

**-SQA-SCOTTISH QUALIFICATIONS AUTHORITY**

**HIGHER NATIONAL UNIT SPECIFICATION**

**GENERAL INFORMATION**

<b>-Unit number-</b>	<b>2580569</b>
<b>-Unit title-</b>	<b>TOTAL QUALITY MANAGEMENT</b>
<b>-Superclass category-</b>	<b>VD</b>
<b>-Date of publication- (month and year)</b>	<b>JUNE 1999</b>
<b>-Originating centre for unit-</b>	<b>SQA</b>

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**-DESCRIPTION-**

**GENERAL COMPETENCE FOR UNIT:** Applying the principles and techniques that are necessary for implementing Total Quality Management.

**OUTCOMES:**

1. describe the fundamental principles of Total Quality Management;
2. explain the role of human resource management in developing a Total Quality culture;
3. apply the tools and techniques used in developing a Total Quality Management organisation;
4. explain the role of marketing in meeting customer requirements;
5. analyse the requirements when planning the implementation of a Total Quality Management programme in an organisation.

**CREDIT VALUE:** 2 HN Credits.

**ACCESS STATEMENT:** Access is at the discretion of the centre. However, it would be beneficial if the candidate had achieved competence in principles of quality assurance. This may be evidenced by possession of the Higher National Unit 2580417 Quality Assurance: Introduction (IQA). It is desirable also that the candidate has completed the Higher National Unit 2580407 Principles and Techniques of Quality Management (IQA).

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Additional copies of this unit can be obtained from:

The Committee and Administration Unit, SQA, Hanover House, 24 Douglas Street, Glasgow G2 7NQ, (Tel: 0141-242 2168).

At the time of publication the cost is £1.50 per unit (minimum order £5.00).

## HIGHER NATIONAL UNIT SPECIFICATION

### STATEMENT OF STANDARDS

Unit number: 2580569

Unit title: TOTAL QUALITY MANAGEMENT

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

### OUTCOME

1. DESCRIBE THE FUNDAMENTAL PRINCIPLES OF TOTAL QUALITY MANAGEMENT

### PERFORMANCE CRITERIA

- (a) The fundamentals of Total Quality Management are explained correctly.
- (b) The fundamentals of TQM are identified correctly in the theories of Deming, Juran and Crosby.
- (c) The role of management in introducing TQM is explained clearly.

### RANGE STATEMENT

Fundamentals: customer satisfaction; commitment and participation by everyone; continuous quality improvement.

Role of management: leadership and motivation; management styles; strategic planning; creating appropriate organisational structure.

### EVIDENCE REQUIREMENTS

Written and/or oral evidence to show that the candidate has achieved the performance criteria and all aspects of the range statement of Total Quality Management.

**OUTCOME**

2. EXPLAIN THE ROLE OF HUMAN RESOURCE MANAGEMENT IN DEVELOPING A TOTAL QUALITY CULTURE

**PERFORMANCE CRITERIA**

- (a) The achievement of strategic human resource objectives through individual development plans is explained correctly.
- (b) The importance of employee empowerment to the success of a TQM programme is explained correctly.
- (c) The operation of quality improvement teams/circles is described clearly.

**RANGE STATEMENT**

Empowerment: employee involvement; devolved decision-making; link between empowerment and training.

**EVIDENCE REQUIREMENTS**

Written and/or oral evidence to show that candidates can explain the function of human resources within total quality management.

**OUTCOME**

3. APPLY THE TOOLS AND TECHNIQUES USED IN DEVELOPING A TOTAL QUALITY MANAGEMENT ORGANISATION

**PERFORMANCE CRITERIA**

- (a) The selection of the appropriate quality improvement tool is correct for a number of different applications.
- (b) The application of the seven management tools for quality improvement is described correctly.
- (c) The elements for a successful quality improvement programme are outlined clearly.
- (d) The role of current Quality Awards for improvement in business performance is described correctly.

**RANGE STATEMENT**

Quality improvement tools: check sheets/tally charts; benchmarking; cause and effect diagram; flow diagram; histogram; pareto diagram; scatter diagram.

Seven management tools: affinity diagram; interrelationship diagram; tree diagram; matrix diagram; matrix data analysis; process decision programme chart; arrow diagram.

Elements of quality improvement programme: organising; planning, measuring and sustaining.

### **EVIDENCE REQUIREMENTS**

Written and/or oral evidence is required that the candidate has achieved the performance criteria and all aspects of the range statement.

### **OUTCOME**

4. EXPLAIN THE ROLE OF MARKETING IN MEETING CUSTOMER REQUIREMENTS

### **PERFORMANCE CRITERIA**

- (a) The importance of the customer supplier chain is explained correctly.
- (b) The methods of gathering information for measuring customer satisfaction are described correctly.
- (c) The uses of customer information are described correctly.
- (d) The role of marketing and the influence of market research in meeting customers' requirements are described correctly.

### **RANGE STATEMENT**

Methods: customer surveys; field intelligence; complaints analysis; analysis of competitor performance; feedback analysis.

Uses: satisfying customers' needs; exceeding customers' expectations; feedback for product/service improvements.

### **EVIDENCE REQUIREMENTS**

Written and/or oral evidence to show that the candidate has achieved the performance criteria and all aspects of the range statement understanding the role of marketing in determining customers' requirements.

**OUTCOME**

5. ANALYSE THE REQUIREMENTS WHEN PLANNING THE IMPLEMENTATION OF A TOTAL QUALITY MANAGEMENT PROGRAMME IN AN ORGANISATION

**PERFORMANCE CRITERIA**

- (a) The strategic planning steps in a typical Total Quality Management programme are outlined clearly.
- (b) The approach adopted by a specific organisation when implementing a Total Quality Management programme is critically analysed.

**RANGE STATEMENT**

Strategic planning steps: understanding and awareness; training; involvement of everyone; quality improvement; review and repeat.

**EVIDENCE REQUIREMENTS**

Written and/or oral evidence to show that the candidates has achieved the performance criteria and all aspects of the range statement.

**MERIT STATEMENT:** To gain a pass in this unit, a candidate must meet the standards set out in the outcomes, performance criteria, range statements and evidence requirements.

To achieve a merit in this unit, a candidate must demonstrate a superior or more sophisticated level of performance. In this unit this might be shown in the following ways:

- (a) evidence of further reading;
- (b) the ability to link the concepts covered in the unit in a coherent manner;
- (c) the ability to work independently.

**ASSESSMENT**

In order to achieve this unit, candidates are required to present sufficient evidence that they have met all the performance criteria for each outcome within the range specified. Details of these requirements are given for each outcome. The assessment instruments used should follow the general guidance offered by the Scottish Qualifications Authority (SQA) assessment model and an integrative approach to assessment is encouraged. (See references at the end of support notes).

Accurate records should be made of the assessment instruments used showing how evidence is generated for each outcome and giving marking schemes and/or checklists, etc. Records of candidates' achievements should be kept. These records will be available for external verification.

### **SPECIAL NEEDS**

Proposals to modify outcomes, range statements or agreed assessment arrangements should be discussed in the first place with the external verifier.

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**HIGHER NATIONAL UNIT SPECIFICATION****SUPPORT NOTES**

Unit number: 2580569

Unit title: TOTAL QUALITY MANAGEMENT

**SUPPORT NOTES:** This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

**NOTIONAL DESIGN LENGTH:** SQA allocates a notional design length to a unit on the basis of time estimated for achievement of the stated standards by a candidate whose starting point is as described in the access statement. The notional design length for this unit is 80 hours. The use of notional design length for programme design and timetabling is advisory only.

**PURPOSE** This unit can be taken as a free standing single credit unit and can be used as part of the Higher National award programme. It is a mandatory unit in the HNC/D Quality and an optional unit in the Associated studies section of the National HND Engineering Qualification. Further Information can be obtained from SQA.

On completion of this unit you will be able to explain the role of quality assurance during the contract review cycle, design cycle and methods of process control used to ensure contracts are fulfilled.

**CONTENT/CONTEXT****General**

This unit is intended to give candidates an insight into total quality management and its implementation. The approach should be more of a practical one and not simply a theoretical discourse on total quality management. There are a number of suitable texts and references. It is recommended, however that candidates have access to BS 7850: Part 1: 1992 and Part 2: 1992.

It should be emphasised to candidates that there is no single approach to implementing total quality management and that it depends very much on the nature and size of the organisation. It should also be made clear to candidates that total quality management is not a system but is a long-term (Indefinite) programme/process that fundamentally changes, the management style and operational practices of an organisation.



## Outcome 1

- (a) This serves as an introduction to the concepts of total quality management as well as emphasising the fundamental importance of the role of senior management. It seeks to introduce and underline the key concepts of customers focus, total commitment, developing all staff and continuous improvement of all processes.
- (b) Candidates should be familiar with the philosophies of the “Quality Gurus”. Deming, Juran and Crosby were chosen as they are considered to have laid the “theoretical” foundations of total quality management. Candidates should be able to relate the steps in an implementation programme to the key features of each of the philosophies.
- (c) Group or team success depends on good leadership. Candidates can explore the characteristics of good leadership. The motivational theories of Herzberg, Maslow etc should be understood by senior management if employees are to embrace the concept and practice of total quality management. Management style is related to leadership and here the X and Y theory of Douglas McGregor could be considered (briefly). Candidates should also understand the importance of setting out the strategic objectives, for an organisation, that include the move towards total quality management. An appropriate organisational structure for total quality management is also necessary, which should be appreciated by candidates.

## Outcome 2

Training and personal development at every level within an organisation is essential. It is generally the role of personnel or human resources to manage and oversee such programmes.

- (a) The human resource strategy can be determined from an organisation’s strategic plans. Departmental, team and individual development and training programmes can thus be established. Candidates should understand how individual training plans are produced to ensure that the organisation’s objectives are met.
- (b) Candidates should be able to explain that for total quality management to succeed, decision-making needs to be devolved down to the lowest appropriate level. A link could be made here with the concepts of leadership and management style. However it should be stressed to candidates that training for employees must be given before this can happen. Training for managers and supervisors is also essential. They must be re-trained to listen to the workforce and their ideas. Employee involvement in problem solving is necessary if a total quality culture is to develop.
- (c) Total quality management depends very much on the team approach. Various teams at different stages of an implementation programme are required. Since all employees are required to participate, it is essential that training be given. Candidates should also give some consideration to Belbin’s theory on the operation of teams. The accepted conduct of quality circles and other quality teams should also be discussed.

## Outcome 3

- (a) Candidates should be given as much experience as possible in applying the tools and using real data where appropriate. Role play and group participation should be encouraged to emphasise the practical applications of the various quality improvement tools.
- (b) An outline of the seven management tools and where/when they are used for quality improvement should be discussed. The Management and Control of Quality by Evans and Lindsay (3rd edition) or Total Quality Management with Case Studies by Oakland and Porter provide a suitable description of the tools and their applications.
- (c) See BS 7850 Part 2: 1992 for further information.
- (d) It is not expected that either the awards or the methods for gaining them should be studied in detail. However the use of the different awards as a tool for developing strategy, measuring and monitoring progress and performance as part of the implementation of total quality management should be described. It should be pointed out however, that the gaining of these awards or even using the model(s) is not necessary for success.

The quality Awards which could be described: European Foundation Quality Award (Business Excellence Model); Investors in People.

## Outcome 4

All PCs - A key feature in moving towards a total quality culture, in any organisation, has to be recognising the central importance of the customer. This includes the internal customer as well as the external customer. The operation of the entire customer supplier chain should be understood and that failure of any part of the chain can result in customer dissatisfaction. The importance of recognising the internal customer and satisfying their needs should be understood.

The importance of gathering customer (internal and external) information and using this information for improving quality of products and services should be understood.

The role of a marketing department in gathering external customer data and information on the performance of competitors should be described. The use of this information by other departments such as design, manufacturing, purchasing etc should be understood.

## Outcome 5

This outcome should be used to link the concepts, theories and practical tools of the previous outcomes. The timescales, problems, difficulties, iterative nature, etc should be clearly understood when implementing total quality management by using real examples and suitable case studies.

**APPROACHES TO GENERATING EVIDENCE** A range of teaching and learning approaches should be adopted to suit the background and experience of the candidates. While some sections of the unit may be suited to lecture/tutorial type of delivery, it is envisaged that much of the material would be more suited to a candidate/group centred approach. Where candidates have no direct experience of total quality management, the use of case studies, videos, texts etc. is recommended. Lecturers/tutors may find it more useful to integrate the teaching/learning throughout the unit rather than to proceed through the unit outcome by outcome.

**ASSESSMENT PROCEDURES** Candidates could be assessed on:

- i. a scenario which closely related to the type of work that they are involved in whilst addressing the issues of the requirements of ISO 9000.
- ii. a case study which relates to an area of work in which they are interested whilst addressing the issues of the requirements of ISO 9000.
- ii an appropriate methods which complies with the SQA's Guide to Assessment.

A series of restricted response questions based upon the performance criteria and the range statement should lead the student through the assessment with every response of an acceptable standard for a 'fundamental-level unit'.

## REFERENCES

1. Guide to unit writing, SQA, 1993 (Code: A018).
2. Guide to assessment, SQA, 1993 (Code: B005).
3. Guide to certification, SQA, 1996 (Code: F025).
4. Notes for unit writers, SQA, 1995 (Code: A041).

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