



Arrangements for:

National Progression Award (NPA)

in

Business Improvement Techniques

at SCQF level 5

Group Award Code: G8YY 45

Validation date: May 2008

Date of original publication: July 2009

Version: 01

Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of National Qualification Group Awards.

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1 Introduction

This is the Arrangements Document for the new Group Award in Business Improvement Techniques at SCQF level 5, which was validated in May 2008. This document includes: background information on the development of the Group Award, its aims, guidance on access, details of the Group Award structure, and guidance on delivery.

The National Progression Award (NPA) in Business Improvement Techniques is a new award and has been developed as an alternative but complementary award to the SVQ in Business Improvement Techniques.

2 Rationale for the development of the Group Award

The National Progression Award in Business Improvement Techniques has been developed in response to demand from industry for nationally-recognised short programmes in Business Improvement Techniques. The requirement of the short programmes is to introduce employees to some of the basic principles and equip them with the fundamental skills of Lean Management.

The Units for the award were selected from those available in the SVQ in Business Improvement Techniques and were chosen following extensive consultation with industry and training providers.

The three Units forming the National Progression Award are closely inter-linked and, taken together, incorporate the fundamental principles of Business Improvement Techniques. These Units are general in nature and can be used in a wide range of job functions.

As these Units relate directly to the workplace candidates will be motivated to identify and implement changes to bring improved performance to their workplace.

Further evidence for selecting the three Units for the National Progression Award are:

- ◆ Candidates will be able to collect evidence for their portfolios relatively easily, will require a minimum of additional training and very quickly gain confidence to seek further progression.
- ◆ All three Units are mandatory for the SVQ in Business Improvement Techniques Process Improvement Pathway at all levels.
- ◆ The Unit on *Contributing to Effective Team Working* is also mandatory for the Quality Improvement Pathway at all levels while the other two can be selected as options at levels 3 and 4 (only one of them can be selected at level 2). When the candidates complete their portfolios of evidence and achieve the Units they will therefore be part way towards completion of the SVQ.

3 Aims of the Group Award

3.1 Principal aims of the Group Award

The NPA Business Improvement Techniques award:

- ◆ Provides a nationally-recognised qualification which has value in its own right
- ◆ Introduces candidates to the basic principles of business improvement
- ◆ Gives progression opportunities for successful candidates
- ◆ Is relevant to a wide range of jobs
- ◆ Provides an entry-level to competence-based assessment for candidates

3.2 General aims of the Group Award

- ◆ Practical skills
- ◆ Health and Safety
- ◆ Transferable skills
- ◆ Responsibility for own learning
- ◆ Planning, organisational and evaluation skills
- ◆ Technical skills
- ◆ Oral, written and communication skills
- ◆ Resources management ability
- ◆ Flexibility, knowledge, skills and motivation as a basis for progression
- ◆ Problem solving

3.3 Target groups

This National Progression Award is suitable for candidates who are employed and who would like to enhance their knowledge of business improvement.

4 Access to Group Award

As with all SQA qualifications, entry to the awards will be at the discretion of the centre. Although the National Progression Awards in Business Improvement Techniques is fundamentally designed to encourage open access to all candidates in so far as is possible.

One of the major attractions to using a National Progression Award is that they are tailored to the needs and circumstances of the candidates. The assessments for the NPA will be challenging and meaningful, but nonetheless still achievable for all candidates who are prepared to work to gain the award. They are designed to get candidates acclimatised to a culture of attainment where assessments will challenge them, but do not put unreasonable obstacles between them and real achievement. The candidate on completion of this NPA may wish to go on and undertake the SVQ in Business Improvement Techniques.

5 Group Award structure

5.1 Framework

The candidate will be required to complete three SVQ Units.

Unit title	Code	SQA credit value
Contributing to Effective Team Working	F1SX 04	1
Applying Workplace Organisation Techniques	F1SD 04	1
Applying Continuous Improvement Techniques	F1S1 04	1

6 Approaches to delivery and assessment

Evidence for this award should ideally be obtained from the working environment where work activities or work Outcomes assessed are the candidates own work/contribution. However, in certain circumstances, replication of work activities may be acceptable. Where replication is considered necessary, assessors must be confident that the work activities undertaken replicate the workplace to such an extent that competencies gained will be fully transferable to the workplace. Assessors must clearly identify those aspects of the work activity that are critical to performance, and make sure that they have been replicated satisfactorily. Where replication is involved, assessors must obtain agreement with internal and/or external verifiers before assessing any candidates.

Examples of critical aspects could be:

- ◆ environmental conditions such as, noise levels, lighting conditions and the presence of hazards
- ◆ the use of industrial equipment and procedures
- ◆ pressure of work, such as time constraints
- ◆ carrying out work on actual plant/equipment and the consequences of making mistakes
- ◆ customer/supplier/departmental relationships

7 General information for centres

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Internal and external verification

All instruments of assessment used within this/these Group Award(s) should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment and Quality Assurance for Colleges of Further Education* (www.sqa.org.uk).

8 General information for candidates

This award is designed as an introduction to techniques used by employers who are implementing business improvement programmes such as Lean Management, Lean Manufacture or Six-Sigma. On completion of the award, candidates will be able to reduce waste and improve efficiency by contributing to effective team working, improving their workplace organisation and applying continuous improvement techniques in the workplace.

The award is practical in nature and it is expected that most learning activities will be practical. Each of the Units will be assessed individually, although, your centre may integrate the assessments over the Units.

On completion of this award it is expected that candidates will progress to further study to complete a full SVQ in Business Improvement Techniques.

Candidates undertaking this award in the workplace will develop skills to enhance their work activities. Your assessor will give guidance on gathering of appropriate evidence and you will be assessed using specifically designed assessments for the workplace.

9 Glossary of terms

SCQF: This stands for the Scottish Credit and Qualification Framework, which is a new way of speaking about qualifications and how they inter-relate. We use SCQF terminology throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at www.scqf.org.uk

SCQF credit points: One SCQF credit point equates to 10 hours of learning. NQ Units at SCQF levels 2–6 are worth 6 SCQF credit points, NQ Units at level 7 are worth 8 SCQF points.

SCQF levels: The SCQF covers 12 levels of learning. National Qualification Group Awards are available at SCQF levels 2–6 and will normally be made up of National Units which are available from SCQF levels 2–7.

Dedicated Unit to cover Core Skills: This is a non-subject Unit that is written to cover one or more particular Core Skills.

Embedded Core Skills: This is where the development of a Core Skill is incorporated into the Unit and where the Unit assessment also covers the requirements of Core Skill assessment at a particular level.

Signposted Core Skills: This refers to the opportunities to develop a particular Core Skill at a specified level that lie outwith automatic certification.

Qualification Design Team: The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the National Certificate/National Progression Award from its inception/revision through to validation. The group is made up of key stakeholders representing the interests of centres, employers, universities and other relevant organisations.

Consortium-devised National Certificates/National Progression Awards are those developments or revisions undertaken by a group of centres in partnership with SQA.

10 Appendices

Appendix 1: Unit Specifications

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Contributing to Effective Team Working

Unit summary

This Unit covers the competencies required to work effectively as a team member within a continuous improvement environment. You will be required to establish and maintain productive working relationships whilst challenging fixed ideas, deal with disagreements in an amicable and constructive way. You will also be expected to contribute to team activities by providing ideas and solutions and to find ways of resolving issues that cause concern and disagreement. As part of the team activities you will need to keep others informed about work plans or activities, which affect them.

Your responsibilities will require you to comply with organisational policy and procedures for the activities undertaken, report any problems with the activities to the relevant people, and complete any necessary job/task documentation accurately and legibly. You will be expected to take full responsibility for your actions within the team and for the quality and accuracy of the work that you produce.

Your underpinning knowledge will be sufficient to provide a good understanding of team working, and provide an informed approach to the techniques and procedures used. You will need to understand how your actions will affect the overall performance of the team.

Applying safe working practices will be a key issue throughout.

Contributing to Effective Team Working

Performance statements:

You must:

Establish and maintain productive working relationships, using the key performance measures and communication processes available to you.

Deal with disagreements in an amicable and constructive way using relevant information and data to support views and arguments.

Provide ideas and solutions to find ways of resolving issues that cause concern and disagreement.

Use all relevant information available to you to keep others informed about work plans or activities which affect them.

Seek assistance from others in a polite courteous way, without disturbing normal work activities.

Respond in a timely and positive way using data and information available when others ask for help or information.

Scope of the Unit:

In carrying out the above activities you must:

- 1 Establish and maintain good working relationships with three of the following:

- Colleagues within your own work group
- Colleagues in other work groups
- Immediate line management
- Those for whom you have responsibility
- External contacts

- 2 Communicate orally by three of the following:

- Question and answer sessions
- Team briefings
- Brain storming sessions
- Problem resolution processes

- 3 Communicate in writing and/or electronically to include three from the following:

- Maintaining up to date key performance indicators for the work area
- Adding ideas and actions to team boards
- Processing information
- Communicating via e-mail/internal network services
- Producing briefs or updates

Contributing to Effective Team Working

Knowledge statements:

You must have knowledge and understanding of:

- 1 The importance of creating and maintaining effective working relationships.
- 2 The types of problems that can occur with working relationships.
- 3 How your own behaviour, dress and language can effect working relationships.
- 4 What actions can be taken to deal with specific difficulties in working relationships.
- 5 The importance of challenging fixed ideas within the team.
- 6 How to challenge fixed ideas without causing problems with working relationships.
- 7 How to use data and information to help resolve concerns and disagreements.
- 8 Who should you seek assistance from when you have difficulties with working relationships.
- 9 The importance of sharing your knowledge and information and your performance measures, with other people in your team and other groups.
- 10 How to use the data and information available to you to communicate your performance effectively to others.
- 11 The types of information and data available in your area (such as Key performance measures for RFT, quality, Target v Actual, scrap, OEE, SPC) problem resolution processes and action planning; continuous improvement, brainstorming and trialling new ideas.
- 12 The mixture of skills and experience available in your team to support you or the process when problems occur (team skills matrix).
- 13 Why you need to keep others involved in any plans or activities you may be doing.
- 14 The types of support or assistance that you might need from others.
- 15 The importance of being polite when requesting assistance.
- 16 The types of disruption that can be caused by inopportune requests for assistance.
- 17 The methods used in your area for effective communication such as (team briefings covering, team performance, quality, cost, delivery, people; team boards general information; process performance boards covering measures, graphs, action plans).
- 18 The extent of your own authority and whom you should report to, in the event of problems that you cannot resolve.

Applying Workplace Organisation Techniques

Unit summary

This Unit covers the competencies required to apply a systemic approach to continuously make improvements to the workplace organisation. It involves applying the principles and techniques of workplace organisation (such as 5S or 5C). You will need to consider the work area and its activity and determine where information, materials, tools and/or equipment are missing or require a new location and where improvements to the area or activity could be made. You will also be expected to produce and/or contribute to improving existing standard operating procedures and visual controls for the work area, which could cover such things as; producing shadow boards to standardise the storage and location of area equipment, colour coding of equipment, cleaning and maintenance of equipment, production operations and health and safety. The overall objective of the activity will be to improve the condition of the working environment.

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 are outside your responsibility, to the relevant authority. You will be expected to take full responsibility for your own actions within the activity and for the quality and accuracy of the work you carry out.

Your underpinning knowledge will provide a good understanding of the workplace organisation activity and the area in which you are working, and provide an informed approach to the techniques and procedures used. You will need to understand the principles of workplace organisation 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.

Applying Workplace Organisation Techniques

Performance statements:

You must:

Work safely at all times, complying with health and safety and other relevant regulations and guidelines.

Apply the principles and process of workplace organisation within the chosen work area and establish the area score.

Identify where information, resources or equipment is missing or is in surplus and where improvements can be made.

Contribute to the production and/or updating of Standard Operation Procedures (SOPs), and visual controls that everyone works to within the area.

Make improvements to the workplace organisation.

Scope of the Unit:

In carrying out the above activities you must:

- 1 Produce and/or contribute to the identification of improvements in existing standard operating procedures which cover three of the following:

- Cleaning of equipment/work area
- Maintenance of equipment
- Health and safety
- Process procedures
- Manufacturing operations/working processes
- Quality systems
- Regulatory compliance system

- 2 Produce and/or contribute to the production of visual controls, which cover three of the following:

- Producing shadow boards or an alternative (such a labelled racking and storage Systems) to standardise the storage and location of area resources and/or equipment
- Colour coding
- Line status systems (such as line, process system)
- Skills matrix
- Performance measures
- Process control boards
- Improvement systems
- Planning systems

Applying Workplace Organisation Techniques

Knowledge statements:

You must have knowledge and understanding of:

- 1 The health and safety requirements of the area in which you are carrying out the workplace organisation activity.
- 2 How a work area is selected for an activity.
- 3 The procedure used to identify and address surplus or missing equipment or resources (such as carrying out a 'red tagging' exercise).
- 4 How to arrange and label the necessary resources or equipment for rapid identification and access.
- 5 How to create Standard Operating Procedures (SOPs).
- 6 The process and principles used to make improvements to the workplace organisation.
- 7 How to score and audit the workplace organisation.
- 8 The techniques required to communicate information using visual control systems (shadow boards).
- 9 How information and equipment can be displayed for various work applications (such as information sheets, boards or IT systems).
- 10 How to correlate work activities into Standard Operating Procedures (SOPs).
- 11 The extent of your own authority and whom you should report to, in the event of problems that you cannot resolve.

Applying Continuous Improvement Techniques (Kaizen)

Unit summary

This Unit covers the competencies required for applying continuous improvement techniques (Kaizen) to your work activities. It involves benchmarking the process before and after the Kaizen activity in order to set quantifiable objectives and targets for the improvement activity. The activities undertaken will include the identification of all forms of waste, and problems or conditions within the work area or activity where improvements can be made. You will need to focus on improvements which would give: business benefits such as reduced product cost, increased capacity and/or flexibility, improved safety, improved regulatory compliance, improved quality, improved customer service, improvements to working practices and procedures, reduction in lead time and reduction/elimination of waste.

You will also be required to produce and/or contribute to improving existing Standard Operating Procedures (SOPs), which could include, cleaning of equipment, maintenance of equipment, health and safety practices and procedures, process procedures, manufacturing operations and quality improvements.

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 are outside your responsibility, to the relevant authority. You will be expected to take full responsibility for your own actions within the activity and the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide a good understanding of the Kaizen activity and the area in which you are working, and provide an informed approach to the techniques and procedures used. You will need to understand the Kaizen principles 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.

Applying Continuous Improvement Techniques (Kaizen)

Performance statements:

You must:

Work safely at all times, complying with health and safety and other relevant regulations and guidelines.

Provide comparisons of the process before and after the Kaizen activity (to confirm improvements).

Apply the principles and process of the Kaizen activity.

Contribute to the identification of quantifiable objectives and targets for the Kaizen activity.

Carry out the Kaizen activity within the chosen work area/activity.

Identify waste, problems or conditions within the work area or activity where improvements can be made.

Carry out a structured waste elimination activity based on the identified wastes, problems or conditions.

Contribute to the production and/or updating of Standard Operating Procedures (SOPs), or other approved documentation that will sustain the improvements made, resulting from the Kaizen activity.

Determine and calculate measure of performance for quality, cost and delivery.

Record and show business improvement using key performance indicators.

Calculate and visually represent the optimum resources required for a process based on customer demand.

Scope of the Unit:

In carrying out the above activities you must:

- 1 Identify improvements within the working area/activity which cover three of the following:
 - Reduction in cost
 - Improved health, safety and/or working environment
 - Improved quality
 - Improved regulatory compliance
 - Improvements to working practices
 - Reduction in lead time
 - Reduction in waste and/or energy usage
 - Improved customer service
 - Improved resource utilisation

- 2 Produce and/or contribute to the identification and application of improvements, which cover three of the following:
 - Cleaning of equipment or work area
 - Maintenance of equipment
 - Health and safety
 - Process procedures
 - Manufacturing operations or work area operations
 - Quality system
 - Regulatory compliance systems

- 3 Determine and calculate one of the following quality measures:
 - Not right first time (as a percentage or as Parts Per Million PPM)
 - Company specific quality measure

- 4 Determine and calculate one of the following measures:
 - Delivery schedule achievement
 - Company specific delivery or service measure

- 5 Determine and calculate one of the following cost measures:
 - Parts per operator hour (PPOH)
 - Production volume
 - Value added per person (VAPP)
 - Overall equipment effectiveness (OEE)
 - Stock turns
 - Floor space utilization (FSU)
 - Cost breakdown (such as labour, material, energy and overhead)
 - Company specific cost measure

- 6 Record and show business improvement using one of the following key performance indicators:

Not right first time (as a percentage or as Parts Per Million PPM)

Company specific quality measure

Delivery schedule achievement

Company specific delivery measure

Parts per operator hour (PPOH)

Production volume

Value added per person (VAPP)

Overall equipment effectiveness (OEE)

Stock turns

Floor space utilization (FSU)

Cost breakdown (such as labour, material, energy and overhead)

Company specific cost measure

Applying Continuous Improvement Techniques (Kaizen)

Knowledge statements:

You must have knowledge and understanding of:

- 1 The health and safety requirements of the area in which you are carrying out the Kaizen activity.
- 2 How a work area/activity is selected for the Kaizen activity.
- 3 The principles and process for the deployment of Kaizen.
- 4 What are the eight wastes (over-production, inventory, transport, over-processing, waiting time, operator motion, bad quality, failure to exploit human potential) and how to eliminate them.
- 5 Problem solving and root cause analysis.

- 6 The importance of understanding the process/activity under review and how this will affect the quality of the problem solving.
- 7 How to carry out a Kaizen activity and establish measurable improvements.
- 8 How to distinguish facts from opinions in order to identify improvement actions.
- 9 How improvements to the process are achieved by engaging the knowledge and experience of the people involved in the process.
- 10 How to encourage people to identify potential improvements.
- 11 How to evaluate improvement ideas in order to select those that are to be pursued.
- 12 How to set quantifiable targets and objectives.
- 13 How to create or update Standard Operating Procedures (SOPs) or other approved documentation.
- 14 The techniques used to visually communicate the work of the Kaizen activity to participants and others.
- 15 The application of the business's key measures of competitiveness (such as the DTIs seven measures, delivered right first time, delivery schedule achievement, people productivity, stock turns, overall equipment effectiveness, value added per person, floor space utilisation).
- 16 How the cycle time of a process can be defined.
- 17 How to calculate the required production rate for a process by using a calculation such as Takt Time.
- 18 How to calculate the optimum resources such as people, equipment, facilities and materials required for a process based on customer demand.
- 19 The techniques used to distribute work content to balance cycle times to the rate of customer demand and how to visually represent it. For example, line balance, and process displays.
- 20 The extent of your own authority and whom you should report to, in the event of problems that you cannot resolve.