
ICT — Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: • text and tables • images • numbers • records.	presenting findings from their research
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	communicating as part of the research process.

Skill	When learners are …
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	analysing and presenting the results from their research
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	analysing and presenting the results and conclusions from their research
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	discussing their research and presenting findings
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching the issue
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions effectively and persuasively	presenting findings from their research