

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

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**Cambridge International Diploma in Management
Professional Level**

Scheme of Work

4249
Managing for Quality
Optional Module



UNIVERSITY *of* CAMBRIDGE
International Examinations

MODULE NUMBER (OPTIONAL) 4249: MANAGING FOR QUALITY

BRIEF INTRODUCTION AND MODULE OUTLINE

This optional module deals with the importance of having clearly defined quality measures in place that meet customer requirements. It asks candidates to consider what quality means in their organisation and how this is maintained.

It encourages candidates to review and develop quality systems that meet both internal and external requirements, devise procedures for implementation and evaluate quality systems. This involves clearly recognising the importance of the customer, how their needs can be specified in quality terms and the constraints that may exist in the organisation. The importance of effective communication is explored and the candidate is expected to identify key performance indicators, critical success factors and other relevant quality measures. Procedures for auditing quality are also introduced in this module and the candidate is expected to carry out quality audits in practice.

Assessment Objectives :

1. Understand the importance of quality in organisations
2. Agree and implement quality standards
3. Develop appropriate systems for managing quality in a department or for a project
4. Monitor and maintain quality in a department or for a project
5. Evaluate quality systems

RECOMMENDED PRIOR KNOWLEDGE

In general, no prior knowledge is required, although an awareness of analysis skills is useful, as is the ability to write reports. For unit 5, there may be a need to conduct a cost-benefit analysis, so an understanding of basic financial management, as in the Managing Finance module would be helpful. In addition, managing for quality involves a great deal of information gathering, so techniques for doing this are essential.

SUGGESTED TEACHING ORDER / SUMMARY SCHEME OF WORK

Apart from the need to ensure that any requirements for prior knowledge are addressed the module sits fairly comfortably at any point in the Programme. However, as stated above, an understanding of finance and information collection and analysis would be useful, so it may be advisable to deliver the Managing Finance and the Managing Information modules prior to this one.

The Managing for Quality module is made up of 5 assessment objectives which follow a logical order from understanding the meaning and importance of quality in an organisation, through to developing quality systems and procedures and evaluating these for effectiveness. The teaching should follow this logical progression.

This module overlaps to some extent with some aspects of the Managing Operations Module and this needs to be considered when planning

The column headed **Explanation of Competence Criteria** is designed to give an indication of the main content to be covered and should help with this planning detail

UNITS / ASSESSMENT OBJECTIVES : SUGGESTED ORDER

1	Understand the importance of quality in organisations This Unit requires candidates to identify and explain different definitions of the term quality, as based on established works in the subject and to explain the key role that the customer plays in this.
2	Agree and implement quality standards This builds on the basic understanding acquired in Unit 1 to identify customer needs and the constraints on the organisation that may prevent these being fully met. Issues of TQM are also explored here to help the candidate set appropriate standards.
3	Develop appropriate systems for managing quality in a department or for a project This Unit follows logically from the above and looks in more detail at the actual process of defining quality in the organization in terms of key measures. Different ways of setting quality standards are included here and how these can be measured.
4	Monitor and maintain quality in a department or for a project This unit builds on unit 3 and looks at different ways of monitoring quality against the standards referred to above. Key assessment techniques are explored.
5	Evaluate quality systems This last Unit looks at the importance of evaluating quality systems to ensure they are efficient and effective and to contribute to the concept of continuous improvement

LIST OF RESOURCES

There is a wealth of accessible and readable material about managing for quality. Most management and project management textbooks will include relevant sections and there are also many dedicated websites.

Candidates should be encouraged to read around the subject and , in particular to look at the work of Deming (Also see CID Reading List).

The following texts are excellent works on quality: What is Six Sigma? By Pande, P. Holpp, L. (2001) McGraw Hill; Six Sigma for Managers, Brue, G. (2002). McGraw Hill; ISO 9001:2000 for Small Businesses; Tricker, R. (2005) Butterworth-Heinemann; Total Quality Management in a Week; Macdonald, J., (2003), Hodder Arnold H&S

In addition, students may be aware of the European Foundation for Quality Management and the British Quality Foundation. Information is available on their web sites: www.quality-foundation.co.uk and <http://www.efqm.org/>

There is also a wealth of readable and interesting case studies from organisations who have introduced quality systems with varying degrees of success. Many of these are available on line, for example, through The Times 100 website (<http://www.thetimes100.co.uk>), Biz Ed (<http://www.bized.ac.uk>) or the CMI.

UNIT 1 : Understand the importance of quality in organisations

Recommended prior knowledge: No prior knowledge is required, however, before tackling this Unit candidates should be encouraged to think about the importance of quality in organisations and the different ways this can be introduced.

Candidates should be encouraged to read around the subject and in particular to look at the work of W Edwards Deming and Total Quality Management in a Week by John Macdonald.

The following texts also include some excellent information on quality: What is Six Sigma? By Pande, P. and Holpp, L; Six Sigma for Managers by Brue, G and ISO 9001:2000 for small businesses: A Guide to Cost-Effective Compliance, by Ray Tricker.

There is also a wealth on readable and interesting case studies from organisations who have introduced effective quality systems. Many of these are available on line, for example, through the Times 100 website Biz Ed (www.bized.ac.uk) or the Chartered Management Institute (CMI) .

Outline : Understanding the importance of quality in organisations requires candidates to define the term quality and study the works of established authors on the subject to gain a clear insight into the growing importance of quality and how the needs of the customer have become a key driver for quality measures and control systems.

COMPETENCE CRITERIA		EXPLANATION OF COMPETENCE CRITERIA	SUGGESTED TEACHING ACTIVITIES
1.1	Define quality in terms of specifications conformance and customer perception	<ul style="list-style-type: none"> different definitions of quality, how these apply to different situations and the application of these both internally and externally 	Introduce or ask candidates to find out different meanings for the word quality, both from an internal and external perspective. Use examples of well known products and services to arrive at different interpretations of quality, based on quality of what and for whom.
1.2	Describe the emergence of quality standards over time	<ul style="list-style-type: none"> the way quality has been defined over recent years and what this means for organizations 	<p>Ideally candidates should focus on their own organisation throughout this module, however where this is not appropriate real case studies should be used. It should be noted however, that the final assignment may require candidates to work on quality issues in their own organizations, so links back to their workplaces should be regularly encouraged.</p> <p>A useful way forward may be to introduce the key concepts and models through group work using two or three different case studies, perhaps one from a manufacturing business and one from the service sector. Throughout the learning, encourage candidates to apply the learning to their own organisations.</p>

1.3	Explain the recent dominance of customer perception as key to quality	<ul style="list-style-type: none"> the history of quality initiatives, leading to the present day where the customer is the main focus for defining quality of product or service 	<p>Use case study examples to illustrate how quality issues have evolved and how the customer has become increasingly the focus for quality measures. Try to use notable organisations that the group are familiar with.</p> <p>Use the case studies to bring out the change from pushing the service or product onto the market to the present consumer-driven approach, including the willingness of customers to “shop around”. Discuss the benefits and drawbacks of this for organisations.</p>
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UNIT 2 : Agree and implement quality standards

Recommended prior knowledge: No prior knowledge is required, however, before tackling this Unit, candidates should familiarise themselves with information collection and analysis techniques.

Candidates should be encouraged to read around the subject, perhaps using the texts listed in Unit 1.

Outline : Agree and implement quality standards builds on the understanding gained in Unit 1, particularly in terms of the work done on customers. Issues of customer needs are explored as are the benefits and constraints of having quality systems in place. TQM is studied as an example of a quality system.

COMPETENCE CRITERIA		EXPLANATION OF COMPETENCE CRITERIA	SUGGESTED TEACHING ACTIVITIES
2.1	Explain the value of a quality system to an organisation	<ul style="list-style-type: none"> what are the benefits to the organisation of having a quality system? 	In Unit 1 candidates will have defined quality and identified how the customer has become a key factor in defining quality in the organisation. It is now appropriate to look at the organisation and what the benefits of a quality system are. Using the case studies, particularly any from organisations that have changed over the years and ask the group to list the reasons for the change in approach and the possible benefits to the business.
2.2	Analyse customer needs	<ul style="list-style-type: none"> using a range of techniques to identify customer needs 	<p>Drawing on previous experiences, ask the group to devise a list of methods for identifying customer needs. Discuss the appropriateness of each approach to different situations and the benefits and drawbacks of each. Identify the skills required to do this, including information collection and collation, analysis and drawing conclusions that can be used.</p> <p>Devise an activity for the candidates to conduct a customer survey that looks at issues of quality of product or service.</p>
2.3	Analyse organisational constraints on quality	<ul style="list-style-type: none"> recognising that organisations may be constrained from meeting all the quality requirements needed to satisfy the customer 	Discuss the balance between what the customer wants and what the organisation can provide, then get the group to construct a general list of possible constraints. Then ask them to use this list to identify specific constraints in the case study organisations. Bring out the need to balance resources against the market return.

2.4	Identify key features of Total Quality Management	<ul style="list-style-type: none"> • TQM as a concept 	<p>Bring all the above together by discussing the need for a quality system. Explain what this means, then introduce TQM as a means for managing for total quality. From this, it is useful to ask the candidates what other systems they are aware of and use these to extend understanding. Examples include ISO 9000, JIT etc.</p> <p>As a final review of this section, ask the candidates to consider the possible implications and constraints posed by national and international cultures on the management of quality, in particular where organisations operate across boundaries.</p>
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UNIT 3: Develop appropriate systems for managing quality in a department or for a project

Recommended prior knowledge: No prior knowledge is required, however, before tackling this Unit candidates should be encouraged to reflect on their experiences of quality systems, both from a point of view of the product or service provider and the customer. It would also be helpful if candidates were already familiar with analytical techniques and audits.

Candidates should be encouraged to read around the subject and in particular the texts referred to in Unit 1.

Outline: This Unit follows logically from Units 1 and 2. It looks in more detail at the actual process of developing quality systems. Quality measures are introduced and methods for monitoring, including carrying out audits are a key feature of this unit.

COMPETENCE CRITERIA		EXPLANATION OF COMPETENCE CRITERIA	SUGGESTED TEACHING ACTIVITIES
3.1	Explain how process management and structural change are balanced	<ul style="list-style-type: none"> linking quality to processes and different ways of managing processes; how these are affected when structures change 	Introduce simple process operations and how these link to quality; e.g. JIT, MRP. (see Managing Operations). Use simple case studies to identify bottlenecks and how these can be overcome in terms of quality. Explore how the customer can contribute to process management.
3.2	Identify critical success factors	<ul style="list-style-type: none"> critical success factors as a means of determining quality 	Get the group to identify what is meant by standards. Lead to the concept of critical success factors and introduce a range of standard measures, including performance indicators, service level agreements etc. Introduce the Business Excellence Model. Encourage the importance of looking both internally and externally. Link to the case study organisations and ask the group to identify the standards for these. Introduce benchmarking as means of measuring quality. Using simple case studies to get the group to practice benchmarking and highlight best practice.
3.3	Identify key performance indicators	<ul style="list-style-type: none"> key performance indicators for quality 	

3.4	Demonstrate use of performance measurement instruments	<ul style="list-style-type: none"> • how to measure performance against quality requirements and record the results 	<p>Ask the group how quality can be monitored in practice, who is responsible and how findings should be recorded. Link responses with established systems, such as ISO 9000 and look at the use of charts, graphs, tables etc as a means of capturing the information to display or effectively communicate information/data.</p> <p>Clarify candidates' understanding of the difference between data and information and link this to the previous activity.</p> <p>Differentiate between qualitative and quantitative tools.</p> <p>Ask the group to share their experiences of audits; discuss the role of quality audits in the monitoring and control of quality.</p>
3.5	Demonstrate use of audit procedures	<ul style="list-style-type: none"> • conducting audits 	

UNIT 4: Monitor and maintain quality in a department or for a project

Recommended prior knowledge: No prior knowledge is required for this Unit, other than that covered in the previous units, as this Unit looks at how to evaluate the effectiveness of the quality systems discussed.

Outline : This Unit looks at monitoring and maintaining quality and requires the candidate to understand the basics of analysis and how to make recommendations for improvement. It also includes the ability to write reports, so an understanding of what makes a good report and how information can be presented would be useful.

COMPETENCE CRITERIA		EXPLANATION OF COMPETENCE CRITERIA	SUGGESTED TEACHING ACTIVITIES
4.1	Identify key features of self assessment frameworks and external measures	<ul style="list-style-type: none">• how to assess effectiveness and what measures to use	Using the skills and techniques used in the previous units, discuss the importance of evaluating the efficiency and effectiveness of their quality systems and get the group to explore techniques for doing this. Discuss issues of cost against benefit and link back to the constraints discussed in Unit 2. Using a simple case study, get the group to evaluate a quality system, then make recommendations for change, where appropriate. Link the outcomes of this activity to continuous improvement.
4.2	Demonstrate use of an identified self assessment technique	<ul style="list-style-type: none">• putting the above into practice	
4.3	Use outcomes of self assessment to plan the next cycle of continuous improvement	<ul style="list-style-type: none">• drawing conclusions from the assessment and using the results to contribute to further improvements	

UNIT 5: Evaluate quality systems

Recommended prior knowledge: No prior knowledge is required for this Unit, other than that covered in the previous units, as this Unit looks at how to evaluate the effectiveness of the quality systems discussed.

Outline : This Unit looks at the evaluation of quality systems and links directly to the previous unit, in that it requires the candidate to understand the basics of analysis and how to make recommendations for improvement.

COMPETENCE CRITERIA		EXPLANATION OF COMPETENCE CRITERIA	SUGGESTED TEACHING ACTIVITIES
4.1	Identify a range of quality systems	<ul style="list-style-type: none"> being aware of the different quality systems that are available 	Here the candidates should be looking beyond their own experiences and identifying the wide range of quality systems that are available. These should include external systems.
4.2	Use a range of techniques to evaluate different quality systems	<ul style="list-style-type: none"> how to assess effectiveness of different systems putting these into practice drawing conclusions from the assessment and using the results to contribute to further improvements 	<p>Benefits and drawbacks should be identified for each system so that candidates can see if their own organisation could improve what they currently have.</p> <p>Get the group to evaluate a range of quality systems, then identify how their findings could contribute to improvements within their own organizations.</p>