

Unit 15: Operations Management

Unit code	Y/618/5055
Unit type	Core
Unit level	4
Credit value	15

Introduction

Operations management is everywhere, in every organisation, in every service experienced and in every product consumed. It is the administration of business practices to create the highest level of efficiency possible within an organisation. It is concerned with converting materials and labour into goods and services as efficiently as possible to maximise profits.

The aim of this unit is to enable students to explore how operations management manages all business activities to efficiently create and deliver products and services. This includes the transformation of inputs into outputs of finished goods and services, and activities throughout the supply chain. Students will explore the approach to quality management and continuous improvement in the production process. They will review how operations managers have to look externally as well as at internal processes, considering suppliers' performance and customers throughout the supply chain.

By the end of the unit, students will have an insight into the complex nature of operations, processes and supply chain management, fundamental for understanding the holistic work environment in any industry and organisation.

Learning Outcomes

By the end of this unit a student will be able to:

- LO1 Examine the interrelationships of operations management with the other functions within an organisation
- LO2 Explain the importance of operations management in achieving effective organisational performance
- LO3 Investigate the importance of quality management and continuous improvement for optimising organisational performance
- LO4 Assess the role of supply chain management in supporting an organisation to satisfy customer requirements.

Essential Content

LO1 Examine the interrelationships of operations management with the other functions within an organisation

Operations, core and support functions:

Defining the operations function and management of activities to create and deliver products and services that include control and distribution systems, transformation process, process design, capacity management, logistics and inventory management.

Core functions of operations, e.g. marketing and product/service development.

Support functions, including accounting and finance, human resources, information systems and process technology.

Interrelationships between operations, core and support functions.

Operations management in manufacturing vs service sectors, profit and not for profit, SMEs and large organisations.

Input-transformation-output process:

Inputs, including raw materials, information, customers.

Transforming resources of facilities and staff.

Outputs of products and services, including facilitating services, service-conscious manufacturing and the servitisation of organisations, e.g. offer to customers of maintenance, maintenance support and training updates.

The process hierarchy – levels of process, the operation, supply network and individual processes. Internal and external customers.

Impact of the Four Vs on operations and processes – volume, variety, variation, visibility.

LO2 Explain the importance of operations management in achieving effective organisational performance

Importance of operations:

Improvement and innovation in operations function for driving organisational improvement, quality and organisational reputation.

Challenges faced in operations management:

Challenges, including

- cost-based competition, increased customer expectations relating to quality and variety, new technologies, social and environmental issues, globalisation, partnership relationships, reputation management.

Measures of operations performance:

Triple Bottom Line (TBL/3BL) and sustainability, strategic impact, including achieving objectives of revenue, risk, efficiency and innovation.

Operations performance objectives of quality, speed, dependability, flexibility and cost.

Emerging digital technologies:

Technologies for customisation of design products and services, e.g. Computer Aided Design (CAD).

Different software systems to integrate and streamline operations, e.g. Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Supply Chain Management (SCM).

Automation in production and operations reducing manual labour, e.g. in manufacturing.

LO3 Investigate the importance of quality management and continuous improvement for optimising organisational performance

Importance of quality:

Increased customer satisfaction, including loyalty and retention.

Improved organisational performance, e.g. market share, waste reduction, impact on costs and revenue, and improved operation processes.

The impact that quality has on reputation and employee motivation and engagement.

Different approaches to quality:

Total Quality Management (TQM) and developments from Deeming's original Fourteen Points for quality control for meeting customers' requirements, including employee involvement, process review and redesign, competitive benchmarking, 'right first time' and constant measurement of results.

Quality Systems approach to achieve quality management that documents structure, processes, roles and responsibilities, policies and procedures. ISO 9001, including the seven Quality Management Principles.

Lean approaches for systematic waste minimisation, including Just-in-Time (JIT), Kaizen, 5S and Kanban.

Six Sigma reducing process variation and enhancing process control, including Define, Measure, Analyse, Improve and Control (DMAIC).

Lean Six Sigma – driving out waste, work standardisation and flow.

Integrated quality improvement philosophy of continuous improvement.

LO4 Assess the role of supply chain management in supporting an organisation to satisfy customer requirements.

The scope of supply chain management:

The difference between supply chains and supply networks.

Internal and external supply chains.

Tangible and intangible supply chains.

Supply chain performance objectives:

Different objectives of quality, speed, including responsiveness to customer demand and the impact on inventory, dependability, flexibility/agility, cost, sustainability.

Lean vs agile supply networks:

Lean supply networks, efficiency and the functional product.

Agile supply networks, responsiveness and the innovative product.

Managing supply chain relationships:

In-house vs outsourcing of activities.

Contract-based/transactional relationships vs long-term/partnership relationship.

Characteristics, advantages and disadvantages of these relationships.

Supply side management and the four key approaches of multiple, single, delegated and parallel sourcing.

Global sourcing and benefits and risks of global sourcing.

Demand side management, components, including logistics services, which includes in-house and outsourcing, and customer relationship management (CRM).

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Examine the interrelationships of the operations function with the other functions within an organisation		LO1 and LO2 D1 Critically analyse operations, processes and management in successfully improving organisational performance and achievement of objectives
P1 Examine the interrelationships between operations and the core support functions in a range of organisations. P2 Examine the impact that operations and processes have on other functions within an organisation.	M1 Analyse the role of operations and processes and impacts within an organisation.	
LO2 Explain the importance of operations management in achieving effective organisational performance		
P3 Explain the challenges faced by operations management in a range of organisations when meeting customer requirements. P4 Compare how different organisations measure operations performance and their effectiveness.	M2 Analyse the importance and effectiveness of operations management in enhancing organisational performance.	
LO3 Investigate the importance of quality management and continuous improvement for optimising organisational performance		
P5 Discuss different approaches to quality management and continuous improvement for improving and optimising organisational performance.	M3 Compare benefits and limitations of different approaches for improving and optimising organisational performance.	

Pass	Merit	Distinction
<p>LO4 Assess the role of supply chain management in supporting an organisation to satisfy customer requirements.</p>		
<p>P6 Review the role of supply chain management in supporting different organisations to supply products and services to meet their customers' needs.</p>	<p>M4 Evaluate how different organisations manage their supply chain relationships in order to ensure and maintain customers' satisfaction.</p>	<p>D3 Critically evaluate effective supply chain management to make recommendations for enhancing and exceeding customer satisfaction.</p>

Recommended Resources

Textbooks

COLE, G. A. and KELLY, P. (2020) *Management Theory and Practice*. 8th Ed. Andover: Cengage.

JACOBS, F. R. and CHASE, R. B. (2017) *Operations and Supply Chain Management*. 14th Ed. McGraw-Hill Education.

REID, R. D. and SANDERS, N. R. (2019) *Operations Management: An Integrated Approach*. 7th Ed. Hoboken NJ: Wiley.

SLACK, N. and BRANDON-JONES, A. (2019) *Operations Management*. 9th Ed. Harlow: Pearson.

Websites

www.apics.org	Association for Operations Management (General reference)
www.cips.org	Chartered Institute of Procurement and Supply (General reference)
www.ismworld.org	Institute for Supply Chain Management
www.scdigest.com	Supply Chain Digest Resources/Education (General reference)

Links

This unit links to the following related units:

Unit 26: Principles of Operations Management

Unit 36: Procurement and Supply Chain Management

Unit 44: Business Information Technology Systems