SQA Advanced Unit Specification

General information

Unit title: Providing Technical Support to Users

Unit code: HP35 48

Superclass: CB

Publication date: August 2017

Source: Scottish Qualifications Authority

Version: 01

Unit purpose

This mandatory Unit is intended to equip learners with the necessary skills and knowledge about technical support procedures to help them work effectively within an organisation in a technical support role. The Unit should give learners an understanding of the key issues and procedures involved in organising and implementing technical support for end users.

On completion of the Unit the candidate should be able to:

1 Describe and analyse components of a technical support system.
2 Describe and analyse technical support procedures.
3 Present findings of performance analysis.

Credit points and level

1 SQA Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8)

Recommended entry to the Unit

Learners undertaking this Unit would be expected to have completed the SQA Advanced Certificate in Computing mandatory Units. Prior completion of the SCQF level 7 Units HP31 47 *Technical Support: Supporting Users — Hardware* and HP32 47 *Technical Support: Supporting Users — Software* would be highly beneficial though this is not a prerequisite.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

This Unit is a mandatory Unit in the framework for SQA Advanced Diploma in Computing: Technical Support and it is recommended the Unit is taught within this context.

The Assessment Support Pack (ASP) for this Unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website **(http://www.sqa.org.uk/sqa/46233.2769.html).**

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**.

Unit specification: statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Describe and analyse components of a technical support system.

Knowledge and/or Skills

- Resources involved in support systems
- Levels of support
- Service level agreements
- Planning a technical support system

Evidence Requirements

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- analyse resources and factors involved in a technical support system
- describe levels of support
- analyse service level agreement components
- plan a technical support system

Evidence should be generated through assessment in supervised open-book conditions. A significantly different question set should be used each time learners are assessed. A pass mark of 60% is required to achieve success in the Outcome.

Outcome 2

Describe and analyse technical support procedures.

Knowledge and/or Skills

- Incident reporting and recording
- Incident management
- Problem management
- Routine maintenance strategies
- Evaluating performance

Evidence Requirements

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- analyse incident reporting and recording
- analyse prioritisation and escalation of incidents
- analyse the tracking of incidents
- plan a routine maintenance strategy
- evaluate performance of technical support procedures

Evidence should be generated through assessment in supervised open-book conditions. A significantly different question set should be used each time learners are assessed. A pass mark of 60% is required to achieve success in the Outcome.

Outcome 3

Present findings of performance analysis.

Knowledge and/or Skills

- Present the findings of performance analysis

Evidence Requirements

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills by delivering findings to an audience while playing the role of technical support specialist:

The findings delivered should:

- be spoken clearly
- include appropriate terminology for the audience
- include information relating to the performance analysis in the Outcome 1 or Outcome 2 scenario
- include at least one justified suggestion for improving technical support system or technical support procedures from the scenario(s)
- include an appropriate and logical structure
- include a question and answer session

The evidence should be presented in open-book conditions. Candidates are free to use any resources at their disposal.

Unit specification: Support notes

Unit title: Providing Technical Support to Users

Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit is intended to provide learners with an understanding of the business requirements involved in technical support systems. The Unit covers some of the skills across a broad range of National Occupational Standards for IT Users v3. In particular, the areas Optimise IT System Performance, IT Security for Users, IT Communication Fundamentals and Using the Internet are utilised within the Outcomes of this Unit. The Unit could also benefit from the ITIL™ framework in delivering basic key concepts to learners to help develop an understanding of the infrastructure required to successfully deliver an efficient and productive IT environment. The Unit is mandatory in the SQA Advanced Diploma in Computing: Technical Support award and the underpinning knowledge from the core Units within SQA Advanced Certificate in Computing will be beneficial for successful completion.

Outcome 1

This Outcome introduces learners to the support mechanisms involved in their chosen field of study. Learners would be expected to identify, describe and analyse resources involved in technical support systems. Learners would be expected to describe the four tier model often cited in relation to technical support environments. They would also be expected to describe the roles and responsibilities required for each tier. Case studies and scenarios may provide learners with materials to analyse and report on these levels.

Learners would be expected to use knowledge to analyse the component parts of a service level agreement and describe their use for different sized organisations.

Learners would be expected to combine the studied material and plan technical support systems for various scenarios.

The bullet points below indicate areas of study and discussion. The list is not exhaustive and may be adjusted in line with industry and NOS requirements to maintain a relevant qualification. It is envisaged that all of the bullet points would be covered during the delivery of this Unit:

- Support mechanisms:
  - Face to Face, Telephone, E-mail, Remote and E-mail
- Tier one to four – relationships in different organisations
- SLA — Why it is important:
  - Areas of consideration:
    - Level of formalisation
    - Ability to meet service targets
    - Control of customer expectations
    - Changes to contracts

- Component parts:
  - Overview
  - Dates
  - Customer ID
  - Demand Periods
  - Expected Service Requirements
  - Assumptions
  - Targets
  - Costs
  - Maintenance
  - Responsibilities
  - Signatures

Outcome 2

This Outcome introduces the metrics and procedures involved in a technical support system. Learners are expected to analyse the metrics and procedures identified in Evidence Requirements. Learners are expected to interpret the analysis and use this interpretation to prepare for Outcome 3.

Learners are expected to create a plan of routine maintenance procedure for a specified organisation. The plan should have a reasonable impact on business production and should be of minimal disruption.

Learners are expected to use knowledge to evaluate a technical support system to identify good or bad practices. This evaluation can also be utilised in Outcome 3.

Outcome 3

Learners are expected to present findings from Outcome 1 and/or Outcome 2 to their peer group. Information should be extracted from the analysis and subsequent discussions. This could then be collated into a form for presenting to peers. Learners are also expected to be prepared for a question and answer session from their peers.

Outcome 3 is aimed at providing learners with the opportunity to communicate their analysis and interpretation to a group. This aims to focus the learner on skills required for the business world and to encourage a professional attitude.

Guidance on approaches to delivery of this Unit

It is recommended that delivery of the Unit follows a logical order from Outcome 1 through to Outcome 3 though this is not compulsory.

Scenarios, case studies and industrial visits provide opportunities for learners to understand the level and detail of work involved. Emphasis should be on the mechanisms of the technical support systems and not on resolution of incidents and problems. Classroom discussion is actively encouraged to voice student opinion and thoughts in an interactive setting.

Learners should be encouraged to discuss their own experience of technical support identifying pertinent factors in relation to quality and service. Through the use of case studies and Internet research, learners can investigate component parts of a technical support environment. Consideration should also be given to the size of an organisation and their particular requirements in relation to their size.

The lecturer should introduce SLAs in their component parts relating this against student interpretation. The SLA should be studied in relation to the previous two sections culminating in analysis and description of differing organisational requirements (eg Internal/External).

Learners are encouraged to explore their thoughts on what constitutes a problem and an incident. Introduction of concepts from the ITIL™ framework may help in understanding these terms and how they apply to a business scenario. Emphasis should be on maintaining production of the employees to enable the business to be successful. Definitions of incidents and problems should be explained and how each should be managed. Case studies may provide examples for analysis and interpretation by learners.

Prioritisation and escalation should be discussed and may utilise materials identified in Outcome 1 tier levels. Learners would be expected to identify when an incident should be passed on in accordance with an organisational policy.

Learners should be made aware that the metrics identified in a technical support system should be analysed and interpreted in order to improve services provided. As part of this analysis, incidents and problems should be tracked through the system in order to gain this information. This information should then be used as part of the evaluation of procedures.

Although not required for assessment it is recommended that justification should be in the form of a report. Learners would be expected to do this on more than one occasion to provide reasonable materials for classroom discussion. This is aimed at improving written and evaluative skills of learners.

Learners should be encouraged to further develop their research skills in order to aid them with unfamiliar problems and circumstances within the workplace environment. These skills can be enhanced by researching and presenting information on their findings.

Guidance on approaches to assessment of this Unit

A holistic approach is recommended through the use of a scenario. Combining Outcome 1 and 2 extended response questions with a recommended maximum two hour timescale. A report format may be used in preference to extended response questions. In both cases lecturers should ensure that all knowledge and skills criteria have been assessed. Where lecturers prefer to assess Outcomes separately it is recommended the timescale should be one hour per assessment.

Evidence should be generated through assessment in supervised open-book conditions.

All nine Knowledge and Skill requirements from Outcome 1 and Outcome 2 should be assessed.

A significantly different question set should be used each time learners are assessed.

The number of questions for each Outcome could be as follows:

Outcome	No of Questions
1	4
2	5

A pass mark of 60% is required to achieve success in Outcomes 1 and 2.

For Outcome 3 an observational checklist is required for evidence of a learner presentation with a question and answer session. If a written report is used then the report must be included with an observational check list of a question and answer session.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

Opportunities exist to develop all components of *Problem Solving and Communication,* at SCQF level 6. If Centres want to use this Unit to automatically credit all or parts of these Core Skills, they must ensure that they incorporate the General and Specific skills. At the time of writing these are detailed in the SQA document *Core Skills Framework: An Introduction.* If this approach is used it is also recommended that the instruments of assessment are Prior Verified by SQA.

Some aspects of *Curriculum for Excellence* relate to this Unit*.* The *Technology curriculum* is the most relevant Curriculum Area. Opportunities also exist to develop any of the Experiences and Outcomes themes which are *Enterprise*, *Citizenship*, *Sustainable Development*, *International Education* and *Creativity*. This depends on the context of delivery and assessment. These will also help to develop a variety of transferable employability skills.

History of changes to Unit

Version	Description of change	Date

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

FURTHER INFORMATION: Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000. Alternatively, complete our Centre Feedback Form.

General information for candidates

Unit title: Providing Technical Support to Users

The Unit is designed to provide you with the opportunity to acquire skills that will enable you to become efficient and effective in a technical support role. It achieves this by providing you with the soft skills demanded by the industry. You will gain valuable experience through peer discussion, case study and scenario analysis. You will be introduced to standard concepts and procedures of a technical support system. You will be required to analyse this information in relation to maintaining business continuity, identify an appropriate response and plan strategy to provide an effective solution.

You will investigate the metrics and responsibilities in relation to technical support system. You will also investigate common maintenance plans and solutions. These components will be discussed and analysed for best use scenarios.

You may have the opportunity to disseminate the investigate results to your peer group in the form of a presentation with a question and answer session.

The Unit is intended to be theoretical in nature but may provide the opportunity to visit business premises in relation to studies.

On completion you should be able to:

1 Describe and analyse components of a technical support system.
2 Describe and analyse technical support procedures.
3 Present findings of performance analysis.