Assessor's guidelines for the SVQs in Business Improvement Techniques at levels 2 and 3

Contents

About this guide

This guide provides some practical examples of how to assess your candidates for the **SVQs in Business Improvement Techniques at levels 2 and 3**. You may be able to think of other ways of assessing your candidates and recording your decisions about their competence.

Using assessments based on these examples does not guarantee successful verification — it is still your responsibility to ensure that internal quality assurance procedures are followed.

Introduction

This introduction provides a brief overview of SVQs and how they are assessed in the workplace. If you are already familiar with the concept of SVQs, you may wish to go to the next section.

About SVQs

Scottish Vocational Qualifications (SVQs) are work-based qualifications which set the level of occupational competence for each sector of the economy. The qualifications have been designed by standards-setting bodies made up of experienced practitioners who represent employers, professional bodies, trade unions, education and voluntary organisations.

Each standards-setting body is responsible for developing national standards which define *what* employees (or potential employees) must be able to do, *how well*, and *in what circumstances*, to show that they are competent in their work.

Each SVQ which a standards-setting body develops has to fit into a broad framework which allows qualifications in the UK and throughout Europe to be compared. SVQs are specified at five levels which reflect the various technical and supervisory skills knowledge and experience, which employees should have as they progress in their industry.

Explanation of levels

Level 1 Defines competent performance in a range of activities which are largely routine and predictable.

Level 2 Specifies that competent performance must be shown in a broader range of work activities which are less routine and predictable. The employee will have more autonomy and responsibility, and may have to work as part of a team.

Level 3 Specifies that competent performance must involve the employee in carrying out a broad range of varied work activities, most of which are complex and non-routine. There is considerable autonomy and responsibility, including the possibility of controlling or guiding others.

Level 4 Specifies competence as complex technical or professional work activities which require a substantial degree of personal autonomy or responsibility. Managing staff and other resources is often involved.

Level 5 Specifies competent performance as involving the employee in carrying out a significant range of activities in a wide variety of situations which are often unpredictable. Substantial responsibility and autonomy is involved in the work, which requires decision-making in the allocation of resources and the work of others. This will require complex skills such as analysis, design and evaluation.

How are standards defined in SVQs?

All SVQs consist of standards which can be broken down into various parts.

Units define the broad functions carried out in the sector, and are made up of a number of Elements. These **Elements** describe the activities which employees have to perform, and will require candidates to demonstrate certain skills or knowledge and understanding.

The quality of performance in what people must be able to do — how well they have to perform — is described by **Performance Statements**.

The section on **knowledge and understanding** says what candidates must know and understand, and how this knowledge applies to their jobs.

You may also come across standards containing statements on **scope**. These statements could, for example, list the equipment that candidates are expected to be familiar with and use in their occupational area.

Who is involved in SVQs?

There are several roles:

♦ **the candidate:**   the person who wants to achieve the SVQ (eg an employee)

♦ **the assessor*:**   the person who assesses the candidates and decides if they are competent (eg supervisor)

♦ **the internal verifier*:** an individual nominated by the centre (eg a company) who ensures that assessors apply the standards uniformly and consistently (eg supervisor's line manager)

♦ **the external verifier*:** an individual appointed by SQA who ensures that standards are being applied uniformly and consistently across all centres offering the SVQ

*Assessors and verifiers in centres will be asked by SQA to prove they have the appropriate occupational competence to assess and verify the SVQ for the areas they are assessing. Occupational competence has been defined by the standards-setting body in the assessment strategy for this SVQ(s) — see SQA's website: **www.sqa.org.uk**

Assessors and verifiers are also expected to obtain an appropriate qualification in assessment and verification — this can be the Assessor/Verifier Units (the national standards for assessment and verification), or an alternative qualification which SQA also recognises.

The steps involved in assessing a candidate for an SVQ

In deciding whether a candidate should get an SVQ, you will go through these stages:

♦ planning for assessment

♦ generating and collecting evidence of the candidate's competence in the Units

♦ judging the evidence of the candidate's ability and making an assessment decision based on the evidence

♦ recording the assessment decision and the candidate's achievement and providing feedback to the candidate

1: The SVQs in Business Improvement Techniques

The SVQs in Business Improvement Techniques have been developed by Science Engineering and Marine Training Association (SEMTA) and are intended for people across a wide range of occupational sectors.

The **SVQ in Business Improvement Techniques at level 2** has been designed to cover those people who are making a contribution to the identification and implementation of business improvements such as:

♦   employees involved in business improvement within a team who wish to have their business improvement competencies assessed for certification purposes
♦   new employees who have undertaken business improvement training and are now acquiring experience within a team and wish to demonstrate their competencies for assessment purposes

The **SVQ in Business Improvement Techniques at level 3** has been designed to cover those people who are applying business improvement activities where they are:

♦   employed as supervisors, team leaders or facilitators and are responsible for carrying out business improvement activities
♦   people who through Continuous Professional Development (CPD) are being prepared to take on staff responsibilities in a business improvement environment

The SVQs are designed to be assessed in the workplace, or in conditions which closely resemble that of the workplace. Examples of the settings or centres in which the SVQs are likely to be delivered include: further education colleges or universities. Partnerships working between an employer and a training provider, for example a further education college, will be very helpful in some cases when cross-referencing the Unit performance statements with actual tasks carried out by candidates in the workplace.

Structure of the SVQs

This section lists the Units which form the SVQs in Business Improvement Techniques.

The qualification structure for the SVQ requires candidates to complete common mandatory Units followed by a choice of pathways. The pathways may be either Process Improvement or Quality Improvement. Core Skills at an appropriate level may be taken as additional Units, where this is considered desirable.

Level 2 pathway for Process Improvement (six Units in total including the mandatory Units)

Must complete the following Units:

SQA Ref	SCQF level	SSC Ref	Title
F9JC 04	5	Unit 01	Complying with Statutory Regulations and Organisational Safety Requirements
F9JE 04	5	Unit 02	Contributing to Effective Team Working
F9JR 04	5	Unit 03	Contributing to the Application of Workplace Organisation Techniques
F9JH 04	5	Unit 04	Contributing to the Application of Continuous Improvement Techniques (Kaizen)
F9JV 04	5	Unit 05	Contributing to the Development of Visual Management Systems

Plus one more optional Unit from the following:

SQA Ref	SCQF level	SSC Ref	Title
F9JF 04	5	Unit 06	Contributing to the Analysis and Selection of Parts for Improvement
F9JD 04	5	Unit 07	Contributing to Carrying Out Lead Times and Analysis
F9J7 04	5	Unit 08	Carrying Out Set-up Reduction Techniques
F9J1 04	5	Unit 09	Carrying Out Autonomous Maintenance
F9JL 04	5	Unit 10	Contributing to the Application of Problem Solving Techniques
F9J3 04	5	Unit 11	Carrying Out Flow Process Analysis
F9JT 04	5	Unit 12	Contributing to the Creation of Standard Operating Procedures (SOP)
F9JM 04	5	Unit 13	Contributing to the Application of Six Sigma Methodology to a Project
F9JN 04	5	Unit 14	Contributing to the Application of Six Sigma Process Mapping

SQA Ref	SCQF level	SSC Ref	Title
F9JG 04	5	Unit 15	Contributing to the Application of Basic Statistical Analysis
F9JP 04	5	Unit 16	Contributing to the Application of Statistical Process Control (SPC) Procedures
F9JJ 04	5	Unit 17	Contributing to the Application of Failure Modes and Effects Analysis (FMEA)
F9JK 04	5	Unit 18	Contributing to the Application of Measurement Systems Analysis (MSA)
F9J5 04	5	Unit 19	Carrying Out Mistake/Error Proofing (POKA YOKE)

Level two pathway for Quality Improvement (seven Units in total including the mandatory Units)

Must complete the following Units:

SQA Ref	SCQF level	SSC Ref	Title
F9JC 04	5	Unit 01	Complying with Statutory Regulations and Organisational Safety Requirements
F9JE 04	5	Unit 02	Contributing to Effective Team Working
F9JM 04	5	Unit 13	Contributing to the Application of Six Sigma Methodology to a Project
F9JN 04	5	Unit 14	Contributing to the Application of Six Sigma Process Mapping
F9JG 04	5	Unit 15	Contributing to the Application of Basic Statistical Analysis

Plus two more optional Units from Group 1 OR ONE Unit from Group 1 AND ONE Unit from Group 2

SQA Ref	SCQF level	SSC Ref	Title
Optional Group 1			
F9JP 04	5	Unit 16	Contributing to the Application of Statistical Process Control (SPC) Procedures
F9JJ 04	5	Unit 17	Contributing to the Application of Failure Modes and Effects Analysis (FMEA)
F9JK 04	5	Unit 18	Contributing to the Application of Measurement Systems Analysis (MSA)
F9J5 04	5	Unit 19	Carrying Out Mistake/Error Proofing (POKA YOKE)
Optional Group 2			
F9JR 04	5	Unit 03	Contributing to the Application of Workplace Organisation Techniques
F9JH 04	5	Unit 04	Contributing to the Application of Continuous Improvement Techniques (Kaizen)

SQA Ref	SCQF level	SSC Ref	Title
F9JV 04	5	Unit 05	Contributing to the Development of Visual Management Systems
F9JF 04	5	Unit 06	Contributing to the Analysis and Selection of Parts for Improvement
F9JD 04	5	Unit 07	Contributing to Carrying Out Lead Times and Analysis
F9J7 04	5	Unit 08	Carrying Out Set-up Reduction Techniques
F9J1 04	5	Unit 09	Carrying Out Autonomous Maintenance
F9JL 04	5	Unit 10	Contributing to the Application of Problem Solving Techniques
F9J3 04	5	Unit 11	Carrying Out Flow Process Analysis
F9JT 04	5	Unit 12	Contributing to the Creation of Standard Operating Procedures (SOP)

Level 3 pathway for Process Improvement (eight Units in total including the mandatory Units)

Must complete the following Units:

SQA Ref	SCQF level	SSC Ref	Title
F9JC 04	5	Unit 01	Complying with Statutory Regulations and Organisational Safety Requirements
F9K0 04	6	Unit 02	Leading Effective Teams
F9J0 04	6	Unit 03	Applying Workplace Organisation Techniques
F9HJ 04	6	Unit 04	Applying Continuous Improvement Techniques (Kaizen)
F9JY 04	6	Unit 05	Developing Visual Management Systems

Optional Units — ONE Unit from Group 1 and TWO units from Group 2
Whichever Unit is selected from Group 1, it cannot then be selected
again as one of the two optional Units required from Group 2

SQA Ref	SCQF level	SSC Ref	Title
Optional Group 1 — plus ONE of the following Units:			
F9JW 04	6	Unit 06	Creating Flexible Production and Manpower Systems
F9J6 04	6	Unit 07	Carrying Out Problem Solving Activities
Optional Group 2 — plus TWO of the following Units:			
F9JW 04	6	Unit 06	Creating Flexible Production and Manpower Systems

SQA Ref	SCQF level	SSC Ref	Title
F9J6 04	6	Unit 07	Carrying Out Problem Solving Activities
F9HG 04	6	Unit 08	Analysing and Selecting Parts for Improvement
F9HN 04	6	Unit 09	Applying Lead Time Analysis
F9JA 04	6	Unit 10	Carrying Out Value Stream Mapping (VSM)
F9HT 04	6	Unit 11	Applying Set-up Reduction Techniques
F9HX 04	6	Unit 12	Applying Total Productive Maintenance (TPM)
F9HL 04	6	Unit 13	Applying Flow Process Analysis
F9HR 04	6	Unit 14	Applying Policy Deployment (Hoshin Kanri, Quality Operating Systems, Business Plan Deployment)
F9HY 04	6	Unit 15	Applying Value Management (Value Engineering and Value Analysis)
F9JX 04	6	Unit 16	Creating Standard Operating Procedures (SOP)
F9HV 04	6	Unit 17	Applying Six Sigma Methodology to a Project
F9J8 04	6	Unit 18	Carrying Out Six Sigma Process Mapping
F9HH 04	6	Unit 19	Applying Basic Statistical Analysis
F9HK 04	6	Unit 20	Applying Failure Modes and Effects Analysis (FMEA)
F9HP 04	6	Unit 21	Applying Mistake/Error Proofing (Poka Yoke)
F9J9 04	6	Unit 22	Carrying Out Statistical Process Control (SPC) Procedures
F9HW 04	6	Unit 23	Applying Six Sigma Metrics to a Project
F9K1 04	6	Unit 24	Producing a Characteristic Selection Matrix
F9J4 04	6	Unit 25	Carrying Out Measurement Systems Analysis (MSA)
F9J2 04	6	Unit 26	Carrying Out Capability Studies
F9K2 04	6	Unit 27	Producing Multi-Variance Charts
F9HM 04	6	Unit 28	Applying Hypothesis Testing

Level 3 pathway for Quality Improvement (nine Units in total including the mandatory Units)

Must cover the following Units:

SQA Ref	SCQF level	SSC Ref	Title
F9JC 04	5	Unit 01	Complying with Statutory Regulations and Organisational Safety Requirements
F9K0 04	6	Unit 02	Leading Effective Teams
F9HV 04	6	Unit 17	Applying Six Sigma Methodology to a Project
F9J8 04	6	Unit 18	Carrying Out Six Sigma Process Mapping
F9HH 04	6	Unit 19	Applying Basic Statistical Analysis
F9HK 04	6	Unit 20	Applying Failure Modes and Effects Analysis (FMEA)

Optional Units — THREE further Units must be taken
ALL THREE Units from Group 1 OR up to TWO of the Units may be selected from Group 2

SQA Ref	SCQF level	SSC Ref	Title
Optional Group 1			
F9HP 04	6	Unit 21	Applying Mistake/Error Proofing (Poka Yoke)
F9J9 04	6	Unit 22	Carrying Out Statistical Process Control (SPC) Procedures
F9HW 04	6	Unit 23	Applying Six Sigma Metrics to a Project
F9K1 04	6	Unit 24	Producing a Characteristic Selection Matrix
F9J4 04	6	Unit 25	Carrying Out Measurement Systems Analysis (MSA)
F9J2 04	6	Unit 26	Carrying Out Capability Studies
F9K2 04	6	Unit 27	Producing Multi-Variance Charts
F9HM 04	6	Unit 28	Applying Hypothesis Testing
Optional Group 2			
F9J0 04	6	Unit 03	Applying Workplace Organisation Techniques
F9HJ 04	6	Unit 04	Applying Continuous Improvement Techniques (Kaizen)
F9JY 04	6	Unit 05	Developing Visual Management Systems

SQA Ref	SCQF level	SSC Ref	Title
F9JW 04	6	Unit 06	Creating Flexible Production and Manpower Systems
F9J6 04	6	Unit 07	Carrying Out Problem Solving Activities
F9HG 04	6	Unit 08	Analysing and Selecting Parts for Improvement
F9HN 04	6	Unit 09	Applying Lead Time Analysis
F9JA 04	6	Unit 10	Carrying Out Value Stream Mapping (VSM)
F9HT 04	6	Unit 11	Applying Set-up Reduction Techniques
F9HX 04	6	Unit 12	Applying Total Productive Maintenance (TPM)
F9HL 04	6	Unit 13	Applying Flow Process Analysis
F9HR 04	6	Unit 14	Applying Policy Deployment (Hoshin Kanri, Quality Operating Systems, Business Plan Deployment
F9HY 04	6	Unit 15	Applying Value Management (Value Engineering and Value Analysis)
F9JX 04	6	Unit 16	Creating Standard Operating Procedures (SOP)

An assessment strategy for the SVQ

As part of its review of the SVQ(s), the standards-setting body SEMTA has developed an assessment strategy which defines a range of requirements:

♦ the occupational expertise of assessors and verifiers

♦ a definition of simulation

♦ definition of the workplace

♦ information on a model of independent assessment or external quality control

The relevant parts of the assessment strategy are published on SQA's website (**www.sqa.org.uk**), and both SQA and centres must comply with these requirements.

Why would people be interested in the SVQ?

People will take SVQs for a variety of reasons: to gain promotion, to prove their job competence, or for personal development. There will be other reasons too. One of the first things to do is to find out why your candidates want to do the SVQ, and to advise them of the appropriateness of the qualification. If anyone is acting as a coach or mentor to your candidates, they might help you to do this.

How do candidates begin?

Choosing the SVQ

You should make sure that candidates get guidance before starting out on an SVQ — they need advice to ensure that their existing job remit, skills, experience, and their plans for progression, are matched to the SVQ selected. It does not have to be you as the assessor, who carried out the matching process, but whoever has responsibility for this should ensure that the assessment opportunities available to the candidate are also considered.

An example

Fiona works as an electronic test technician in a manufacturing company. The company has a systematic, continuous quality improvement strategy aimed at delivering quality products and services to customers. This strategy involves all employees and the company offers in-house training to raise staff awareness and to improve their skills.

Fiona has attended some of these courses, particularly in six-sigma techniques, which she has applied within her work area. This has resulted in improvement in the processes as well as enhancing her skills. She would like to achieve an SVQ in Business Improvement Techniques at

level 2 to improve her promotion opportunities within the company as well as achieving national recognition of her abilities.

When the T & D Manager matched Fiona's job remit and existing skills and experience with the SVQ, it emerged that Fiona should be able to generate sufficient evidence to meet the requirements of the following SVQ Units:

♦ *Complying with Statutory Regulations and Organisational Safety Requirements*
♦ *Contributing to Effective Team Working*
♦ *Contributing to the Application of Workplace Organisation Techniques*
♦ *Contributing to the Application of Six Sigma Methodology to a Project*
♦ *Contributing to the Application of Six Sigma Process Mapping*

The T & D Manager arranged for an assessor within the company to provide Fiona with guidance on how to collect evidence and construct a portfolio to achieve these Units.

Fiona also had some experience in relation to three further Units, however, some planning was required in order to provide her with the opportunity to demonstrate competence in these areas.

The Units were:

♦ *Contributing to the Application of Statistical Process Control (SPC) Procedures*
♦ *Carrying Out Failure Modes and Effects Analysis (FMEA)*
♦ *Contributing to the Application of Basic Statistical Analysis*

Plans were made to assess these Units through a combination of observation, questioning and assessment of work products. These arrangements were agreed by everyone involved and then written up in an assessment plan for Fiona.

Achievement of these Units would allow Fiona to complete the award at level 2.

2: Preparing to assess the SVQ

This section offers practical advice on how to begin to go about assessing your candidates for the SVQ. This advice is offered as examples of good practice — you may develop your own approaches to assessing your candidates which also work well.

Your role and your candidate's role

Assessing the SVQ will involve several stages. Both you and the candidate should be clear on your roles in the assessment process before you begin.

Your role

♦ ensure candidates understand what is to be assessed and how it is to be assessed

♦ ensure the conditions and resources required for assessment are available

♦ help candidates to identify and gather evidence

♦ observe and record candidates carrying out the activities described in the standards — records should say what has been observed, how it was carried out, and what it demonstrates

♦ assess products of the candidate's own work

♦ question candidates and record results

♦ help candidates to present evidence

♦ authenticate the evidence candidates provide

♦ judge evidence and make assessment decisions

♦ identify gaps or shortfalls in candidates' competence

♦ provide feedback to candidates throughout the assessment process

♦ record achievement

Candidates' role

♦ prepare for assessment — become familiar with the standards, what is to be assessed and how it is to be assessed

♦ help to identify sources of evidence and how these could be assessed

♦ carry out activities, and/or produce products of own work, and/or answer questions

♦ gather and present evidence

♦ receive and act on feedback from the assessor

Planning

In planning for assessment, you will find it helpful to meet with your candidate and plan what is to be assessed, in what way, and when and where the assessment is to take place. This discussion can be confirmed in the form of an agreed assessment plan between you and your candidate.

You should treat assessment plans as working documents — they can be updated and changed as you review progress with your candidate.

As you are planning assessment, don't forget to make the most of opportunities to *integrate* assessment. This means planning to assess an activity which draws on the contents of different Units or Elements. It can be a practical and cost-effective way of assessing your candidate's competence.

If you are a new assessor working towards your A/V Units (the national standards in assessment and verification) you will need copies of completed assessment plans as part of your evidence.

To help you plan for assessment, we have produced an assessment plan which covers Unit 13 — *Contributing to the Application of Six Sigma Methodology to a Project* and Unit 14 — *Contribute to the Application of Six Sigma Process Mapping.*

You will notice that we have included spaces to enter dates when the assessment plan has been reviewed. Any gaps identified during these reviews should be discussed with your candidates and noted for action in the assessment plan.

Assessment plan

Units: Unit 13 — Contribute to the Application of Six Sigma Methodology to a Project Unit 14 — Contribute to the Application of Six Sigma Process Mapping					
Activities	**PCs**	**Method of assessment/Sources of evidence**	**Date of assessment**	**Evidence already available**	**Links to other Units (PCs and range)**
It is planned that Fiona will apply Six Sigma techniques to the testing procedures for a new electronic unit. During this project, which is a practical activity, Fiona will carry out a preliminary investigation of the system specification, identify key stages in the test procedure, construct a Six Sigma process map, apply the methodology, then document the results including improvements in quality. All of these activities will be documented and collated as a portfolio of evidence.	Unit 13 — Performance Statements 1 to 6 Unit 14 — Performance Statements 1 to 7	Portfolio of evidence and direct observation with additional questioning as required.	24 June 2010		Unit 1 — Complying with Statutory Regulations and Organisational Safety Requirements: Performance Statements 1, 2, 4, 5, 6 Unit 2 — Contributing to Effective Team Working: Performance Statements 1 to 6
Questioning for knowledge and understanding not apparent from performance to be identified from 2nd review		Written Q and A may be used for this.			

Assessor's signature: *Leo McDonald*

Candidate's signature: *Fiona Galloway*

Date of agreement: *4 February 2010*

1st review due: *5 March 2010*

2nd review due: *7 April 2010*

Date of completion: *24 June 2010*

Selecting methods of assessment

The methods of assessment you use should be valid, reliable and practicable.

♦ By *valid* we mean that the assessment method should be appropriate to the standards.

♦ By *reliable* we mean that the assessment method should ensure consistent results when used with different candidates, different assessors and on different occasions.

♦ By *practicable* we mean that the method ensures that the assessment makes best use of available resources, equipment and time.

Before you assess a candidate, you must make sure that the methods of assessment you have chosen to use, along with any assessment materials (such as questions and sample answers) have been agreed within your centre through its system of internal quality assurance. This system is often called *internal verification* — its purpose is to help to ensure that assessment methods are valid, reliable and practicable.

There are both benefits and challenges when you are assessing SVQs in the workplace, or in conditions in the workplace. When you select methods of assessment, you should try to offer the candidate the benefits of workplace assessment and minimise any potential difficulties.

The benefits might be:

♦ feeling at ease in the familiarity of the workplace
♦ being familiar with the candidate
♦ working at the candidate's pace of learning
♦ informality of the processes
♦ all resources readily available

The challenges might be:

♦ candidates being too familiar in the context of a workshop or office
♦ pressure of work on site
♦ candidates moving around on site, making it difficult to locate them
♦ timing visits for specific assessments
♦ candidate changing job or moving to another company

An example

You might agree with a candidate working in a test laboratory, who has to demonstrate how to apply a particular test procedure, that this will be carried out by **observation** as and when such situations arise. If you are an assessor who is working alongside the candidate you should be well placed to

observe the candidate's performance, perhaps using a prepared checklist, and to question the candidate about the procedure afterwards.

Methods of assessment

Assessment may involve a range of assessment methods. For SVQs, some of the most commonly used methods are observation, product evidence, and questioning.

Observation

Observation by an assessor is considered to be the most valid and reliable method of assessment. It can be organised in a variety of ways:

♦ working alongside the candidate
♦ arranging to visit when naturally-occurring activities are carried out by the candidate
♦ arranging for activities to take place

Observation by the assessor can often be supplemented by other types of assessment methods such as questioning. For example, it may be appropriate to ask oral questions of candidates as they carry out naturally-occurring activities.

An assessor could observe a candidate preparing a product for test by following the procedures in a test manual and wearing the appropriate Personal Protection Equipment (PPE).

♦ Observation of candidate taking instructions, interpreting information and working as part of a team.
♦ Direct observation of the candidate preparing the work area, obtaining and using the correct test tools and connecting equipment correctly.

Product evidence

As candidates work towards achieving the SVQ, they will produce evidence in the form of products of their work. The nature of this evidence can vary widely depending on what the candidate's job entails, but examples of product evidence include:

♦ A completed test schedule showing accurate measurements taken.

♦ Photographs of a task before and after it was completed by the candidate.

♦ Written comments indicating any faults found and statistical spread of results obtained.

Questioning

Candidates have to show that they can meet the knowledge specifications for the SVQs. For these SVQs, knowledge and understanding is specified for each Performance Statement. Much of a candidate's knowledge and understanding will be apparent from what they do or produce as part of their work, but this will not always be the case and questioning can be a useful way of confirming what candidates know and understand.

Questions can be asked in a variety of forms, such as oral questions, short answer written questions, and multiple-choice.

You should be careful that the method of questioning does not go beyond the competence required for the SVQ and become a barrier to fair assessment. For example, some candidates will feel more comfortable with oral questions than written.

Q: At the end of the test I noticed you completed a Pareto chart. What is the purpose of this?

A: This helps to identify the most common faults found on the units under test. These will be discussed at our next team meeting to identify areas where improvements can be made.

Q: At the end of the procedure I noticed that you cleared away all the test equipment from the bench and tidied the work area. Isn't this a labourer's job?

A: I am responsible for my work area. For health and safety reasons all equipment is disconnected and stored away after use. This also assists in being able to find the equipment when it is next required.

Other methods of assessment

These methods, like questioning, are often used for authentication. See section 3 for more about authenticating candidates' evidence.

Personal statements

You might sometimes find it helpful to ask a candidate to give an account of why they did an activity in a certain way or how they produced a product of their work. This is often referred to as a *personal statement*. You should take care to ensure that by asking candidates to produce such statements, you are not asking them to demonstrate competence beyond what is required by the standards. You should also be selective in the use of personal statements, and make sure they have not been produced as a substitute to a more valid, reliable and practical method of assessment.

An example of a personal statement might be where a candidate produces a one page success story summarising the purpose and the outcomes of a particular project they have been involved in.

Witness testimony

For practical reasons, you may not be able to observe all the activities carried out by your candidates, but might feel that other people may be able to provide a statement on what your candidates have been doing or producing as part of their work. Statements of this kind are called *witness testimony*, and are often used to support other evidence produced by candidates such as photographic evidence. If witness testimony is used, you should, ideally, identify witnesses and opportunities for using their testimony as part of assessment planning.

You should bear in mind that the weight of the evidence will vary, depending on the knowledge and expertise of the person providing the witness testimony. You will have to take these factors into account as you make your judgement.

Strongest	Someone with considerable occupational expertise in the candidate's area of work and who is familiar with the standards. This person may also be an assessor or internal verifier qualified with the A/V Units or 'D-Units'.
	Someone with considerable occupational expertise in the candidate's area of work and who is familiar with the standards.
	Someone with considerable occupational expertise in the candidate's area of work, but with no knowledge of the standards.
	Someone who may be a colleague of the candidate, but with no knowledge of the standards.
Weakest	Someone with no or little knowledge of the candidate's work or no knowledge of the standards.

Witness testimony is unlikely to be sufficient in itself for a decision about the candidate's competence, and would normally be supplemented by questioning candidates.

An example

In Unit 02 — *Contributing to Effective Team Working*, candidates are required to: 'Deal with disagreements in an amicable and constructive way'. A witness testimony from the candidate's supervisor would be very useful in providing evidence of how the candidate fulfills this requirement.

Simulation

Simulation is any structured assessment exercise involving a specific task which reproduces real-life situations.

On some occasions, it may not be practical to assess a candidate in real work. Examples might be where the standards require candidates to carry out emergency or contingency procedures, or where client confidentiality is an issue, or where a candidate's job role does not cover all aspects of the qualification.

SEMTA, the Sector Skills Council, has defined what it regards as simulation, and has specified in the standards when simulation is and is not acceptable. The standards also state when candidates must demonstrate competence in the workplace.

For more details on simulation and what constitutes performance in the workplace, look at the assessment strategy on SQA's website: **www.sqa.org.uk**.

An example

In Unit 01 Performance Statement 3, candidates are required to: Follow organisational accident and emergency procedures. This may require the following areas to be demonstrated in a simulated environment as it may be too costly, too hazardous or time consuming to wait until these events occur naturally.

♦ following organisational procedures in the event of fire
♦ following organisational procedures for the evacuation of premises
♦ identifying procedures to be followed in the event of dangerous occurrences or hazardous malfunctions

Since this may not occur naturally at regular intervals, simulation could be used to assess this.

Other sources of evidence

Other sources of evidence can be previous experience or learning, case studies or assignments.

SQA's *Guides to Assessment and Quality Assurance* (see section 5) have more advice on methods of assessment and how to ensure that your assessment is valid, reliable and practicable.

3: Generating evidence

The methods of assessment you use should generate sufficient evidence to demonstrate the candidate's competence.

We described earlier the circumstances in which you might choose to use different methods of assessment. Starting on the next page, this section gives you examples of forms which you can use to record and present evidence of:

♦ observation (by the assessor)

♦ questions and candidate responses

♦ personal statement (produced by the candidate)

♦ witness testimony

There are blank forms which you can copy and use in assessment in Appendix 1.

Observation

For observation, note that the form asks you to record the skills and activities observed. This helps you to make a judgement on how the activity was carried out and what it demonstrates.

Observation record

Units: Unit 14: *Contributing to the Application of Six Sigma Process Mapping*
Unit 15: *Contributing to the Application of Basic Statistical Analysis*

Candidate: Fiona Galloway   **Date of observation:** 25 March 2010
Evidence index number: 1

Skills/activities observed:	PS covered:
The candidate showed good organisational skills when setting up a test rig, selecting the correct test instrumentation and tools when preparing to start a project to test a power supply unit which is a new product for the company. The number of units to be tested were stored conveniently and then carried safely to be tested. The candidate then set up the equipment in accordance with the wiring diagrams and proceeded to follow the test procedure. Results were recorded accurately on a data gathering form which had been developed at an earlier meeting with the supervisor and the production manager. The following day the candidate was observed recording the measurements obtained onto a frequency table and then constructing a histogram.	Unit 1, PS 1, 2, 4, 5, and 6 Unit 13 PS 1, 2, 6 Unit 14, PS 1–7 Unit 15, PS 1–7

Knowledge and understanding apparent from this observation:

The candidate demonstrated a good knowledge of health and safety procedures when carrying out the work. She demonstrated knowledge of basic statistical control techniques, how to interpret data and record it onto appropriate charts and how to calculate the required parameters such as standard deviation, mean, range and variance.

Other Units/Elements to which this evidence may contribute:

Unit 1 Complying with Statutory Regulations and Organisational Safety Requirements
Unit 2 Contributing to Effective Team Working
Unit 3 Contributing to the Application of Workplace Organisation Techniques

Assessor's comments and feedback to candidate:

The work was carried out in a very professional manner. Showed good communication skills and an understanding of the purpose of the job.

I can confirm the candidate's performance was satisfactory.

Assessor's signature: *Leo McDonald*   Date: *26 March 2010*

Candidate's signature: *Fiona Galloway*   Date: *26 March 2010*

Questions and candidate responses

This form can be used to record any questions you might ask the candidate to establish what they know and understand. You should note the candidate's responses on this form too.

Note that there is a space near the top of the form for you to record when, where, how and why you asked the questions.

Where you want to give the candidate written questions, this form could also be used however you should ensure consistency in your approach with other assessors within the centre.

Record of questions and candidate's answers

Unit 15: *Contributing to the Application of Basic Statistical Analysis*	Performance Statements: 3 and 5

Evidence index number: 2

Circumstances of assessment:
During observation of the candidate's performance the following questions were asked to verify her understanding of the task she was performing.

List of questions and candidate's responses:

Q: Why did you use a histogram to represent the data graphically?

A: This helps to display large amounts of data in tabular form and helps to show if the process is repeatable.

Q: How did you go about constructing the histogram?

A: First of all I prepared a frequency table and calculated the range for the sample. I then calculated the number of class intervals required to represent the data and then drew the histogram.

Assessor's signature: *Leo McDonald*	Date: *27 March 2010*

Candidate's signature: *Fiona Galloway*	Date: *27 March 2010*

Candidate's personal statement

If a personal statement is being used as evidence, it should be completed by the candidate. The statement should record what they did, how and why they chose to carry out an activity or produce work in a certain way. Where other people may have been present during an activity and they may be able to provide witness testimony, the candidate should record how the statement links to other evidence in the column provided.

Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Unit, Performance statements, scope covered
30 May 2010	3	This is a summary of my six sigma project which was aimed at standardising the process for proving a test system's repeatability and the method for reporting this. The problem statement for the project was that there was no standard method for carrying out this exercise, some of the methods used didn't provide enough information for production and each time the information was presented to production it was in a different format. The following was achieved: A specification has been drafted and is awaiting sign off by production engineering. The spec will be released to configuration and will also be available on the internal website. A spreadsheet which allows the user to enter the required information and carry out various calculations has been developed. The improvements taken from this project are that we now have a standard method for proving repeatability and a standard form to present the information in. **Tools used** The tools that were used for the project were a problem statement, brainstorming and IPO.	Witness testimony by Danny Davidson, Chief Test Engineer. (Evidence index no 4) Observation Record (Evidence index no 1) Test procedure (Evidence index no 5)	Unit 1, Statements 1, 2, 4, 5 and 6 Unit 2, Statements 1, 3, 4, 5 and 6 Unit 14 Statements 1 and 2 Parts of Units 3, 13, 15, 6, 16 Part of Unit 3, 13, 14, 15

Signed (candidate):   *Fiona Galloway*

Date: *20 June 2010*

Witness testimony

Remember when you begin to use witness testimony that it must be capable of being authenticated — even if the testimony itself is being used to authenticate a candidate's claim to competence.

To make sure the witness testimony is genuine, you must ensure that you have a record of who is acting as a witness, their relationship to the candidate (eg supervisor, client) address, telephone number and the date. There are spaces for this information in the form.

Witness testimony

SVQ title and level:	Business Improvement Techniques at level 2
Candidate's name:	Fiona Galloway
Evidence index no:	4
Index no of other evidence which this testimony relates to (if any):	1, 3
Element(s):	Elements within Units 1, 2, 3, 13, 14, 15, 16
Date of evidence:	18 June 2010
Name of witness:	Danny Davidson
Designation/relationship to candidate:	Senior Test Engineer

Details of testimony:

Fiona has worked under my supervision for about eight years during which time she has progressed from trainee technician through to become a test development engineer.

She recently undertook a project to develop a test specification which provides guidance on how to evaluate the performance of a new piece of equipment. The requirement for this had been identified at a meeting with the production engineer, myself and Fiona. Fiona participated fully in the discussions, showing that she had grasped the problems being encountered by production, and made some useful suggestions about how the project could proceed.

During the project Fiona led a small team which assessed the problem, carried out some test procedures then developed the specification as required. She has taken this a bit further by producing a spreadsheet which performs various calculations and gives an indication when problems are being met.

Fiona has made a presentation on this project to the chief test engineer and the production engineer and the procedure is currently being applied.

I can confirm the candidate's evidence is authentic and accurate.
Signed by witness: *Danny Davidson*   Date: *20 June 2010*

Witness (please tick the appropriate box)**:**

☐   Holds A1 or D32/D33 qualifications

☒   Is familiar with the SVQ standards to which the candidate is working

Filling the gaps

There may come a time when your candidate has provided evidence for most of the Unit (or SVQ), but there are some gaps. For example, you may find that certain situations, such as handling contingencies, have not arisen during assessment. Often these will relate to dealing with health and safety issues, or unexpected problems with workflow like delays in receiving information from another part of the organisation.

In this SVQ, such gaps are likely to occur in generating evidence for:

♦ Unit 01 Performance Statements 3 and 5:
— PS 3 — Follow Organisational Accident and Emergency
      Procedures
— PS 5 — Use Correct Manual Lifting and Carrying Techniques

You may be able to overcome these by simulation and/or by the candidate writing a storyboard to confirm knowledge and understanding of how competence could be demonstrated if these situations arose.

Guidance and support to candidates

At all times during the assessment process — from planning through to making your assessment decision — feedback should be on-going, clear and constructive. Feedback should be given against the national standards by relating it to the evidence provided, including the knowledge specifications.

Where there are any shortfalls in a candidate's competence, you should discuss these with your candidate and make plans for re-assessment.

Judging candidate evidence and making an assessment decision

In judging candidate evidence, you must be satisfied that your candidates can work consistently to the required standard, and that the evidence they have produced is their own. You must consider whether your candidate understands and applies the knowledge evidence and how this links to performance evidence.

Evidence must:

♦ be relevant to the SVQ

♦ be authentic

♦ show current competence

♦ be sufficient to help you form a decision about the candidate's competence

Insufficient evidence

You have to judge whether the candidate has produced enough evidence required by the standards for you to reach a decision about their evidence.

Where there is insufficient evidence, you should say this to your candidate. You should tell them that it is not that they are not yet competent — there is simply not enough evidence on which to make a decision.

In this situation, your feedback to your candidates must help them produce more evidence and/or plan for further assessment.

Authenticating candidates' evidence

Authentication is required where you have not observed candidates' performance at first hand.

You can check whether a candidate has produced evidence which they claim shows their competence by questioning them or, if this is appropriate, asking them to produce a personal statement, using witness testimony, or seeking peer reports from other colleagues of the candidate.

Example

Your candidate may produce product evidence that is of higher quality than you had either seen them produce before or expected them to be capable of, eg a difficult technique. Whilst you should be reluctant to dismiss the evidence, out of hand, it is not unreasonable to:

♦ ask a senior colleague for a witness testimony

♦ use questions and answers to consolidate the candidate's knowledge and understanding of the technique

♦ ask the candidate to demonstrate the technique again to ascertain whether the result can be reproduced and to indicate sufficiency (of competent behaviour)

4: Recording achievement

You should retain all evidence — clearly referenced — for internal and external verification.

The candidate's evidence is normally kept in a file, often called a *portfolio*. These documents help you and your candidates to collect, present and cross-reference the evidence to the national standards. They are also a means of recording your assessment decisions, and they tell an external verifier what stage a candidate has reached in achieving the SVQ.

Recording documents do not need to be paper-based — it is possible to use an electronic format for collecting and structuring the evidence. Whatever format you and your candidates choose to use, the documents must show what evidence was generated, the assessment decisions you made, how the evidence meets the standards, and where the evidence can be located. You should avoid photocopying items simply to put them in a portfolio — a clear explanation of where the evidence can be found (for example, in a filing cabinet) may be sufficient for the external verifier to follow it up and include it in the visit.

There are various reasons why record-keeping is so important:

♦ it provides a way of tracking a candidate's progress in achieving an SVQ

♦ it helps candidates to make claims for certification of their competence

♦ internal verifiers and External Verifiers use the records to sample assessment decisions

♦ it helps us to monitor the quality assurance of our qualifications

If your candidates' evidence is incomplete, or cannot be located, or if there is inaccurate cross-referencing to the standards, there is a risk that an internal verifier or External Verifier will be unable to confirm your assessment decisions.

To help you and your candidate present evidence and record your assessment decision, we have provided examples of the forms which you and your candidate might use to compile the portfolio.

♦ completing the Unit progress record

♦ using the evidence index

♦ completing the Element achievement record

These forms are also used in SQA's portfolio.

Completing the Unit progress record

You should complete this form each time your candidate achieves a Unit from the SVQ by adding your signature and the date next to the relevant Unit.

At this stage, candidates should make sure they have completed the recording documents correctly and that their evidence can be easily located. Only then should they circle the relevant Unit number at the top of the form. This enables both of you to see at a glance what stage the candidate is at in their SVQ.

Unit progress record

Qualification and level: SVQ in Business Improvement Techniques at level 2

Candidate: Fiona Galloway

To achieve the whole qualification, you must prove competence in five **mandatory** Units and two **optional** Units.

Unit Checklist

Mandatory	1	(2)	(13)	(14)	(15)						
Optional						(3)	16				

Mandatory Units achieved

Unit Number	Title	Assessor's Signature	Date
Unit 01	Complying with Statutory Regulations and Organisational Safety Requirement		
Unit 02	Contributing to Effective Team Working	Leo McDonald	15 April 2010
Unit 13	Contributing to the Application of Six Sigma Methodology to a Project	Leo McDonald	7 May 2010
Unit 14	Contributing to the Application of Six Sigma Process Mapping	Leo McDonald	15 May 2010
Unit 15	Contributing to the Application of Basic Statistical Analysis	Leo McDonald	10 June 2010

Optional Units achieved

Unit 03	Contributing to the Application of Workplace Organisation Techniques	Fiona Galloway	20 May 2010
Unit 16	Contributing to the Application of Statistical Process Control (SPC) Procedures		

Using the index of evidence

The purpose of the index of evidence is to help you locate and work through the candidate's evidence. It should give you a summary of what evidence the candidate has collected, and where (eg in a portfolio) it can be found.

The index of evidence should be completed by entering:

♦ the index number for each piece of evidence

♦ a description of each piece of evidence

♦ the place or location where it can be found

♦ the initials of the internal verifier and the date (if they have sampled the candidate's evidence)

Ideally, it should be candidates themselves (with your support and encouragement) who complete the index.

You must make sure that the information in the evidence index is accurate when your candidates' portfolios are presented for assessment and verification — particularly the information about where the evidence can be located. This is important because we suggest that anything which has been produced as day-to-day work is kept in its normal location, but anything which has been produced through assessment for the SVQ, eg observation checklists, is filed in the candidate's portfolio. In this way, your candidate can avoid having to photocopy work products just for the sake of including them in a portfolio. It also means that evidence produced as a result of assessment is kept safely in a central file.

If the index of evidence is not completed with an accurate description and location of the evidence, there is a risk that an internal verifier or External Verifier might be unable to confirm your assessment decisions.

Index of evidence

SVQ title and level: SVQ in Business Improvement Techniques level 2

Evidence number	Description of evidence	Included in portfolio (Yes/No) If no, state location	Sampled by the IV (initials and date)
1	Direct observation of candidate organising the workplace, recording measurements and creating charts.	Yes	*LR* *10 May 2010*
2	Questions and answers for Unit 15.	Yes	*LR* *10 May 2010*
3	Personal statement — summary regarding work on a Six Sigma project.	Yes	*14 June 2010*
4	Witness testimony — description of Six Sigma project undertaken by the candidate.	Yes	*14 June 2010*
5	Test procedure developed by candidate.	No. Available on company intranet.	*24 June 2010*

Completing the Element achievement record

To help you and your candidates cross-reference the evidence to the standards of the SVQs, we have provided records similar to those produced in the SQA portfolio. Use one record for each Element. The grids should be completed by:

♦ entering the evidence index number in the first column

♦ giving a brief description of the evidence in the second

♦ ticking the relevant boxes for the Performance Criteria (or statements of competence as they are sometimes known)

♦ entering the areas of knowledge and understanding the piece of evidence covers

If integrated assessment is used (linking PS across different Units) the evidence should be cross-referenced back to the relevant Units.

We have provided a completed example to show how to use the record.

Element achievement record

Unit 13: Contributing to the Application of Six Sigma Methodology to a Project

Evidence index no	Description of evidence	Performance statements											Areas of knowledge and understanding/scope											
		1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	12
1	Direct observation of candidate organising the workplace, recording measurements and creating charts.	✓	✓	✓	✓	✓	✓						✓	✓	✓								✓	✓
2	Written and oral questions.												✓		✓		✓					✓		
4	Witness testimony.		✓	✓	✓									✓		✓		✓	✓	✓	✓		✓	✓
5	Test procedure.			✓	✓	✓							✓			✓	✓							

Unit 13: Contributing to the Application of Six Sigma Methodology to a Project

Notes/Comments
Fiona demonstrated a professional competence in setting up the equipment, recording and interpreting the measured values of data from the unit under test. She showed good knowledge and understanding of how to interpret the data by calculating the range of the readings, determining the number of class intervals and their width, constructing a frequency table, then drawing a histogram representing the data graphically. She has developed a standard operating procedure for the test of this unit and presented the findings to her managers.

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: *Fiona Galloway*   Date: *14 June 2010*

Assessor: *Leo McDonald*   Date: *14 June 2010*

Internal Verifier: *Leanne Ross*   Date: *14 June 2010*

5: Further information

What else should I read?

The publications listed here provide additional information on how to implement SVQs. Details of these and other SQA publications are available on our website at **www.sqa.org.uk** on the 'Publications, Sales and Downloads' section. They can be ordered from SQA's Customer Contact Centre — telephone 0845 279 1000. Please note that there may be a charge for some of these publications.

Assessor/Verifier Units: assessment guidance

External Assessment Moderation in National Qualifications and Higher National Qualifications: a guide for centres

Guide to Assessment and Quality Assurance for Colleges of Further Education

Guide to Assessment and Quality Assurance for Employers and Training Providers

Arrangements for Candidates with Disabilities and/or Additional Support Needs in Examinations and Assessments

Quality Assurance Principles, Elements and Criteria

Operational Help Centre

The Operational Guide for Centres has been replaced by the online Operational Help Centre on **www.sqa.org.uk**

Appendix 1: Blank recording forms

Unit progress record

Qualification and level:

Candidate:

To achieve the whole qualification, you must prove competence in ____ **mandatory** Units and ____ **optional** Units.

Unit Checklist

Mandatory										
Optional										

Mandatory Units achieved

Unit	Assessor's signature	Date

Optional Units achieved

Index of evidence

Evidence number	Description of evidence	Included in portfolio (Yes/No) If no, state location	Sampled by the IV (initials and date)

Unit achievement record

Unit:

Performance Statements:

Evidence index no	Description of evidence	Performance statements							Scope																		

Unit:

Performance statements:

Notes/comments

The candidate has satisfied the assessor and internal verifier that the performance evidence has been met.

Candidate: **Date:**

Assessor: **Date:**

Internal Verifier: **Date:**

Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Unit, performance statements covered

Signed by candidate:

Date:

Observation record

Unit:

Candidate: Date of
                                              observation:

Evidence index number:

Skills/activities observed:	Performance statements covered:

Knowledge and understanding apparent from this observation:

Other Units to which this evidence may contribute:

Assessor's comments and feedback to candidate:

I can confirm the candidate's performance was satisfactory.

**Assessor's
signature:**   **Date:**

**Candidate's
signature:**   **Date:**

Witness testimony

SVQ title and level:	
Candidate's name:	
Evidence index no:	
Index no of other evidence which this testimony relates to (if any):	
Units:	
Date of evidence:	
Name of witness:	
Designation/relationship to candidate:	

Details of testimony:

I can confirm the candidate's evidence is authentic and accurate.

Signed by witness: **Date:**

Witness (please tick the appropriate box)**:**

☐ Holds A1/A2 Units or D32/D33 Award

☐ Is familiar with the SVQ standards to which the candidate is working

Record of questions and candidate's answers

Unit:	Performance statements
Evidence index number:	
Circumstances of assessment:	

List of questions and candidate's responses:

Assessor's signature:	Date:
Candidate's signature:	Date: