

SEMBIT2-10 - SQA Unit Code F9JL 04

Contributing to the application of problem solving techniques



Overview

This unit covers the competences required for contributing to the application of problem solving techniques. It involves identifying the nature and extent of the problem and obtaining all the relevant information relating to it, using appropriate problem solving tools and applying them within a team focused environment.

In carrying out the problem solving activities, you will be expected to take on one of the key roles such as facilitator, timekeeper, scribe or active team member involved in the collection of support information. You will be required to contribute to the identification of the root cause of the problem and the determination of what permanent corrective actions need to be implemented to meet with organisational requirements. Typically, these corrective actions will lead to reduced costs, improved quality, improved delivery and responsiveness (lead time reduction), improved output, health and safety and regulatory compliance.

Your responsibilities will require you to comply with organisational policy and procedures for the activities undertaken, and to report any problems that you cannot solve, or that are outside your responsibility, to the relevant authority. You will be expected to take responsibility for your own actions within the activity, and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide a good understanding of your work, and will provide an informed approach to the techniques and procedures used. You will need to understand the principles and procedures of structured problem solving and their application, in adequate depth to provide a sound basis for carrying out the activities to the required criteria.

Applying safe working practices will be a key issue throughout.

Specific Unit Requirements

The word 'contribute' is used throughout this unit. This means that, although the outcomes of this unit may be carried out and achieved as part of a team, in order to prove consistent competent performance you must be able to demonstrate:

1. specific, quantifiable and auditable personal contributions in the achievement of this unit
2. competence in all the areas required by the standard

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3. your ability to combine the performance statements specified when contributing to the application of the principles and processes of this unit.

Performance criteria

You must be able to:

- P1 work safely at all times, complying with health and safety and other relevant regulations and guidelines
- P2 contribute to identifying the nature and extent of the problem, and to obtaining all relevant information relating to it
- P3 support a structured approach to problem resolution
- P4 contribute to the identification of appropriate problem solving tools, and to applying them within a team focused environment
- P5 contribute to the identification of the root cause of the problem and the determination of permanent corrective actions
- P6 contribute to ensuring that the corrective actions determined meet with organisational requirements
- P7 contribute to obtaining the appropriate authority, and to the implementation of the agreed permanent corrective actions, within agreed timescales
- P8 contribute to monitoring the problem resolution progress, and recording progress in the appropriate information systems

Knowledge and understanding

You need to know and understand:

- K1 the business need for problem identification and removal
- K2 the benefits of adopting a formalised problem solving process
- K3 how to establish and select the team to be used for the problem solving activity
- K4 why there must be clearly defined roles within the team, and what these roles are (such as facilitator, scribe, timekeeper)
- K5 how to formally define the problem, and the level of involvement required from others in the problem solving process
- K6 time line graphing, and how this is applied to the problem solving process
- K7 the importance of good data collection and analysis to support problem solving
- K8 containment action planning (to include process risk, action planning, testing decisions, determining timescales and protecting the customer)
- K9 how to identify and verify the root cause of a problem (to include the use of brainstorming, the 5 `Why's, Ishikawa diagrams, testing decisions, verification techniques, root cause paths)
- K10 how to determine and select permanent corrective actions
- K11 how to implement the permanent corrective actions identified
- K12 how to prevent recurrence of the problems (to include changes to management systems, operating systems and procedures, and the identification of opportunities for improvements)
- K13 how to capture process improvement opportunities
- K14 how to recognise the team's problem solving efforts, review the lessons learned and ensure that implementation has occurred
- K15 the extent of your own authority, and to whom you should report in the event of problems that you cannot resolve

Additional Information

Scope/range related to performance criteria

You must be able to:

1. participate in problem solving activities, taking on **one** of the following key roles:
 - 1.1. facilitator
 - 1.2. timekeeper
 - 1.3. sourcing data and/or information required
 - 1.4. scribe
2. contribute to identifying the savings within the chosen problem solving activity, covering **two** of
 - 2.1. cost
 - 2.2. quality
 - 2.3. delivery or service
 - 2.4. responsiveness (lead time reduction, output or capacity)
 - 2.5. health and safety
 - 2.6. regulatory compliance

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