



Unit 27: International Logistics

Delivery guidance

This unit will provide learners with an understanding of the purpose of international logistics and the factors that influence the movement of goods between countries, including the role of the supply chain. Key areas of study will include:

- examining the factors that affect the movement of a range of goods cargo or freight between countries
- the advantages and disadvantages of an integrated supply chain
- effective planning and scheduling
- different transportation methods and compliance factors
- examining organisations in terms of compliance, and industry and technological standards
- environmental sustainability within the supply chain.

Approaching the unit

It would be useful to introduce learners to the concept of logistics in the context of their own experience as consumers. For example, they could undertake a short comparative study of national and international logistics by considering how different foodstuffs reach their table (one focused on a national food and one involving a food imported from another country). This would introduce learners to the different sectors of the economy – primary, secondary and tertiary – as well as giving them an understanding of the concept of the supply chain and the importance of managing the different aspects of the supply chain. You can support learners with a short video clip illustrating the movement of goods in the supply chain. This approach would also allow learners to discuss some of the challenges faced when goods are involved in movements across international boundaries, such as documentation requirements, security and costs. Whatever approach is taken, by the end of the introductory phase, learners should have a clear understanding of the features and characteristics of international logistics and how these differ from national logistics.

Learners will need to explore and examine the different organisations within the international logistics sector. They will learn about the supply chain and the many methods used to transport goods between different countries. Learners will investigate a range of management operations and systems used to move goods. They will consider how logistics operations must balance the need to continuously improve, with meeting the needs of stakeholders, the environment and regulatory issues.

In delivering this unit, it is essential that learners understand the importance of the supply chain to industry and trade, and have a firm understanding of its many components. Visits to organisations involved in different aspects of the supply chain, or information from guest speakers would greatly enhance the learning experience.

Delivering the unit aims

Learning aim A introduces learners to the different sectors within logistics, both national and international. They should be able to differentiate between the characteristics of the primary, secondary and tertiary sectors and how these characteristics influence supply chain management. For example, learners could research how perishable farming products are transported to ensure their freshness and guard against waste. The unit looks at the various transport methods used, planning techniques, the nature of the supply chain and its role within logistics. It also covers other factors influencing international logistics, such as types of freight, methods used to store goods in transit, compliance with national and international legislation and compliance with organisational demands.

To understand the role of logistics and the supply chain, learners should investigate the different sectors within logistics and their purpose. They should consider transport requirements for different goods, storage facilities, compliance with legislation, and the advantages and disadvantages of integrated supply chains. Learners would benefit from visits to various organisations involved in different components of the supply chain, such as a functioning warehouse or a transportation depot.

Learning aim B examines systems used for managing logistics operations on a national and international scale. It covers communication methods, technology systems (including information technology), security systems, automated storage and retrieval, planning, budgeting and compliance.

Learners will need to understand communication and the role of technology in the supply chain to effectively plan and process the movement of goods. Learners should investigate the different types of technological systems used within the supply chain, and the contribution each makes to the efficient management and distribution of goods. They will also investigate the purpose and impact of different quality control systems, including Total Quality Management (TQM), and the role of operations management in controlling the key functions of logistics and the supply chain. Learners would benefit from guest speakers and flow diagrams to explain systems and processes in action.

Learning aim C is primarily concerned with approaches to improving operations to meet changing customer demand.

Learners will need to understand the various demands affecting logistics operations, including customer needs, environmental sustainability and regulation. They will need to gain an understanding of how logistics operations are monitored and assessed, and how recommendations to make improvements are made. Real-life scenarios or case studies provided by industry would greatly enhance the learner experience. Such scenarios and case studies should involve learners in identifying specific issues that influence the efficient distribution and movement of goods, and the impact of these inefficiencies on costs and quality. Learners could then recommend improvements to the operations management of the supply chain by identifying specific actions to improve logistics, and evaluating the costs and benefits of such actions.



Assessment model

Learning aim	Key content areas	Recommended assessment approach
A Understand logistics and the supply chain in national and international contexts	A1 National and international logistics A2 The supply chain A3 Factors affecting international logistics	A critical review of national and international logistics that includes the role of the supply chain and other factors.
B Examine systems used for managing logistics operations	B1 Systems used in logistics B2 Quality systems B3 The role of operations management	An investigative report on how different logistics organisations use a range of systems to manage operations and the outcomes of improving these.
C Investigate approaches to improving logistics operations to meet changing demands	C1 Demands affecting logistics operations C2 Assessing logistics operations C3 Reporting on improvements to logistics operations	

Assessment guidance

This unit is assessed through independent tasks – a critical review for learning aim A and a single report for learning aims B and C.

The main sources of evidence that should be included in the critical review for learning aim A are records of visits to a range of organisations, ideally with a detailed summary of each organisation that the learner has chosen to investigate. All evidence must be authenticated as the learner's own. Other appropriate sources of evidence could include documents from the organisation(s) being researched.

The delivery of the content should enable learners to work independently. Minimal guidance on 'live' content should be given. However, assessors should consider approaches that develop the required skills and integrate practical learning, experiential learning and theory. This could be achieved through classroom- and field-based learning. Learners are free to produce their own research and preparatory evidence in any way that they choose. However, the final evidence produced must be in a report format. Learners must acknowledge all of the sources that they use during the course of evidence gathering and report writing.

For learning aims B and C, the assessment is based on a report that investigates how different logistics organisations use a range of systems to manage operations, and the outcomes of improving these. In completing the assignment for learning aims B and C, learners must clearly identify the issues which were addressed by the organisation, the impact that these issues had on the logistics process, how the issues were addressed, and the costs and benefits of any systems improvements on the organisation and its customers.

Getting started

This gives you a starting place for one way of delivering the unit, based around the recommended assessment approach in the specification.

Unit 27: International Logistics

Introduction

This unit develops learners' understanding of the factors that influence the movement of goods when they are transported between different countries, including the role of the supply chain.

Learning aim A: Understand logistics and the supply chain in national and international contexts

- Introduce the purpose of learning aim A by discussing how it will equip learners with an understanding of national and international logistics, the different sectors within the supply chain, and the factors affecting them.
- Content area A1 focuses on the different sectors, processes and methods used in national and international logistics. It looks at the purpose of the various sectors and their connections within the supply chain. The learning aim also covers the purpose of different types of storage and transportation. Learners should develop a clear understanding of the different sectors (primary, secondary and tertiary) and their place within the logistics timeline. They must also understand the importance of reverse logistics and its associated environmental impact. They must learn the need for correct planning and scheduling of efficient routes to ensure goods reach their destination in a timely manner. Introduce this learning aim by giving a presentation.
- It is important that learners carry out sufficient research to understand the advantages and disadvantages of different transportation systems, and the planning and scheduling requirements for each. Ideally, learners should contact a large warehouse or transportation provider and arrange to visit the organisation. Alternatively, you could invite a guest speaker to visit the centre who could emphasise the importance of correct storage and transportation.
- For content area A2, learners must develop a clear understanding of the meaning of 'integrated supply chain'. Learners need to research and understand specific supply chain terminology and language. They could create a glossary of terms to this end.
- Learners need to be aware of the damaging effects of breaks in the supply chain to the wider economy, and the advantages and disadvantages of both integrated and non-integrated supply. Lead a class discussion on the supply chain and then ask learners to work in small groups to map out the supply chains used by a range of different organisations. Learners should be able to identify both the internal and external risks that may impact on the supply chain; for example, poor quality control within an organisation involved in the supply chain (internal) and factors outside the control of organisations within the supply chain (such as weather and civil unrest).
- Content area A3 focuses on factors affecting international logistics. Learners will need to understand the importance of compliance with national and international legislation when moving goods across borders and tax/tariff implications, as well as international norms. You could give a presentation on national and international legislation for international

logistics (including cabotage, highway regulations, tariffs, taxes, movement of goods, employment, licenses, health and safety, and vehicle and consignment security). Learners could then work in small groups to research the logistics of a range of international companies.

- As a formative assessment activity to check progress and attainment, you could set a knowledge quiz to test learners' understanding of learning aim A.
- Ensure that sufficient time is allocated for learners to complete their summative assignment review for learning aim A. Learners are required to write a critical review of national and international logistics that includes the role of the supply chain and other factors.

Learning aim B: Examine systems used for managing logistics operations

- Introduce this learning aim by explaining how it aims to equip learners with the knowledge and understanding of systems used to manage logistics operations. Emphasise its links to learning aim A.
- Content area B1 focuses on technological systems used within logistics, electronic payment systems and security measures. Facilitate a group discussion on the use of various types of communication systems by modern organisations, including their purpose and correct use.
- Give a presentation on the technological systems used in logistics, such as Traffic Management Systems (TMS), digital tachographs, Barcoding Automatic Identification and Data Capture (AIDC), Electronic Data Interchange (EDI), and Automated Storage and Retrieval System (ASRS or AS/RS).
- Learners could choose one of the technological systems covered in the presentation and carry out independent research to learn about it in more detail. They then present their findings to the class. It is important that the links between systems are fully understood. If feasible, demonstrations of the scanning process would be a useful contribution.
- A useful formative assessment would be to ask the learners to create flow diagrams of different systems and their links to each other.
- Lead a group discussion on the different payment systems available and create a mind map. Encourage learners to think about the circumstances in which each system is most appropriate.
- Lead a class discussion on security systems (including Closed Circuit Television and Radio Frequency Identification) and explain at what points during transit different systems are used.
- Content area B2 focuses on quality systems used in logistics, their features purpose and impact. You could start with a discussion of quality within logistics, ensuring you cover quality control, assurance, management and standards (e.g. ISO9000, ISO14000, BSI, CE). You should also cover the importance of transporting goods within an agreed timeframe.
- Ask learners to investigate different ISO systems and present their findings to the class. Cost, implementation and customer perception should form part of the research.
- Learners work in pairs to research the features of Total Quality Management (TQM) and its impact on management and the workforce. The difference between quality control and quality management should also be explored.

- Content area B3 concentrates on the role of operations management within logistics and the supply chain. You could start with a group discussion of the key functions required to manage a logistics and supply chain operation. It would be beneficial to invite an operations manager as a guest speaker to talk to the learners about his/her role.
- Learners work in small groups to investigate route planning, scheduling and the impact of safety and operating regulations on logistics operations. Learners present their findings to the class.
- Give a presentation on stock storage and handling. Include information on auditing, health, safety and security procedures, special storage requirements and the use of lifting equipment.
- Learners need to be aware of the staffing requirement behind logistics. Learners could work in small groups on staff rotas for set scenarios, considering customer needs, cost and legal requirements.
- Facilitate a discussion on the need for environmental compliance within the logistics sector. Discuss its benefits to an organisation and the wider environment.
- Outline the requirements for the final assessment and explain how it links to learning aims B and C.
- Create a formative assessment using a knowledge and understanding quiz, covering learning aims B2 and B3.

Learning aim C: Investigate approaches to improving logistics operations to meet changing demands

- Learning aim C develops learners' knowledge of the demands affecting logistics operations, how to assess operations using internal and external information, and how to investigate and make recommendations to improve logistics operations.
- For content area C1, give a presentation on the main demands affecting logistics operations, including:
 - profits and expenses
 - competitiveness and marketing
 - national and international legislation and regulations
 - environmental sustainability
 - customer requirements.
- For content area C2, facilitate a group discussion on external sources of publicly available information on logistics operations (e.g. websites, public accounts, policies, mission statements). Then ask learners to work in small groups to research information available internally within logistics operations (e.g. accounts, schedules, facilities, vehicles, equipment, human resources and key performance indicators). Learners should consider how this information could be used to assess logistics operations.
- Content area C3 covers reporting on improvements to logistics operations. You could give a formal presentation on research methods, including:
 - Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis
 - process flow charts
 - Pareto principle 80/20 rule.



- Ask the class to work in pairs on set scenarios to practise using the above methods.
- Give the class a presentation on report structure and purpose, linking it to the final assignment.
- As a formative assessment activity, give the class sample SMART targets, including examples of good and bad practice, to develop discussion on what is and what isn't a SMART target.
- Ensure that sufficient time is allocated for learners to complete their summative assignment report covering learning aims B and C.

Details of links to other BTEC units and qualifications, and to other relevant units/qualifications

This unit links to:

- Unit 7: Business Decision Making
- Unit 32: Business and Environmental Sustainability

Resources

In addition to the resources listed below, publishers are likely to produce Pearson-endorsed textbooks that support this unit of the BTEC International Qualifications in Business. Check the Pearson website (<http://qualifications.pearson.com/endorsed-resources>) for more information as titles achieve endorsement.

Textbooks

Christopher, M – *Logistics and Supply Chain Management*, 5th edition (FT Publishing International, 2016) ISBN 9781292083797

Chopra, S – *Supply Chain Management: Strategy, Planning, and Operation*, 7th edition (Pearson, 2019) ISBN 9781292257891

Websites

A business blog identifying the best mode and method of transporting different products can be found by searching online for 'Freighthub' and then clicking on the 'logistics knowledge' section of their website, followed by 'blog'. The blog entry is called 'Modes of Transportation explained: Which type of cargo and freight transportation is the best?'

The Logistics Bureau has a useful blog on their website with a range of information about logistics. It can be found by searching online for 'The Logistics Bureau'.

Tes have two simple PowerPoint presentations on their website explaining the three main industry subsectors. They can be found by searching online for 'tes' and then searching their website for 'sectors of industry' and 'Business studies: primary, secondary, tertiary industries picture sort'.

Pearson is not responsible for the content of any external internet sites. It is essential for tutors to preview each website before using it in class so as to ensure that the URL is still accurate, relevant and appropriate. We suggest that tutors bookmark useful websites and consider enabling students to access them through the school/college intranet.