

SFJZI1

Provide solutions to, and advise on, complex technical support problems



Overview

This unit covers analysing information in order to define the nature of the problem, working out possible solutions to the problems, executing the selected solution to the problems and evaluating the effectiveness of the selected solution.

You will need to be able to deal with a range of complex problems presented through various aspects of technical support functions e.g. feasibility surveys, installations of equipment and systems, modification of equipment and systems of recovering equipment and systems, etc.

There are three elements

- 1 Analyse information and define the problem
- 2 Work out possible solutions to problems
- 3 Evaluate the selected solution to the problem

Target Group

This unit is aimed at technical support practitioners.

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Performance criteria

Analyse information and define the problem

You must be able to:

- P1 clarify the nature of the **problem** with relevant personnel
- P2 seek information to allow a comprehensive analysis of all factors relevant to the **problem**
- P3 access alternative **sources** of information and clarify inadequate or conflicting information
- P4 use relevant information in the analysis and evaluate it correctly
- P5 draw conclusions from the information based on reasoned argument and evidence
- P6 consult with relevant personnel about the **problem** and keep them informed of decisions
- P7 record relevant information accurately

Work out possible solutions to problems

You must be able to:

- P8 assess the significance and likely consequences of identified **problems**
- P9 derive, evaluate and compare **options** for responding to **problems**
- P10 identify the criteria which distinguish the appropriate solution from less appropriate solutions
- P11 provide further clarification of the nature of the **problem**
- P12 select a solution which is the appropriate response to the **problem**
- P13 identify a solution in an agreed timescale
- P14 develop contingency plans to cater for unexpected developments
- P15 consult relevant personnel and keep them informed of progress
- P16 give relevant personnel clear instructions about health and safety procedures and practices to be adopted
- P17 record relevant information accurately

Evaluate the selected solution to the problem

You must be able to:

- P18 use appropriate **sources** to obtain relevant information about the outcome of the implemented solution
- P19 agree the evaluation criteria with relevant personnel
- P20 consult relevant personnel to evaluate the outcome of the implemented solution and the solution itself
- P21 evaluate the outcomes of implementing the selected solution and review the effectiveness of the solution
- P22 record the evaluation and inform relevant personnel of the outcome

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Knowledge and understanding

You need to know and understand:

Legal and organisational requirements

- K1 your responsibilities under current legislation and regulations and the implications of non-compliance
- K2 the approved ways of working
- K3 how to carry out risk assessments and why these are required

Effective communication and record keeping

You need to know and understand:

- K4 how to communicate effectively and the value and importance of effective communication
- K5 what information to record and the importance of keeping accurate records

Accessing resources

You need to know and understand:

- K6 how to identify available technical resources and how they can be accessed and provided

Collecting and analysing information

You need to know and understand:

- K7 how to collect and organise information for analysis
- K8 how to analyse information - numeric and descriptive
- K9 how to determine information needs
- K10 what information is required and its significance
- K11 the actions to take if information is inadequate or conflicting

Problem solving

You need to know and understand:

- K12 the common causes of different types of problem
- K13 how to assess the consequences of problems
- K14 the importance of having clear criteria on which judgements can be made about possible solutions
- K15 how to develop contingency plans
- K16 the methods and techniques used to solve problems
- K17 how to interpret and use technical specifications

Evaluating solutions to problems

You need to know and understand:

- K18 how to assess outcomes and the effectiveness of actions taken
- K19 how to determine evaluation criteria
- K20 the factors to consider when reviewing the effectiveness of the solution

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Additional Information

Scope/range related to performance criteria

Analyse information and define the problem

1. **types of problems**
 - 1.1. usual
 - 1.2. unusual
 - 1.3. intermittent
 - 1.4. constant
 - 1.5. critical
 - 1.6. emergency
 - 1.7. financial
 - 1.8. sensitive
 - 1.9. non-sensitive
2. **sources of information**
 - 2.1. customer
 - 2.2. line management
 - 2.3. equipment specification
 - 2.4. documentary

Work out possible solutions to problems

3. **types of problems**
 - 3.1. usual
 - 3.2. unusual
 - 3.3. intermittent
 - 3.4. constant
 - 3.5. critical
 - 3.6. emergency
 - 3.7. financial
 - 3.8. sensitive
 - 3.9. non-sensitive
4. **options**
 - 4.1. supply new technical equipment
 - 4.2. modify or adapt existing equipment
 - 4.3. simplify equipment
 - 4.4. install technical equipment
 - 4.5. identify new equipment

Evaluate the selected solution to the problem

5. **sources**

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- 5.1. customer
- 5.2. documentary
- 5.3. line management
- 5.4. equipment specification

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