

Assessment Strategy for SVQs in Life Sciences and Related Industries

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The Sector Skills Council for Science-Based Industries

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1) Introduction

This Assessment Strategy applies to SVQs in Life Sciences and Related Industries and takes into account SQA Accreditation guidance.

- a. This strategy is set out in terms of four components, each of which is given below. They are:
 - requirements for mandatory use of evidence from workplace performance;
 - aspects of the standards for which the use of simulation is to be permitted and design characteristics which those simulations must address;
 - definitions of the occupational competence requirements of assessors and verifiers; and
 - the recommended approach to external quality control.
- b. These principles are in addition to the regulatory requirements that awarding bodies must meet as specified by SQA Accreditation.

2) Mandatory use of evidence from workplace performance

- c. Unless the use of simulation is expressly permitted, evidence must demonstrate the candidate's competence in a real or realistic environment.
- d. Knowledge and Understanding will be assessed via (pre-set and/or free form) questions, or by inference from performance, which cover three primary types of knowledge:
 - Knowledge of facts and procedures
 - Understanding of principles, concepts and underpinning procedures
 - How to apply principles and procedures in specific contexts

All questions must be asked by the assessor at appropriate moments throughout the assessment process, preferably linked to observed activity and/or review of documentary evidence. The questions asked of, and answers provided by, the candidate must be recorded.

3) Use of Simulation

- e. The use of high quality, realistic simulations, which impose pressures that are consistent with workplace expectations, should only be used in relation to the assessment of rare and/or dangerous occurrences, such as:
 - Emergency scenarios
 - Health, safety and the environment issues
 - Rare operations at work
 - The response to faults and problems for which no opportunity has presented for the use of naturally occurring workplace evidence of candidate competence

- f. Simulations should be designed in relation to a realistic work environment i.e. a model environment, having an acceptable level of appropriate equipment and operating to professional standards. The realistic work environment should provide the opportunity for candidate assessment under conditions approximating as closely as possible to the workplace under the control of a qualified assessor.
- g. The external verifier must formally approve the use of simulation to assess competence.
- h. Simulation should be used only where direct evidence of candidate performance cannot be obtained. Under these circumstances simulation may be used for summative assessment. Reasons for the use of simulation should be made clear to and agreed by the external verifier and should include the following details:
- which competence (and standards) the simulation was designed to assess;
 - the kind of equipment, facilities and physical environment proposed for the simulation of performance. It is unlikely that the External Verifier will approve a simulation if it does not involve real plant and equipment;
 - how the simulated activity relates to the candidate's normal work context in terms of the pressures of time, access to resources and access to information, and the communication media; and
 - how the simulation was set up and conducted, preferably supported by physical evidence such as photographs or inspection of a test rig.

Assessors, internal verifiers and external verifiers should monitor the proportion of evidence generated via simulations to ensure that it is not the primary source of a candidate's claim to competence.

- i. Simulation must enable the individual to demonstrate competence in a real or realistic work environment. In this context this means in specialist centres which replicate the workplace in terms of equipment and environment, reflect normal working situations and use relevant industrial or commercial standards and procedures. Short work placements or non-realistic work environments which do not replicate the pressures and requirements of normal commercial or industrial activities will not be acceptable. The bulk of the candidate's evidence should be drawn from their normal working activity and not consist of artificially contrived opportunities for one-off demonstration of competence. Similarly equipment must be that used in current commercial and industrial contexts. Procedures and standards used should be those which are nationally or internationally recognised or devised by specific companies as standard operating procedure.

4) Occupational competence of assessor and verifiers

- j. Assessors:

- must be competent in the units they are assessing. This is shown through the assessor having achieved the award they are assessing OR providing quality evidence to the external verifier that they are able to make valid judgements

of the competence of candidates. This could be done through a combination of a) personal interview, b) review of employment histories and/or c) examination of the assessor's judgement during assessments.

- must have a working knowledge of awards and a full understanding of that part of the award for which they have responsibility.
- should hold or be working towards suitable qualifications for assessment, as defined by the Qualification Regulator(s). Organisations should consult with the relevant awarding organisation regarding approval for exemptions.

k. Internal verifiers:

- must be either working in the appropriate sector itself OR they must be able to demonstrate they possess practical and up-to-date knowledge of current working practices appropriate to the sector in which they are carrying out verification practices; and
- must be appointed by an approved centre
- must have a working knowledge of the awards they are internally verifying
- should hold or be working towards suitable qualifications for verification, as defined by the Qualification Regulator(s). Organisations should consult with the relevant awarding organisation regarding approval for exemptions.

l. External Verifiers:

- must be familiar with the industry, and have an understanding of the technical processes and terminology used. The Awarding Body, through examination of relevant CV's and references, will confirm this.
- should hold or be working towards suitable qualifications for verification, as defined by the Qualification Regulator(s).

5) External Quality Control

m. The external quality control of assessment is to be ensured through the use of competent external verifiers.

n. External quality control will be undertaken by:

- *Statistical Monitoring* in which the risk rating of centres is determined through the collection of a range data types. Awarding Bodies delivering the awards should provide arrangements for fulfilling these requirements.

Appendix

This assessment strategy applies to the following Life Sciences and Related Industries qualifications:

- *SVQ 2 in Life Sciences and Related Industries at SCQF level 6*
- *SVQ 3 in Life Sciences and Related Industries at SCQF level 7*
- *SVQ 4 in Life Sciences and Related Industries at SCQF level 8*