

LIS311

ORGANIZATION OF KNOWLEDGE II



Course video is available on our app

COURSE CODE: LIS 311

COURSE TITLE: Organization of Knowledge II

COURSE UNIT LOAD: 3 Units

- **Series 1 Foundations and Concepts of Classification**
- **Series 2 Historical Development of Classification Schemes**
- **Series 3 Types and Applications of Classification Schemes**
- **Series 4 Practical Subject Analysis and Organization**
- **Series 5 Challenges and Innovations in African Contexts**

Series 1 Foundations and Concepts of Classification

Part 1: Definition and Scope of Classification

- **1.1 Meaning of Classification**
- **1.2 Scope and Importance in Libraries and Information Centres**
- **1.3 Key Terms in Classification (classification, schemes, schedules)**

Part 2: Principles and Objectives of Classification

- **2.1 Basic Principles of Organising Knowledge**
- **2.2 Objectives of Classification in Information Management**
- **2.3 Relationship between Classification and Subject Organisation**

Part 3: Components of Classification Schemes

- **3.1 Classification Schedules**
- **3.2 Call Marks and Indexing Elements**
- **3.3 Examples of General and Special Schemes (brief overview)**

Part 4: Significance of Classification in Knowledge Organisation

- **4.1 Role in Libraries**
- **4.2 Role in Information Centres**
- **4.3 Contribution to Access and Retrieval**

Introduction

Libraries and information centres thrive on order, and classification provides the structure that makes knowledge accessible. Imagine walking into a library where books are placed randomly without any guiding system. Finding a single text would be frustrating and time-consuming. This Series introduces you to the foundations of classification, the very system that transforms collections of information into organised resources that can be easily located, studied, and



applied. By exploring the fundamental concepts, you will begin to appreciate why classification is central to the organisation of knowledge.

The aim of this Series is to equip you with a clear understanding of the basic principles, components, and significance of classification. It intends to build your capacity to define, explain, and apply these concepts in the context of libraries and information centres.

We shall commence this Series by examining the definition and scope of classification, highlighting its meaning, importance, and key terms. Then, we will move on to the principles and objectives that underpin the organisation of knowledge. Following that, we will explore the components of classification schemes, including schedules, call marks, and indexing elements, with brief examples of general and special schemes. Finally, we will wrap up by considering the wider significance of classification in libraries and information centres, focusing on its role in access and retrieval. This sequential journey will provide you with a solid foundation for the more advanced Series that follow.

Series Learning Outcomes

Upon completing this Series, you should be able to:

- Define the concept of classification and explain its scope within libraries and information centres,
- Describe key terms such as classification, schemes of classification, and classification schedules,
- Explain the basic principles that underpin the organisation of knowledge,
- Analyse the objectives of classification in relation to information management,
- Identify and describe the main components of classification schemes, including schedules, call marks, and indexing elements,
- Illustrate with examples how general and special schemes are structured, and
- Evaluate the significance of classification in supporting access and retrieval within libraries and information centres.

2.1 Definition And Scope Of Classification

2.1.1 Meaning of classification

The term **classification** refers to the systematic arrangement of knowledge or materials into categories based on shared characteristics. In libraries and information centres, classification is the process of grouping books, documents, or other resources so that they can be easily identified and retrieved. By placing items with similar subjects together, classification creates order and enhances accessibility.

A useful way to think about classification is to imagine a supermarket where items are grouped into sections such as fruits, dairy, or household goods. Without such organisation, finding a single product would be difficult. Similarly, classification in libraries ensures that learners and researchers can locate resources without confusion.



Fill in the blank: Classification is the systematic _____ of knowledge or materials into categories based on shared characteristics.

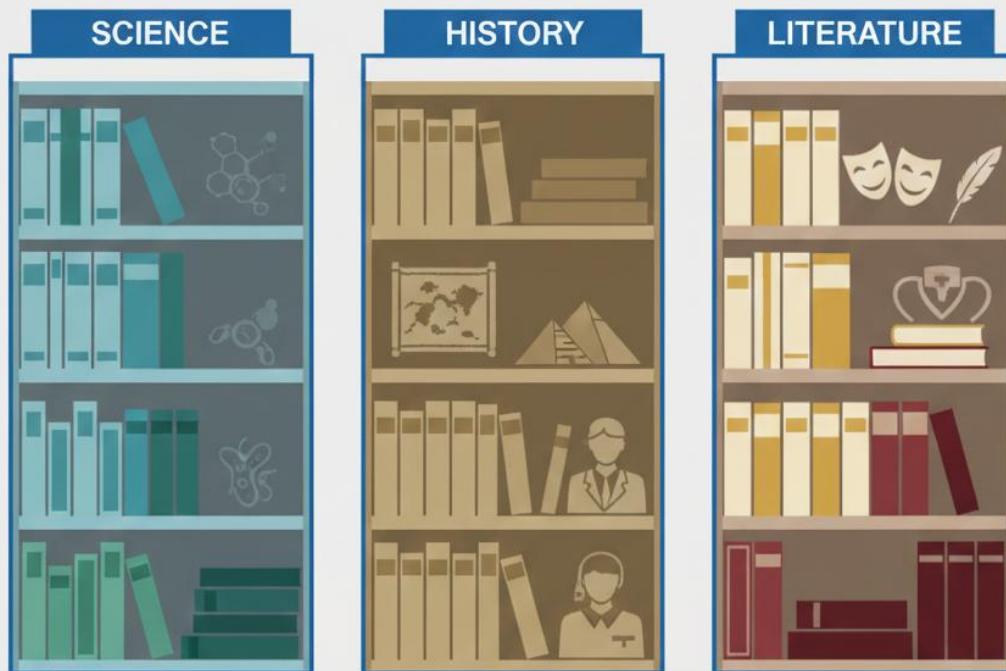


Figure 2.1 Arrangement of books by subject categories

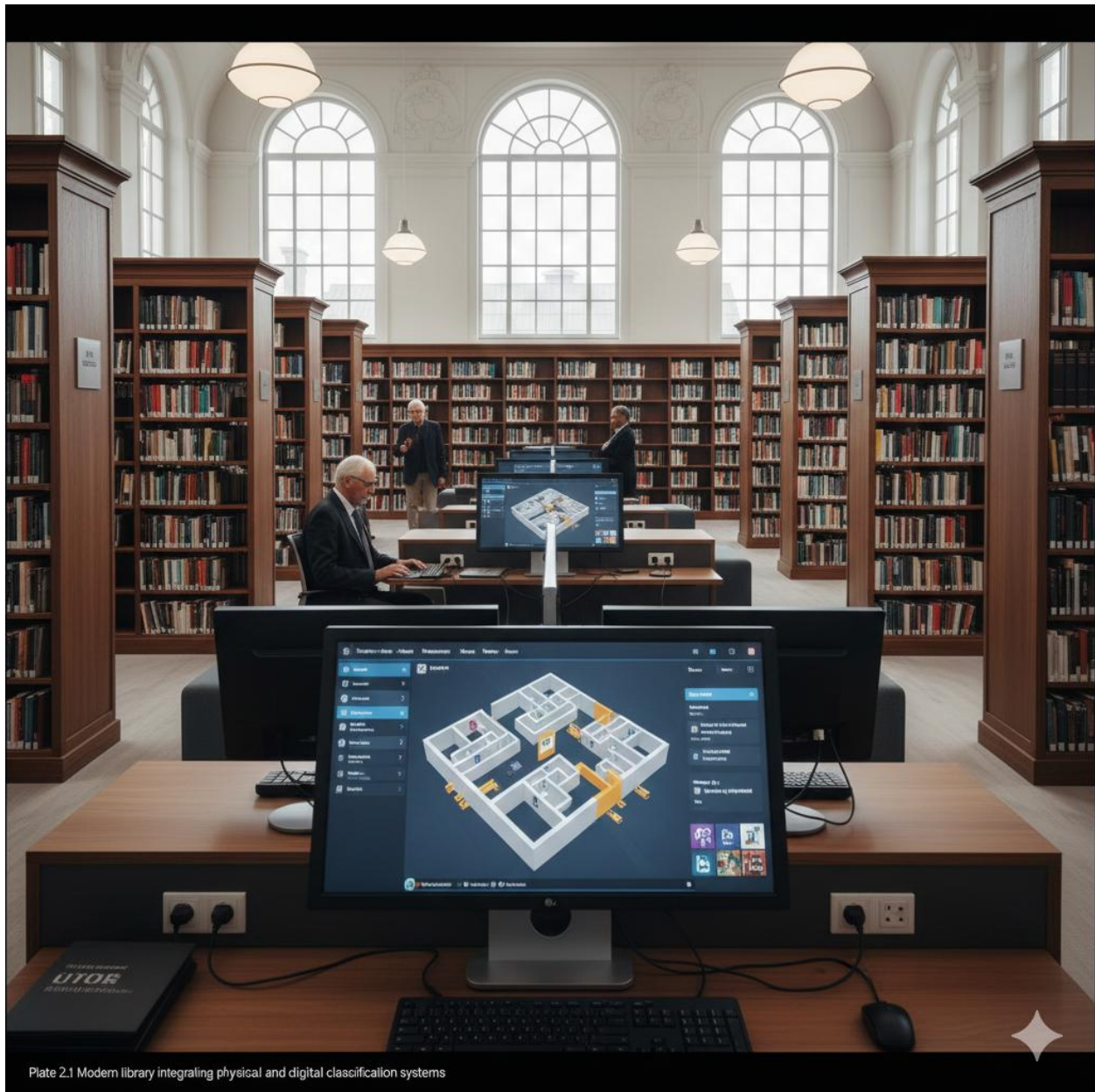
2.1.2 Scope and importance in libraries and information centres

The **scope of classification** covers all aspects of organising knowledge, from the smallest collection in a school library to the largest national archives. It applies to both physical and digital resources, ensuring that information remains accessible regardless of format.

The **importance of classification** lies in its ability to save time, reduce confusion, and promote effective use of resources. For example, a student searching for materials on African history can go directly to the relevant section rather than browsing through unrelated subjects. Classification also supports cataloguing, indexing, and subject analysis, making it a cornerstone of knowledge organisation.



Fill in the blank: The scope of classification applies to both _____ and digital resources, ensuring accessibility across formats.



2.1.3 Key terms in classification

Several key terms are essential for understanding classification:

- **Scheme of classification:** A structured system used to organise knowledge, such as the Dewey Decimal Classification (DDC) or Library of Congress Classification (LCC).
- **Classification schedule:** A detailed list of subjects and their corresponding codes or numbers, which guides the placement of materials.
- **Call mark:** A unique identifier placed on each item, usually combining classification numbers and letters, to show its exact location on the shelf.



These terms form the vocabulary of classification and will recur throughout the course. Learners should be comfortable with them, as they are the building blocks of practical subject organisation.

Fill in the blank: A _____ is a detailed list of subjects and their corresponding codes or numbers used in classification.

Box 2.1

Key terms in classification

Classification scheme: A system for organizing knowledge



Schedule: The detailed list of classes and subclasses in the scheme



Call mark: A unique code indicating of item's subject and location



Box 2.1 Key terms in classification

Pilot questions 2.1

1. Which term refers to the systematic arrangement of knowledge into categories?
2. What is the main purpose of classification in libraries and information centres?
3. Which type of resources does the scope of classification cover?



4. What is a classification schedule?
5. Why is classification important for subject analysis and retrieval?

2.2 Principles And Objectives Of Classification

2.2.1 Basic principles of organising knowledge

The **principles of organising knowledge** are the guiding rules that ensure information is arranged logically and consistently. These principles include grouping similar subjects together, maintaining a hierarchical order, and ensuring that each item has a unique place. By following these principles, libraries and information centres can create systems that are predictable and easy to navigate.

For example, in the Dewey Decimal Classification, subjects are arranged from general to specific, such as moving from “Science” to “Biology” and then to “Botany.” This hierarchical approach allows learners to trace knowledge from broad areas down to finer details.

Fill in the blank: One principle of organising knowledge is to arrange subjects from _____ to specific.



Box 2.1

Key terms in classification

Classification scheme: A system for organizing knowledge



Schedule: The detailed list of classes and subclasses in the scheme



Call mark: A unique code indicating of item's subject and location



Box 2.1 Key terms in classification

2.2.2 Objectives of classification in information management

The **objectives of classification** are the intended outcomes of applying classification systems in libraries and information centres. These objectives include:

- Facilitating quick and accurate retrieval of information.
- Supporting effective cataloguing and indexing.
- Promoting systematic organisation of collections.
- Enhancing user experience by reducing search time.



Classification is not just about placing books on shelves, it is about creating pathways that connect learners to the information they need. When objectives are met, classification becomes a powerful tool for knowledge discovery.

Fill in the blank: One objective of classification is to facilitate quick and accurate _____ of information.

[

Box 2.2

Objectives of classification in information management

-  Improved retrieval and access to information
-  Systematic organization of resources
-  Efficient cataloging and collection management
-  Enhanced user experience and browsing

Box 2.1 Key terms in classification

2.2.3 Relationship between classification and subject organisation

The **relationship between classification and subject organisation** lies in their shared goal of structuring knowledge. Classification provides the codes and categories, while subject organisation ensures that these categories are applied consistently across collections. Together,



they make it possible for users to locate materials by subject, whether in physical shelves or digital catalogues.

For instance, a book on Nigerian literature may be classified under “Literature” and then organised further under “African Literature.” This dual process ensures that the book is not only placed correctly but also easily retrievable by anyone searching for related materials.

Fill in the blank: Classification provides the codes and categories, while _____ ensures consistent application across collections.

Box 2.2

Objectives of classification in information management

-  Improved retrieval and access to information
-  Systematic organization of resources
-  Efficient cataloging and collection management
-  Enhanced user experience and browsing

Box 2.1 Key terms in classification

Pilot questions 2.2

1. What principle ensures that subjects are arranged from general to specific?
2. List two objectives of classification in information management.



3. How does classification support cataloguing and indexing?
4. What is the relationship between classification and subject organisation?
5. Give an example of how a book on Nigerian literature might be classified and organised.

2.3 Components Of Classification Schemes

2.3.1 Classification schedules

A **classification schedule** is a structured list of subjects with corresponding codes or numbers that guide the placement of materials in a library or information centre. It acts as a roadmap, showing where each subject belongs within the overall scheme. For example, in the Dewey Decimal Classification, “500” represents science, while “510” narrows it down to mathematics.

Schedules are essential because they provide consistency. Without them, different librarians might classify the same book in different ways, leading to confusion. By following a schedule, libraries ensure that materials are organised uniformly across collections.

Fill in the blank: A classification _____ is a structured list of subjects with codes or numbers for placement.



Figure 2.3 Example of a classification schedule

Subject Heading	Classification Number
- Science	500
- Astronatin	520
- Chemistry	530
- Geology	540
- Biology 560	550
- Zoalaty	580
- Medicine	610

Figure 2.3 Example of a classification schedule

2.3.2 Call marks and indexing elements

A **call mark** is a unique identifier placed on each item in a library, usually combining classification numbers and letters, to show its exact location on the shelf. For instance, a book on African literature might carry the call mark “820.9 AFR,” where “820.9” represents literature and “AFR” specifies African works.

Indexing elements are additional details, such as author initials or publication year, that help distinguish between items with similar subjects. Together, call marks and indexing elements ensure that every resource has a precise and retrievable position.

Fill in the blank: A call mark is a unique _____ placed on each item to show its exact location.





Plate 2.2 Books arranged with call marks on library shelves

2.3.3 Examples of general and special schemes

General classification schemes are broad systems designed to cover all fields of knowledge. Examples include the Dewey Decimal Classification (DDC), Library of Congress Classification (LCC), and Universal Decimal Classification (UDC). These schemes are widely used because they provide comprehensive coverage and international recognition.

Special classification schemes are narrower systems designed for specific subjects or disciplines. For example, Elizabeth Moi's scheme for law focuses exclusively on legal materials. Special schemes are valuable in specialised libraries or information centres where detailed subject coverage is required.

Fill in the blank: Dewey Decimal Classification is an example of a _____ classification scheme.



Box 2.3

Examples of general and special classification schemes

General Schemes

- DDC (Dewey Decimal Classification ) knowledge)
- LCC (Library of Congress Classification)
- UDC (Universal Decimal Classification )

Special Schemes

- Elizabeth Moi's Law Scheme 
- NLM Classification (Medicine)
- Art & Architecture Thesaurus 

Box 2.3 Examples of community engagement services for adults

Pilot questions 2.3

1. What is a classification schedule?
2. Give an example of how a call mark might be structured.
3. What role do indexing elements play in classification?
4. Name two general classification schemes.
5. What is the difference between general and special classification schemes?

2.4 Significance Of Classification In Knowledge Organisation

2.4.1 Role in libraries



The **role of classification in libraries** is to provide a systematic framework that ensures resources are arranged in a way that supports easy access. Without classification, libraries would become disorganised spaces where finding a single book could take hours. By grouping materials according to subject, classification helps learners and researchers locate information quickly and efficiently. It also supports cataloguing and indexing, making the library a reliable centre for study and research.

Fill in the blank: Classification in libraries ensures resources are arranged systematically to support easy _____.



Plate 2.3 Students using classification systems in a university library

2.4.2 Role in information centres

In **information centres**, classification plays a similar role but extends beyond books to include digital resources, reports, and multimedia materials. It ensures that diverse formats are organised



consistently, allowing users to retrieve information regardless of whether it is stored physically or electronically. For example, an information centre may classify reports on Nigerian agriculture under a specific subject code, making them easily retrievable alongside related digital files.

Fill in the blank: Classification in information centres applies to both physical and _____ resources.

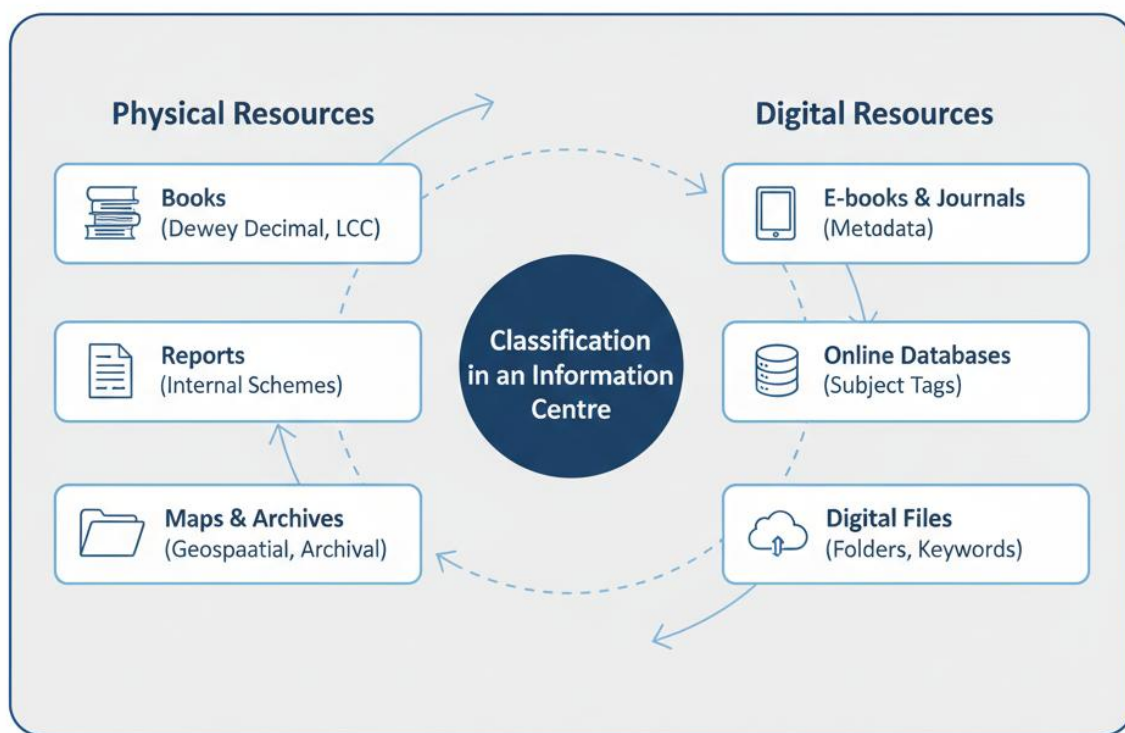


Figure 2.4 Classification across physical and digital formats

2.4.3 Contribution to access and retrieval

The **contribution of classification to access and retrieval** is one of its most significant benefits. By providing a clear structure, classification reduces search time and enhances user satisfaction. It allows learners to move directly to the section that contains the information they need, whether in a library or an online catalogue.



For instance, a researcher looking for materials on African literature can go straight to the relevant classification number rather than browsing through unrelated subjects. This efficiency demonstrates why classification is considered the backbone of knowledge organisation.

Fill in the blank: Classification reduces search time and enhances user _____ by providing a clear structure.

Box 2.4

Contributions of classification to access and retrieval

- ✓ Reduced search time and enhanced discoverability
- ✓ Improved efficiency in cataloging and organization
- ✓ Increased user satisfaction and independent browsing

Box 2.4 Contributions of classification to access and retrieval

Pilot questions 2.4

1. What is the main role of classification in libraries?
2. How does classification extend its role in information centres?
3. Give an example of how classification supports retrieval in an information centre.



4. What benefit does classification provide to researchers searching for specific subjects?
5. Why is classification considered the backbone of knowledge organisation?

Objective questions

1. Which of the following best defines classification? a) Random arrangement of books b) Systematic grouping of knowledge into categories c) Labelling books with colours d) Storing books in alphabetical order *(Linked to SLO 2.1)*
2. Which of these is an example of a general classification scheme? a) Elizabeth Moi's scheme for law b) Dewey Decimal Classification c) A local in-house scheme d) A personal filing system *(Linked to SLO 2.6)*
3. A classification schedule provides: a) A list of authors b) A list of subjects with codes or numbers c) A list of publishers d) A list of library staff *(Linked to SLO 2.5)*

Short-answer questions

4. Define the term "call mark" and explain its purpose in libraries. *(Linked to SLO 2.5)*
5. State one principle of organising knowledge and explain why it is important. *(Linked to SLO 2.3)*
6. Identify one objective of classification in information management and give an example of how it is applied. *(Linked to SLO 2.4)*

Long-answer questions

7. Compare general and special classification schemes, giving at least one example of each. *(Linked to SLO 2.6)*
8. Evaluate the significance of classification in supporting access and retrieval in libraries and information centres. *(Linked to SLO 2.7)*

Answers to Concept Check Questions 2

Objective questions

1. b) Systematic grouping of knowledge into categories
2. b) Dewey Decimal Classification
3. b) A list of subjects with codes or numbers

Short-answer questions

4. A call mark is a unique identifier placed on each item, usually combining classification numbers and letters, to show its exact location on the shelf. Its purpose is to ensure precise retrieval and organisation.
5. One principle of organising knowledge is arranging subjects from general to specific. This is important because it allows learners to trace knowledge hierarchically, making retrieval logical and efficient.



6. One objective of classification is to facilitate quick and accurate retrieval of information. For example, a student searching for African literature can go directly to the relevant classification number rather than browsing unrelated sections.

Long-answer questions

7. Compare general and special classification schemes

- *Basic response:* General schemes, such as Dewey Decimal Classification (DDC) and Library of Congress Classification (LCC), cover all fields of knowledge. Special schemes, such as Elizabeth Moi's scheme for law, focus on specific disciplines.
- *Value-added response:* General schemes are widely adopted internationally and provide comprehensive coverage, making them suitable for large libraries. Special schemes, however, offer depth and precision in specialised fields, making them ideal for subject-specific collections such as law libraries or medical archives. Outstanding learners may also note that some libraries use both types in combination to balance breadth and depth.

8. Evaluate the significance of classification in supporting access and retrieval

- *Basic response:* Classification structures knowledge systematically, reducing search time and ensuring that users can locate materials efficiently. It supports cataloguing and indexing, making libraries and information centres reliable for study and research.
- *Value-added response:* Beyond efficiency, classification enhances user satisfaction and promotes equitable access to information. In digital environments, classification supports metadata organisation and search algorithms, ensuring that electronic resources are as accessible as physical ones. Outstanding learners may also highlight challenges, such as adapting schemes to African contexts, and propose innovations like in-house schemes tailored to local needs.

References and Attributions 2

Course materials

- LIS 311: Organisation of Knowledge II (Course document provided).

General references

- Dewey Decimal Classification (DDC) manuals.
- Library of Congress Classification (LCC) schedules.
- Universal Decimal Classification (UDC) outlines.
- Elizabeth Moi's scheme for law (specialised classification).

Illustrations (Figures, Plates, Tables, Boxes)

- *Figure 2.1 Arrangement of books by subject categories* Attribution: AI-generated placeholder. Prompt: "Generate a simple diagram of library shelves with books grouped by subject categories such as science, history, and literature." Platform: AI illustration tool. Suggested OER search string: "library classification diagram OER."



- *Plate 2.1 Modern library integrating physical and digital classification systems* Attribution: AI-generated placeholder. Prompt: “Generate an image of a library interior showing bookshelves alongside computer terminals for digital catalogues.” Platform: AI illustration tool. Suggested OER search string: “modern library digital catalogue OER image.”
- *Box 2.1 Key terms in classification* Attribution: AI-generated placeholder. Prompt: “Generate a simple text box listing and defining key terms in library classification such as scheme, schedule, and call mark.” Platform: AI illustration tool. Suggested OER search string: “library classification glossary OER.”
- *Figure 2.2 Hierarchical organisation of subjects* Attribution: AI-generated placeholder. Prompt: “Generate a diagram showing a pyramid with subjects arranged from general at the top to specific at the bottom.” Platform: AI illustration tool. Suggested OER search string: “hierarchical subject classification diagram OER.”
- *Box 2.2 Objectives of classification in information management* Attribution: AI-generated placeholder. Prompt: “Generate a simple text box listing objectives of classification such as retrieval, cataloguing, organisation, and user experience.” Platform: AI illustration tool. Suggested OER search string: “library classification objectives OER.”
- *Table 2.1 Comparison between classification and subject organisation* Attribution: AI-generated placeholder. Prompt: “Generate a simple table comparing classification (codes, categories) and subject organisation (application, arrangement).” Platform: AI illustration tool. Suggested OER search string: “classification vs subject organisation OER table.”
- *Figure 2.3 Example of a classification schedule* Attribution: AI-generated placeholder. Prompt: “Generate a diagram showing a list of subjects with corresponding numbers, such as science 500, mathematics 510.” Platform: AI illustration tool. Suggested OER search string: “library classification schedule diagram OER.”
- *Plate 2.2 Books arranged with call marks on library shelves* Attribution: AI-generated placeholder. Prompt: “Generate an image of library shelves showing books with call marks on their spines.” Platform: AI illustration tool. Suggested OER search string: “library call marks OER image.”
- *Box 2.3 Examples of general and special classification schemes* Attribution: AI-generated placeholder. Prompt: “Generate a text box listing examples of general schemes (DDC, LCC, UDC) and special schemes (Elizabeth Moi’s law scheme).” Platform: AI illustration tool. Suggested OER search string: “general vs special classification schemes OER.”
- *Plate 2.3 Students using classification systems in a university library* Attribution: AI-generated placeholder. Prompt: “Generate an image of students in a library using shelves arranged by subject classification.” Platform: AI illustration tool. Suggested OER search string: “students using library classification OER image.”
- *Figure 2.4 Classification across physical and digital formats* Attribution: AI-generated placeholder. Prompt: “Generate a diagram showing classification applied to books,



reports, and digital files in an information centre.” Platform: AI illustration tool.
Suggested OER search string: “information centre classification diagram OER.”

- *Box 2.4 Contributions of classification to access and retrieval* Attribution: AI-generated placeholder. Prompt: “Generate a text box listing contributions of classification such as reduced search time, efficiency, and user satisfaction.” Platform: AI illustration tool.
Suggested OER search string: “classification benefits access retrieval OER.”

COURSE CODE: LIS 311

COURSE TITLE: Organization of Knowledge II

COURSE UNIT LOAD: 3 Units

- **Series 1 Foundations and Concepts of Classification**
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- **Series 4 Practical Subject Analysis and Organization**
- **Series 5 Challenges and Innovations in African Contexts**

Series 2 Historical Development of Classification Schemes

Part 1: Early beginnings of classification

- **2.1.1 Ancient and medieval approaches to organising knowledge**
- **2.1.2 Contributions of early scholars and institutions**

Part 2: Emergence of modern classification schemes

- **2.2.1 Development of Dewey Decimal Classification (DDC)**
- **2.2.2 Growth of Library of Congress Classification (LCC)**
- **2.2.3 Introduction of Universal Decimal Classification (UDC)**

Part 3: Alternative and innovative schemes

- **2.3.1 Bliss Bibliographic Classification**
- **2.3.2 Colon Classification by S. R. Ranganathan**
- **2.3.3 Other notable schemes and their contexts**

Part 4: Evolution in specialised schemes

- **2.4.1 Subject-specific schemes such as Elizabeth Moi’s law scheme**
- **2.4.2 Adaptations for specialised libraries and information centres**



Introduction

The organisation of knowledge has not always been as structured as it is today. In earlier times, scholars and institutions relied on rudimentary methods to arrange information, often limited to simple lists or subject groupings. Over the centuries, however, classification schemes have evolved to reflect advances in scholarship, technology, and the growing complexity of knowledge. This Series will take you through the historical development of classification schemes, showing how they emerged, adapted, and continue to influence libraries and information centres.

The aim of this Series is to provide you with a clear understanding of how classification schemes have developed over time, highlighting the contributions of key systems and individuals, and enabling you to appreciate their relevance to modern knowledge organisation.

We shall commence this Series by exploring the early beginnings of classification, focusing on ancient and medieval approaches to organising knowledge and the contributions of early scholars and institutions. Then, we will move on to the emergence of modern classification schemes, examining the development of Dewey Decimal Classification, the growth of Library of Congress Classification, and the introduction of Universal Decimal Classification. Following that, we will consider alternative and innovative schemes such as Bliss Bibliographic Classification and Colon Classification by S. R. Ranganathan, along with other notable systems. Finally, we will conclude with the evolution of specialised schemes, including subject-specific systems like Elizabeth Moi's law scheme and adaptations for specialised libraries and information centres. This progression will give you a comprehensive view of how classification has developed historically and why it remains central to the organisation of knowledge today.

Series Learning Outcomes

Upon completing this Series, you should be able to:

- Describe the early beginnings of classification, including ancient and medieval approaches to organising knowledge,
- Explain the contributions of early scholars and institutions to the development of classification,
- Analyse the emergence of modern classification schemes such as Dewey Decimal Classification, Library of Congress Classification, and Universal Decimal Classification,
- Evaluate alternative and innovative schemes including Bliss Bibliographic Classification and Colon Classification,
- Identify specialised schemes such as Elizabeth Moi's law scheme and explain their relevance to subject-specific libraries, and
- Assess the historical significance of classification schemes in shaping modern knowledge organisation.

3.1 Early Beginnings Of Classification

3.1.1 Ancient and medieval approaches to organising knowledge



The earliest forms of **classification** can be traced back to ancient civilisations, where knowledge was grouped according to broad subjects such as philosophy, medicine, or astronomy. For example, in ancient Greece, scholars like Aristotle attempted to categorise knowledge into logical divisions, laying the foundation for systematic organisation. In medieval times, monasteries and universities organised manuscripts by subject matter, often using simple lists or catalogues.

These early approaches were rudimentary compared to modern systems, but they established the principle that knowledge must be arranged in a structured way to be useful. Without such organisation, valuable manuscripts and texts would have been inaccessible to scholars.

Fill in the blank: In ancient Greece, scholars such as _____ attempted to categorise knowledge into logical divisions.



Figure 3.1 Early subject divisions in ancient Greece

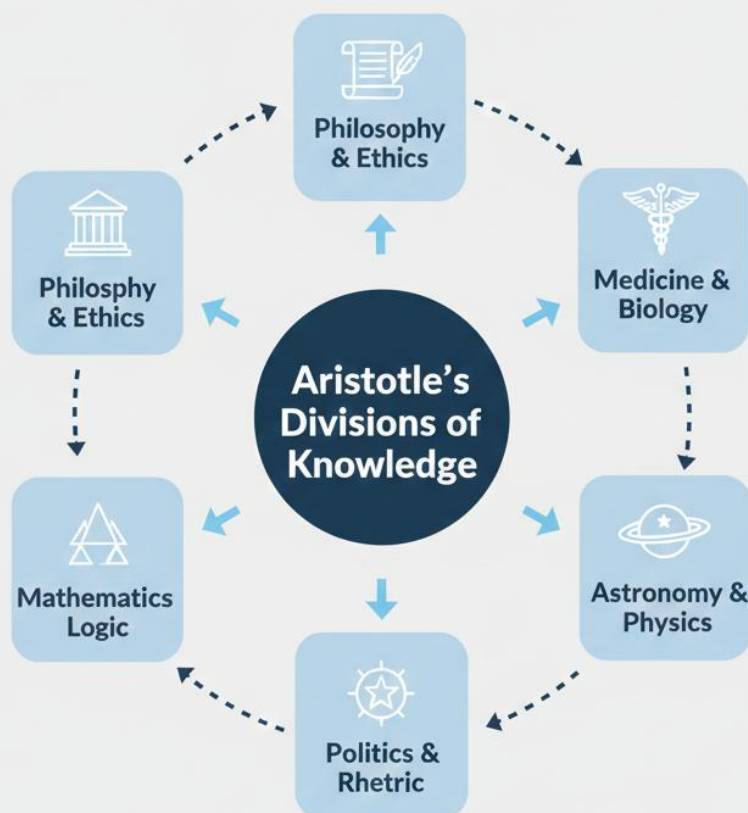


Figure 3.1 Early subject divisions in ancient Greece

3.1.2 Contributions of early scholars and institutions

Early scholars and institutions played a crucial role in shaping the development of classification. Aristotle's logical categorisation influenced later systems, while medieval universities developed subject-based catalogues to manage growing collections of manuscripts. The Library of Alexandria, though largely destroyed, is often cited as an early attempt to organise vast amounts of knowledge systematically.

These contributions highlight the importance of intellectual effort in creating order out of complexity. They also demonstrate that classification has always been closely tied to the needs of scholars and institutions seeking to preserve and share knowledge.

Fill in the blank: The Library of _____ is often cited as an early attempt to organise vast amounts of knowledge systematically.



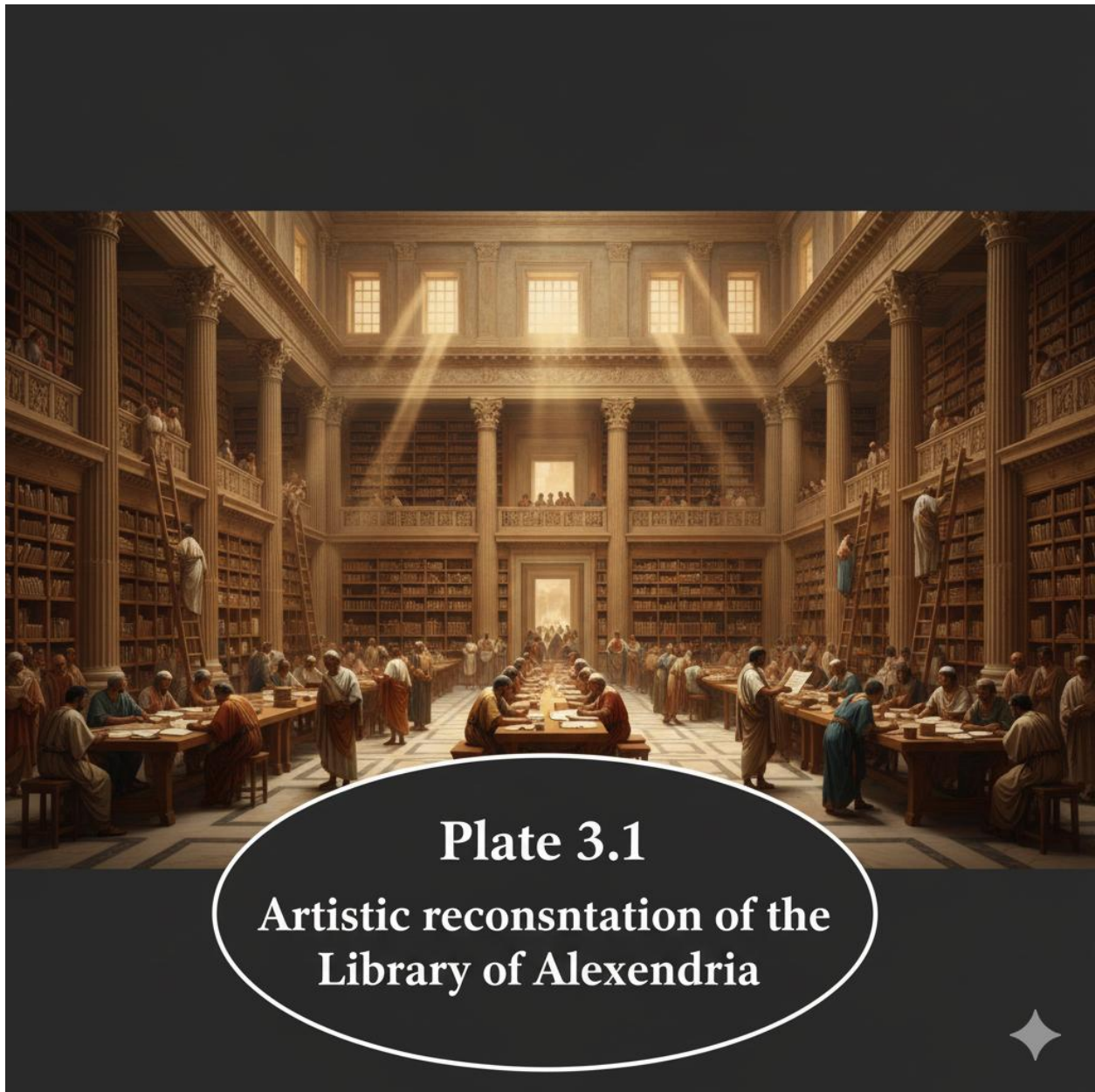


Plate 3.1

Artistic reconstruction of the Library of Alexandria

Pilot questions 3.1

1. Who was one of the earliest scholars to attempt logical categorisation of knowledge?
2. How were manuscripts organised in medieval universities?
3. What principle did early approaches to classification establish?
4. Which ancient institution is often cited as an early attempt at systematic organisation of knowledge?
5. Why were early classification efforts important for scholars?

3.2 Emergence Of Modern Classification Schemes



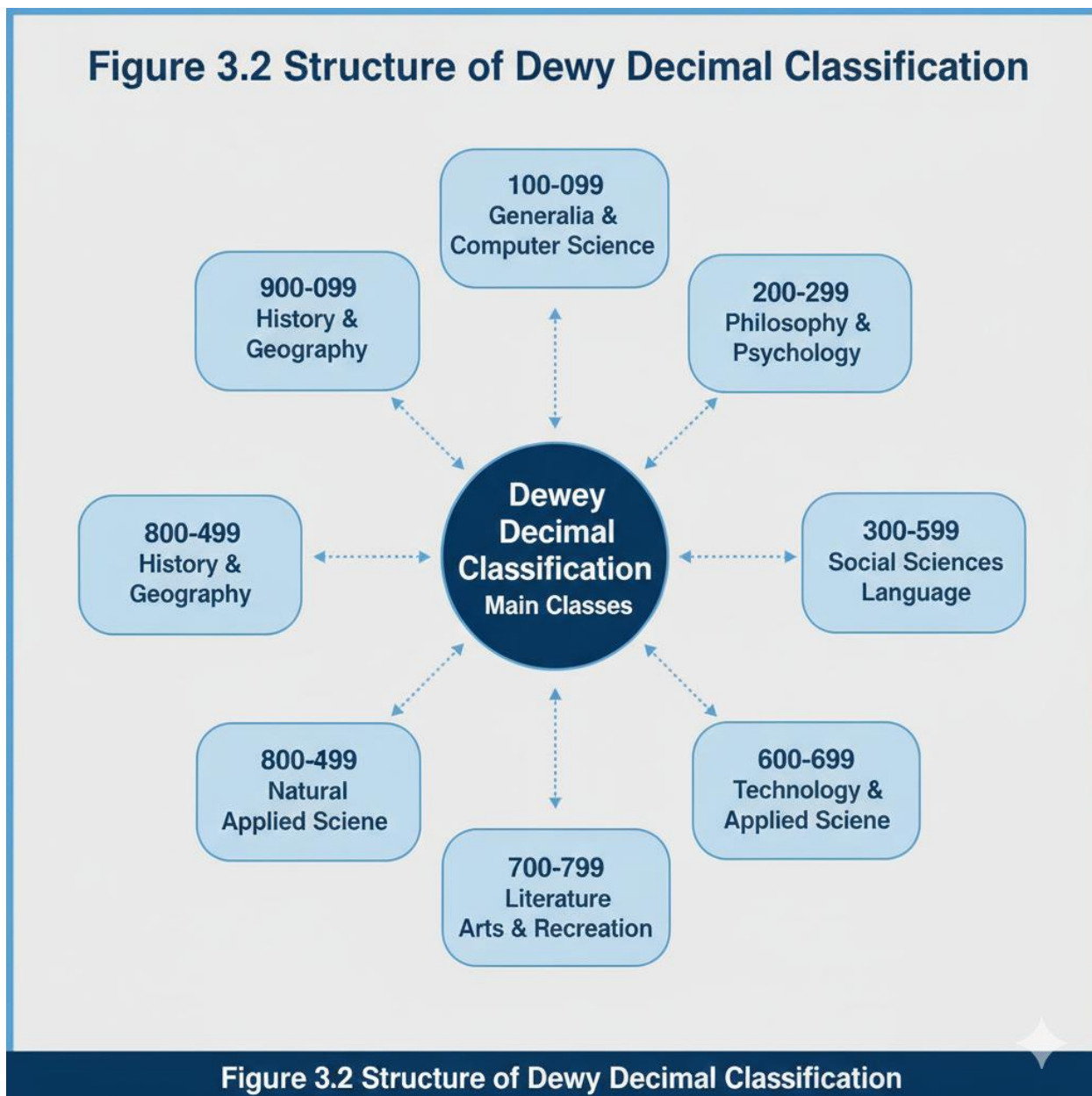
3.2.1 Development of Dewey Decimal Classification (DDC)

The **Dewey Decimal Classification (DDC)** was developed in 1876 by Melvil Dewey. It is one of the most widely used general classification schemes in libraries worldwide. DDC organises knowledge into ten main classes, each further divided into divisions and sections. This decimal structure makes it flexible and expandable, allowing new subjects to be added as knowledge grows.

DDC's simplicity and universality have made it particularly popular in public and school libraries. Its numerical system ensures that materials can be arranged logically and retrieved easily.

Fill in the blank: The Dewey Decimal Classification was developed in the year _____ by Melvil Dewey.





3.2.2 Growth of Library of Congress Classification (LCC)

The **Library of Congress Classification (LCC)** was developed in the early 20th century to meet the needs of the Library of Congress in the United States. Unlike DDC, which uses numbers, LCC uses a combination of letters and numbers to represent subjects. It is particularly suited for large academic and research libraries because of its detailed subject coverage.

LCC is highly flexible and allows for precise categorisation of specialised topics. Its strength lies in its ability to accommodate vast collections and complex subject areas.

Fill in the blank: The Library of Congress Classification uses a combination of _____ and numbers to represent subjects.



Table 3.1 Comparison of Dewey Decimal Classification and Library of Congress Classification

Dewey Decmical Classification (DDC)		Library of Loccrmg Classification (LCC)
Structure		Alphanuronic; uses letters and numbers
	Hierarchical; Hieraicne decimal notation	
Notation	Primarily numbers (000-999)	Letters (A-Z) + numbers
Main Classes	10 main classes	21 masses
Subject	More general;	More specifit; detaied subjects
Specificity	broad categories	subjects
Application	Public & school libraries	Academic & research libraries

Table 3.1 Comparison of DDC and LCC

3.2.3 Introduction of Universal Decimal Classification (UDC)

The **Universal Decimal Classification (UDC)** was developed in the late 19th century, based on the Dewey system but adapted for international use. It employs a decimal notation similar to DDC but allows for greater flexibility through the use of symbols and auxiliary tables.

UDC is particularly useful in specialised and scientific libraries because it can represent complex subjects with precision. Its international scope makes it suitable for multilingual and multicultural contexts.

Fill in the blank: The Universal Decimal Classification was adapted from the _____ system for international use.



Box 3.2

Features of Universal Decimal Classification



Decimal notation: Uses a period to separate main classes and subdivisions



Auxiliary tables: Provides symbols for common facets like language, time, and place



International scope: Translated into many languages and used worldwide

Box 3.2 Features of Universal Decimal Classification

Pilot questions 3.2

1. Who developed the Dewey Decimal Classification and in what year?
2. How does the Library of Congress Classification differ from DDC in its notation?
3. Why is LCC particularly suited for large academic libraries?
4. What system was UDC adapted from?
5. Name one feature that makes UDC useful in specialised libraries.

3.3 Alternative And Innovative Schemes

3.3.1 Bliss Bibliographic Classification



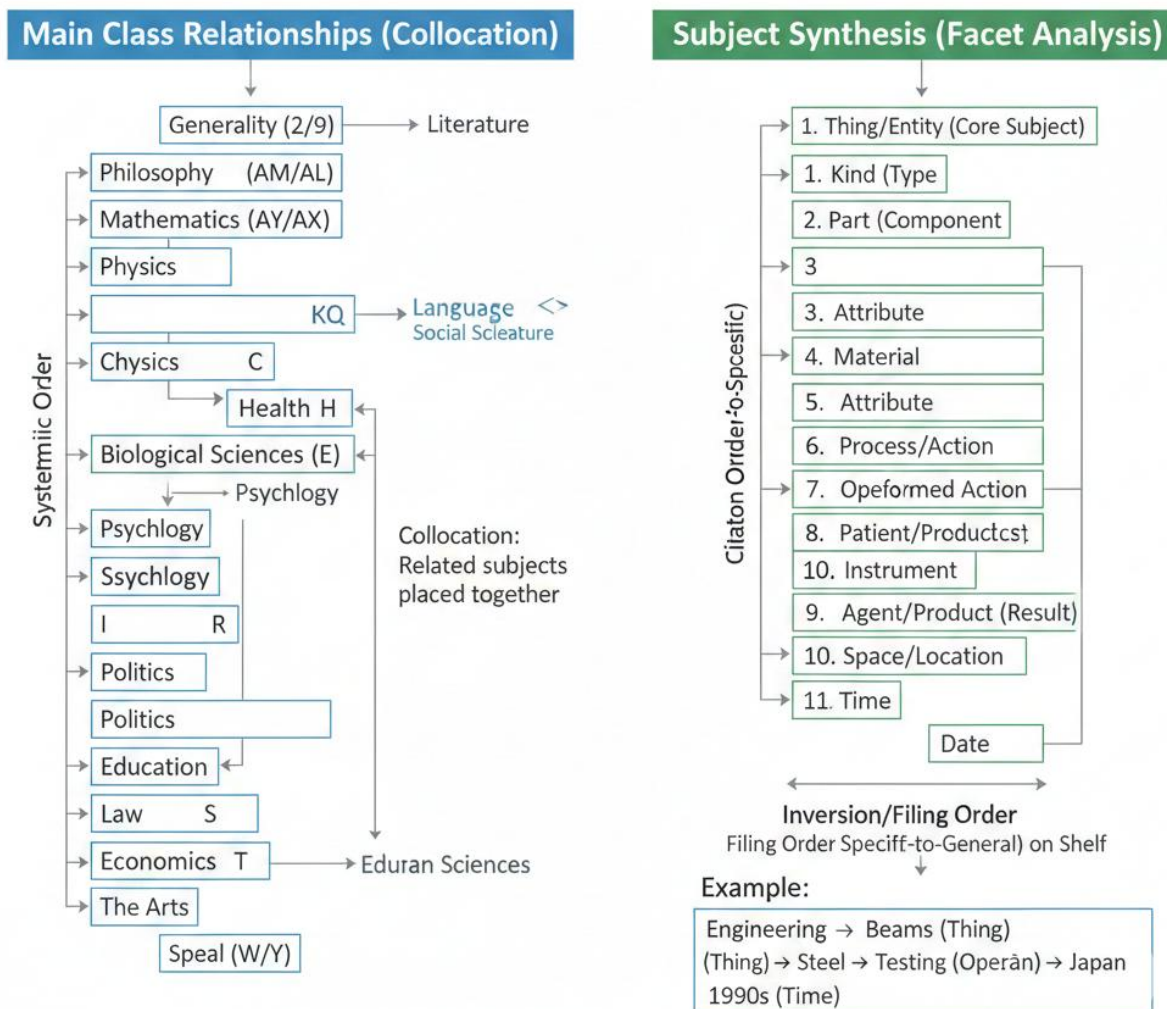
The **Bliss Bibliographic Classification (BC)** was developed by Henry Evelyn Bliss in the mid-20th century. Unlike the Dewey and Library of Congress systems, Bliss emphasised logical subject relationships rather than rigid numerical or alphabetical codes. It sought to reflect the natural order of knowledge, arranging subjects in a way that highlighted their interconnections.

Although not as widely adopted as DDC or LCC, Bliss Bibliographic Classification is valued for its intellectual depth and flexibility. It is particularly appreciated in academic contexts where subject relationships are important for research.

Fill in the blank: Bliss Bibliographic Classification was developed by Henry Evelyn _____ in the mid-20th century.

Figure 3.3

Bliss Bibliographic Classification (BC₂)



3.3.2 Colon Classification by S. R. Ranganathan



The **Colon Classification (CC)** was introduced by S. R. Ranganathan in 1933. It is considered one of the most innovative systems because it uses a faceted approach. Instead of assigning a single number or letter, CC allows subjects to be broken down into multiple facets such as personality, matter, energy, space, and time. These facets are combined using colons, hence the name.

Colon Classification is highly flexible and can represent complex subjects with precision. It is especially useful in specialised libraries where detailed subject analysis is required.

Fill in the blank: Colon Classification uses a _____ approach, allowing subjects to be broken down into multiple facets.

Box 3.3

Facets in Colon Classification Sample

1. Personality (P)
2. Matter (M)
3. Energy (E)
4. Space (S)
5. Time (T)

3.3.3 Other notable schemes and their contexts



Beyond Bliss and Colon Classification, other schemes have contributed to the diversity of knowledge organisation. For example, the Bibliographic Classification developed in Britain and various national schemes in Europe and Asia reflect local needs and traditions. These systems may not be globally dominant, but they demonstrate the adaptability of classification to different cultural and institutional contexts.

Such schemes remind us that classification is not a one-size-fits-all solution. Libraries and information centres often adopt or adapt systems to meet their specific requirements.

Fill in the blank: Classification schemes developed in Europe and Asia often reflect local _____ and institutional contexts.



Pilot questions 3.3



1. Who developed the Bliss Bibliographic Classification?
2. What is the main feature of Colon Classification?
3. Name two facets used in Colon Classification.
4. Why is Bliss Bibliographic Classification valued in academic contexts?
5. How do local schemes in Europe and Asia reflect cultural needs?

3.4 Evolution In Specialised Schemes

3.4.1 Subject-specific schemes such as Elizabeth Moi's law scheme

Specialised classification schemes are designed to meet the needs of particular disciplines. One notable example is **Elizabeth Moi's scheme for law**, which was developed to organise legal materials more effectively than general schemes could. Law libraries often require detailed subject divisions to cover statutes, case law, and legal commentary. Moi's scheme provides this precision, ensuring that legal practitioners and students can locate resources quickly.

Such subject-specific schemes highlight the limitations of general systems like DDC and LCC when applied to specialised fields. They demonstrate the importance of tailoring classification to the unique demands of a discipline.

Fill in the blank: Elizabeth Moi's scheme was designed to organise materials in the field of _____.



Box 3.4

Features of Elizabeth Moi's Law Scheme

Sample AI Prompt:

1. Statues (Legislation)
2. Case Law (Judicial Decisions)
3. Commentary (Analysis & Interpretation)
4. Subject-Based Organization
5. Hierorhichal Structure

3.4.2 Adaptations for specialised libraries and information centres

Beyond law, many specialised libraries and information centres have developed their own **in-house classification schemes**. These adaptations are often necessary because general schemes may not provide sufficient detail for highly technical or localised subjects. For example, a medical library may design a scheme that focuses on anatomy, pathology, and pharmacology, while an agricultural library may emphasise crops, soil science, and livestock.

In-house schemes allow institutions to reflect their unique collections and user needs. They also provide flexibility, enabling libraries to adapt classification systems to cultural contexts, such as African materials that may not be adequately represented in international schemes.

Fill in the blank: Specialised libraries often develop _____ classification schemes to reflect their unique collections and user needs.





Pilot questions 3.4

1. What is the main purpose of Elizabeth Moi's law scheme?
2. Why might general schemes be inadequate for specialised fields?
3. Give an example of a subject area that requires an in-house classification scheme.
4. How do specialised schemes benefit users in law or medical libraries?
5. Why are in-house schemes particularly important for African materials?

Series Summary



This Series has guided you through the historical development of classification schemes, showing how systems for organising knowledge have evolved to meet the needs of scholars, libraries, and information centres. Beginning with the early approaches of ancient and medieval times, we examined the contributions of key thinkers and institutions before moving into the emergence of modern schemes such as Dewey Decimal Classification, Library of Congress Classification, and Universal Decimal Classification. We then explored alternative and innovative systems, including Bliss Bibliographic Classification and Colon Classification, and concluded with specialised schemes designed for subject-specific contexts such as law, medicine, and agriculture.

By working through this Series, you should now be able to describe the early beginnings of classification (SLO 3.1, SLO 3.2), analyse the development of modern schemes (SLO 3.3), evaluate alternative and innovative approaches (SLO 3.4), and identify specialised schemes and their relevance (SLO 3.5). Most importantly, you are now equipped to assess the historical significance of classification schemes in shaping modern knowledge organisation (SLO 3.6), reinforcing your ability to connect past developments with present-day practices.

Glossary of Terms (Series 2)

- **Historical classification:** Early attempts to organise knowledge, often using simple lists or subject groupings in ancient and medieval times.
- **Dewey Decimal Classification (DDC):** A general classification scheme developed by Melvil Dewey in 1876, organising knowledge into ten main classes using decimal notation.
- **Library of Congress Classification (LCC):** A system developed in the early 20th century, using letters and numbers to categorise subjects, particularly suited for large academic libraries.
- **Universal Decimal Classification (UDC):** An international adaptation of DDC, employing decimal notation with auxiliary tables and symbols to represent complex subjects.
- **Bliss Bibliographic Classification (BC):** A system created by Henry Evelyn Bliss, emphasising logical subject relationships and the natural order of knowledge.
- **Colon Classification (CC):** Introduced by S. R. Ranganathan in 1933, using a faceted approach with categories such as personality, matter, energy, space, and time.
- **Faceted classification:** A method of organising subjects by breaking them into multiple aspects or facets, allowing for flexible representation of complex topics.
- **Specialised classification schemes:** Systems designed for specific disciplines, such as Elizabeth Moi's law scheme, or in-house schemes for medical and agricultural libraries.
- **In-house schemes:** Locally developed classification systems tailored to the unique collections and cultural contexts of particular libraries or information centres.

Objective questions



1. Who was one of the earliest scholars to attempt logical categorisation of knowledge? a) Melvil Dewey b) Aristotle c) S. R. Ranganathan d) Henry Evelyn Bliss (*Linked to SLO 3.1*)
2. In which year was the Dewey Decimal Classification developed? a) 1933 b) 1876 c) 1901 d) 1950 (*Linked to SLO 3.3*)
3. Which classification system uses a combination of letters and numbers to represent subjects? a) Dewey Decimal Classification b) Library of Congress Classification c) Universal Decimal Classification d) Colon Classification (*Linked to SLO 3.3*)

Short-answer questions

4. Define the term “faceted classification” and explain its purpose. (*Linked to SLO 3.4*)
5. State one feature of the Universal Decimal Classification that makes it suitable for international use. (*Linked to SLO 3.3*)
6. Identify one reason why specialised libraries may develop in-house classification schemes. (*Linked to SLO 3.5*)

Long-answer questions

7. Compare general classification schemes such as DDC and LCC with specialised schemes like Elizabeth Moi’s law scheme. (*Linked to SLO 3.5*)
8. Assess the historical significance of classification schemes in shaping modern knowledge organisation. (*Linked to SLO 3.6*)

Answers to Concept Check Questions 3

Objective questions

1. b) Aristotle
2. b) 1876
3. b) Library of Congress Classification

Short-answer questions

4. Faceted classification is a method of organising subjects by breaking them into multiple aspects or facets, such as personality, matter, energy, space, and time. Its purpose is to provide flexibility and precision in representing complex subjects.
5. One feature of UDC is its use of auxiliary tables and symbols, which allow it to represent complex subjects across different languages and cultures.
6. Specialised libraries may develop in-house schemes because general systems often lack sufficient detail for highly technical or localised subjects, such as medicine or agriculture.

Long-answer questions

7. Compare general and specialised schemes



- *Basic response:* General schemes like DDC and LCC cover all fields of knowledge, while specialised schemes such as Elizabeth Moi's law scheme focus on specific disciplines.
- *Value-added response:* General schemes provide broad coverage and international recognition, making them suitable for large and diverse collections. Specialised schemes, however, offer depth and precision in subject-specific contexts, ensuring that users in fields like law or medicine can access highly detailed resources. Outstanding learners may also note that some libraries combine both types to balance breadth and depth.

8. Assess the historical significance of classification schemes

- *Basic response:* Classification schemes have provided systematic frameworks for organising knowledge, reducing search time, and supporting cataloguing and retrieval. They are essential for making libraries and information centres accessible and reliable.
- *Value-added response:* Beyond their practical role, classification schemes reflect intellectual traditions and cultural contexts. They have shaped how societies perceive and structure knowledge, influencing education, research, and information management. Outstanding learners may also highlight the adaptability of schemes to digital environments, where metadata and faceted search continue the legacy of historical classification systems.

Answers to Pilot Questions 3

Part 3.1 Early Beginnings of Classification

- Aristotle
- By subject matter, often using simple lists or catalogues
- That knowledge must be arranged in a structured way to be useful
- The Library of Alexandria
- They made valuable manuscripts and texts accessible to scholars

Part 3.2 Emergence of Modern Classification Schemes

- Melvil Dewey, 1876
- Letters and numbers
- Because it provides detailed subject coverage suitable for vast collections
- Dewey Decimal Classification
- Its use of auxiliary tables and symbols for complex subjects

Part 3.3 Alternative and Innovative Schemes

- Henry Evelyn Bliss
- A faceted approach
- Personality and matter (others include energy, space, and time)



- Because it reflects logical subject relationships and supports academic research
- They reflect local cultural and institutional contexts

Part 3.4 Evolution in Specialised Schemes

- To organise legal materials more effectively than general schemes
- Because they may not provide sufficient detail for highly technical or localised subjects
- Medicine, agriculture, or law
- They provide precision and detailed subject divisions for users
- Because international schemes may not adequately represent African contexts and materials

References and Attributions 3

Course materials

- LIS 311: Organisation of Knowledge II (Course document provided).

General references

- Dewey, M. (1876). *Dewey Decimal Classification*.
- Library of Congress. (1901–present). *Library of Congress Classification schedules*.
- International Federation for Information and Documentation. (1895–present). *Universal Decimal Classification*.
- Bliss, H. E. (1940). *Bliss Bibliographic Classification*.
- Ranganathan, S. R. (1933). *Colon Classification*.
- Moi, E. (Year). *Law classification scheme*.

Illustrations (Figures, Plates, Tables, Boxes)

- *Figure 3.1 Early subject divisions in ancient Greece Attribution: AI-generated placeholder. Prompt: “Generate a diagram showing Aristotle’s divisions of knowledge into broad subjects like philosophy, medicine, astronomy.” Platform: AI illustration tool. Suggested OER search string: “Aristotle classification of knowledge diagram OER.”*
- *Plate 3.1 Artistic reconstruction of the Library of Alexandria Attribution: AI-generated placeholder. Prompt: “Generate an artistic image of the Library of Alexandria showing scrolls and scholars.” Platform: AI illustration tool. Suggested OER search string: “Library of Alexandria artistic reconstruction OER image.”*
- *Figure 3.2 Structure of Dewey Decimal Classification Attribution: AI-generated placeholder. Prompt: “Generate a diagram showing the ten main classes of Dewey Decimal Classification with numbers 000–900.” Platform: AI illustration tool. Suggested OER search string: “Dewey Decimal Classification ten classes diagram OER.”*



- *Table 3.1 Comparison of DDC and LCC Attribution: AI-generated placeholder. Prompt: “Generate a table comparing Dewey Decimal Classification (numbers, ten classes) and Library of Congress Classification (letters and numbers, detailed subjects).” Platform: AI illustration tool. Suggested OER search string: “DDC vs LCC comparison table OER.”*
- *Box 3.2 Features of Universal Decimal Classification Attribution: AI-generated placeholder. Prompt: “Generate a text box listing features of UDC such as decimal notation, auxiliary tables, and international scope.” Platform: AI illustration tool. Suggested OER search string: “Universal Decimal Classification features OER.”*
- *Figure 3.3 Subject relationships in Bliss Bibliographic Classification Attribution: AI-generated placeholder. Prompt: “Generate a diagram showing interconnected subject categories in Bliss Bibliographic Classification.” Platform: AI illustration tool. Suggested OER search string: “Bliss Bibliographic Classification diagram OER.”*
- *Box 3.3 Facets in Colon Classification Attribution: AI-generated placeholder. Prompt: “Generate a text box listing facets in Colon Classification: personality, matter, energy, space, time.” Platform: AI illustration tool. Suggested OER search string: “Colon Classification facets OER.”*
- *Plate 3.2 Specialised library applying a local classification scheme Attribution: AI-generated placeholder. Prompt: “Generate an image of a library with shelves labelled using a local classification system.” Platform: AI illustration tool. Suggested OER search string: “local classification scheme library OER image.”*
- *Box 3.4 Features of Elizabeth Moi’s law scheme Attribution: AI-generated placeholder. Prompt: “Generate a text box listing features of Elizabeth Moi’s law scheme such as statutes, case law, and commentary.” Platform: AI illustration tool. Suggested OER search string: “Elizabeth Moi law classification scheme OER.”*
- *Plate 3.3 Medical library applying an in-house classification scheme Attribution: AI-generated placeholder. Prompt: “Generate an image of a medical library with shelves labelled using a specialised classification system.” Platform: AI illustration tool. Suggested OER search string: “medical library classification scheme OER image.”*



COURSE CODE: LIS 311

COURSE TITLE: Organization of Knowledge II

COURSE UNIT LOAD: 3 Units

- **Series 1 Foundations and Concepts of Classification**
- **Series 2 Historical Development of Classification Schemes**
- **Series 3 Types and Applications of Classification Schemes**
- **Series 4 Practical Subject Analysis and Organization**
- **Series 5 Challenges and Innovations in African Contexts**

Series 3 Types and Applications of Classification Schemes

Proposed outline for Series 3:

Part 1: Principles of organising knowledge

- 3.1.1 General principles of classification
- 3.1.2 Subject analysis and logical arrangement

Part 2: Objectives of classification

- 3.2.1 Facilitating access and retrieval
- 3.2.2 Supporting cataloguing and indexing
- 3.2.3 Enhancing user satisfaction

Part 3: Components of classification schemes

- 3.3.1 Schedules and notation systems
- 3.3.2 Call marks and indexing elements
- 3.3.3 Examples from DDC, LCC, and UDC

Part 4: Application in libraries and information centres

- 3.4.1 Physical collections
- 3.4.2 Digital resources and metadata
- 3.4.3 Case studies in specialised libraries

Introduction

In the last Series, we explored the historical development of classification schemes, tracing their journey from ancient beginnings through modern systems and specialised adaptations. Having understood how these schemes evolved, it is now important to turn our attention to the principles and practices that underpin their use today. This Series will help you appreciate not only why



classification is necessary but also how it is applied in libraries and information centres to organise knowledge effectively.

The aim of this Series is to introduce you to the guiding principles of classification and to equip you with the skills needed to apply these principles in both physical and digital contexts. By the end, you will be able to explain the objectives of classification, describe its key components, and demonstrate how it supports access and retrieval of information.

We shall commence this Series by examining the principles of organising knowledge, focusing on subject analysis and logical arrangement. Next, we will consider the objectives of classification, including how it facilitates access, supports cataloguing, and enhances user satisfaction. Following that, we will study the components of classification schemes, such as schedules, notation systems, and call marks, with examples drawn from DDC, LCC, and UDC. Finally, we will wrap up by exploring the application of classification in libraries and information centres, looking at both physical collections and digital resources, and considering case studies in specialised contexts.

Series Learning Outcomes

Series 1: Fundamentals of Classification

Upon completing this Series, you should be able to:

- Define the concept of classification in the context of knowledge organisation,
- Explain the general purpose of classification in libraries and information centres,
- Identify the basic elements that make up a classification scheme,
- Describe the role of subject analysis in organising knowledge, and
- Demonstrate how classification supports access and retrieval of information in practical settings.

Part 1: Principles of Organising Knowledge

3.1 Principles Of Organising Knowledge

Classification is not just about assigning numbers or letters to subjects. It is built on principles that ensure knowledge is arranged logically, consistently, and in a way that supports retrieval. In this Part, we will explore the general principles of classification and the process of subject analysis and logical arrangement.

3.1.1 General principles of classification

Consistency is the principle that similar materials should always be treated in the same way. This avoids confusion and ensures predictability for users. **Specificity** means that subjects should be represented as precisely as possible, rather than being lumped into broad categories.

Exhaustiveness refers to the need to cover all subjects within a domain so that nothing is left unclassified. Together, these principles make classification systematic and reliable.

Fill in the blank:

- The principle of _____ ensures that similar materials are treated in the same way.



[Insert figure here] Short description: Flowchart showing consistency, specificity, and exhaustiveness as core principles of classification. Caption: *Figure 3.1 Core principles of classification* Sample AI prompt: “Generate a flowchart showing consistency, specificity, and exhaustiveness as principles of classification.” Search string: “principles of library classification diagram OER”

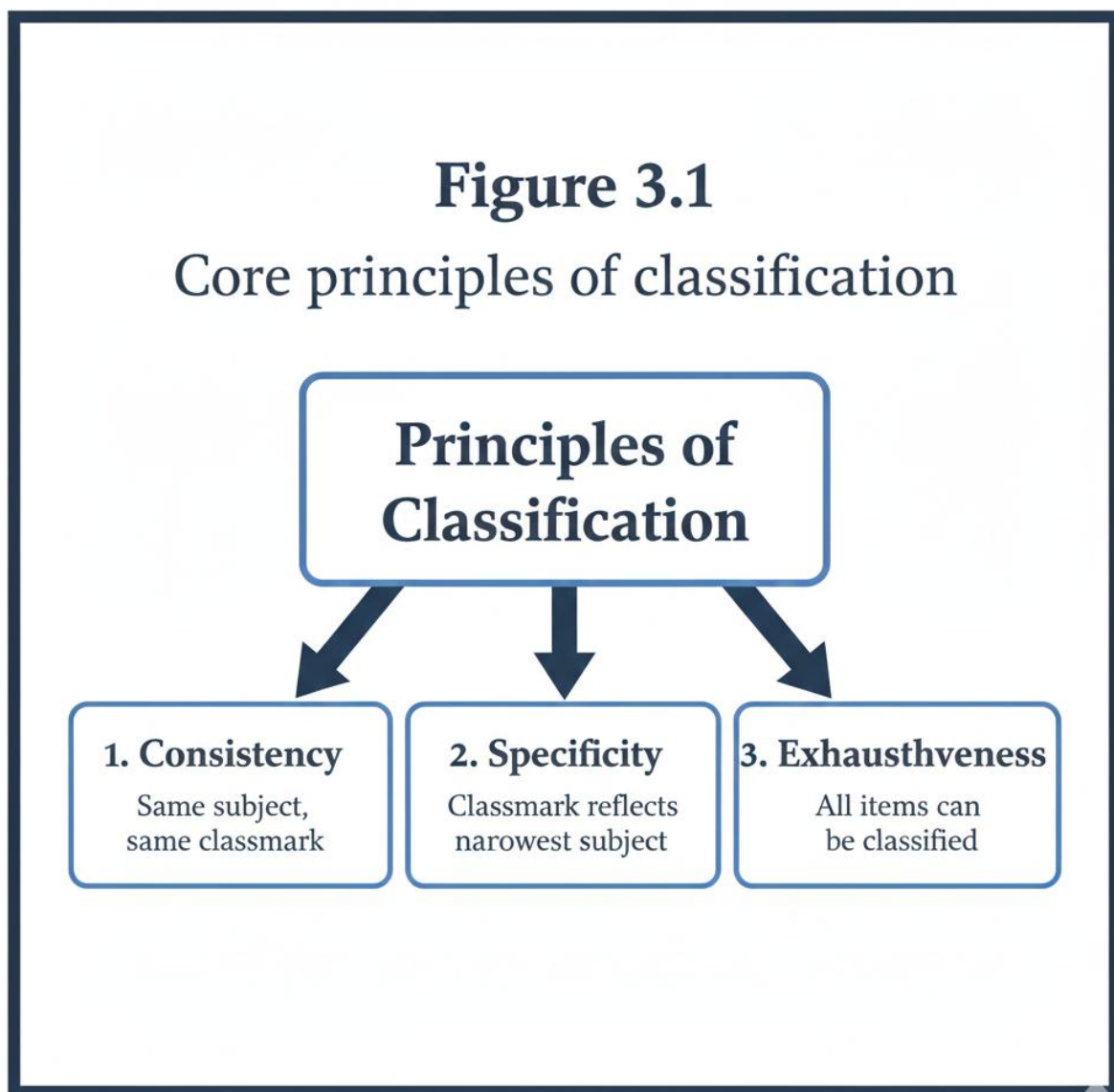
3.1.2 Subject analysis and logical arrangement

Subject analysis is the process of examining the content of a document to determine its main themes and concepts. Without accurate subject analysis, classification cannot be effective. Once subjects are identified, **logical arrangement** places them in a meaningful order, often moving from general to specific. For example, in Dewey Decimal Classification, knowledge is divided into ten broad classes, which are then subdivided into narrower topics.

Fill in the blank:

- Subject analysis involves examining a document to determine its _____.





[Insert figure here] Short description: Diagram showing progression from general to specific subjects in DDC. Caption: *Figure 3.2 Logical arrangement of subjects in Dewey Decimal Classification* Sample AI prompt: “Generate a diagram showing general to specific arrangement of subjects in Dewey Decimal Classification.” Search string: “DDC logical arrangement diagram OER”

3.2 Objectives Of Classification

Classification is not only about arranging knowledge systematically; it also serves specific purposes that make information organisation meaningful and useful. In this Part, we will explore the main objectives of classification, focusing on how it facilitates access, supports cataloguing and indexing, and enhances user satisfaction.

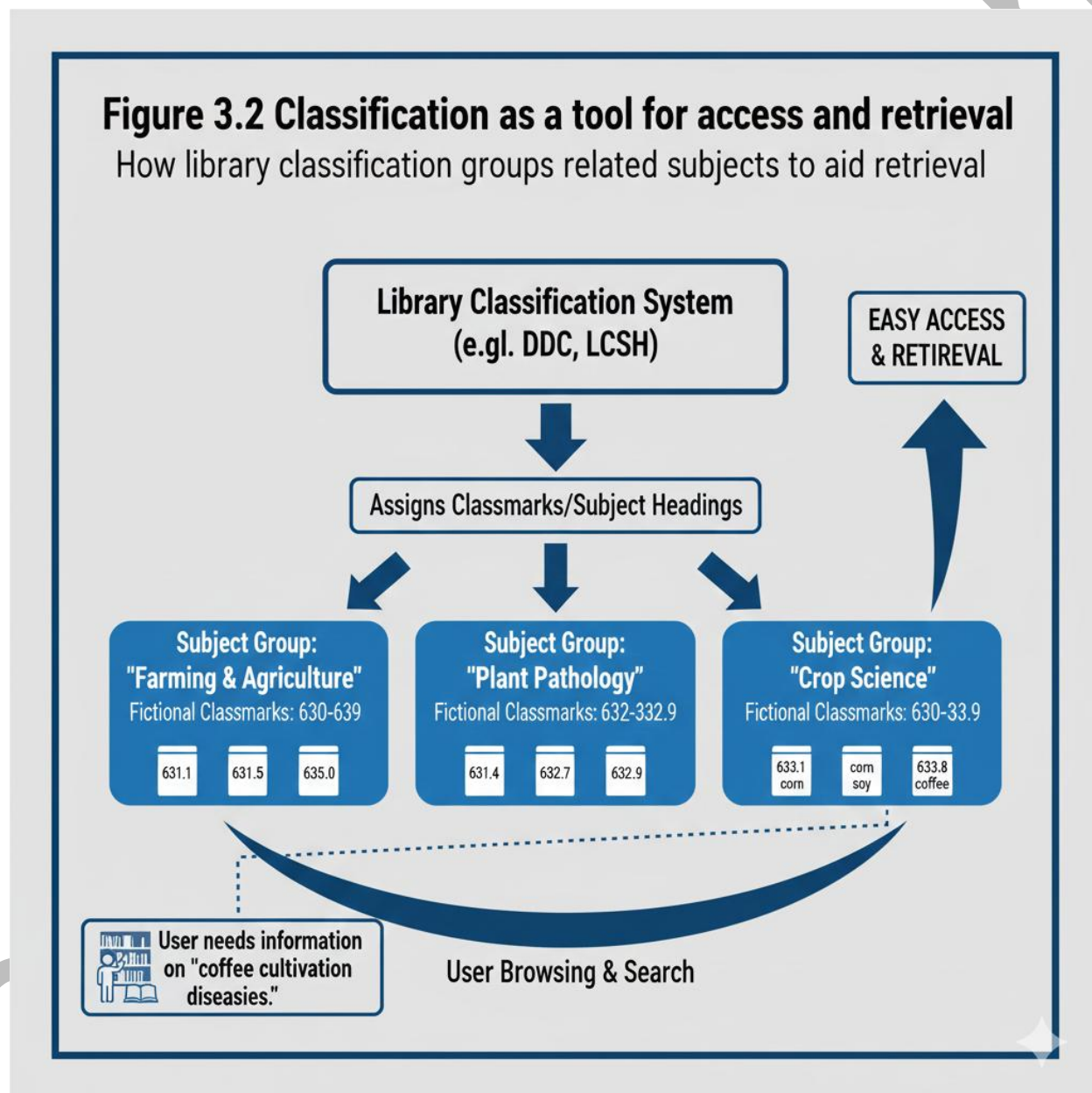
3.2.1 Facilitating access and retrieval



One of the most important objectives of classification is to make information easy to access. By grouping related materials together, classification schemes allow users to locate resources quickly and efficiently. For example, books on African history will be placed near other historical works, enabling systematic browsing and retrieval.

Fill in the blank:

- Classification facilitates _____ by grouping related materials together.



3.2.2 Supporting cataloguing and indexing

Classification provides a framework for cataloguing and indexing, ensuring bibliographic records are consistent and meaningful. It helps librarians assign call numbers and subject



headings that reflect the content of materials. This structured approach supports interoperability across catalogues and databases, making it easier for users to search across systems.

Fill in the blank:

- Classification supports cataloguing by providing a framework for assigning _____.

Box 3.2

Example of a catalogue entry with classification details

Case study showing a catalogue entry with classification number, subject heading, and indexing terms

Title:

Title: Sustainable Urban Green Spaces: Design, Ecology, and Community

Eulthor(): Anya Petrova & David Chen

Publisirer: Greenleaf Press, 2023

ISBN: 978-1-555-678-90-1

Call Number (Library Deciimal):

Urban ecology – Planning – Planning. | Green infrastructure (Conservation)
Sustainable urble-delar urban development. | Public spaces – Design.
Public spaces – Design.

Genre/Form: Textboks. | Conference proceedings

A collection of essays on the theory and practice of creating und sustainable urban parks and green spaces

Summary

Urban planning, Landscape architecture, Biodedisity, Community engagement, Climate resilience

Indexing Terms

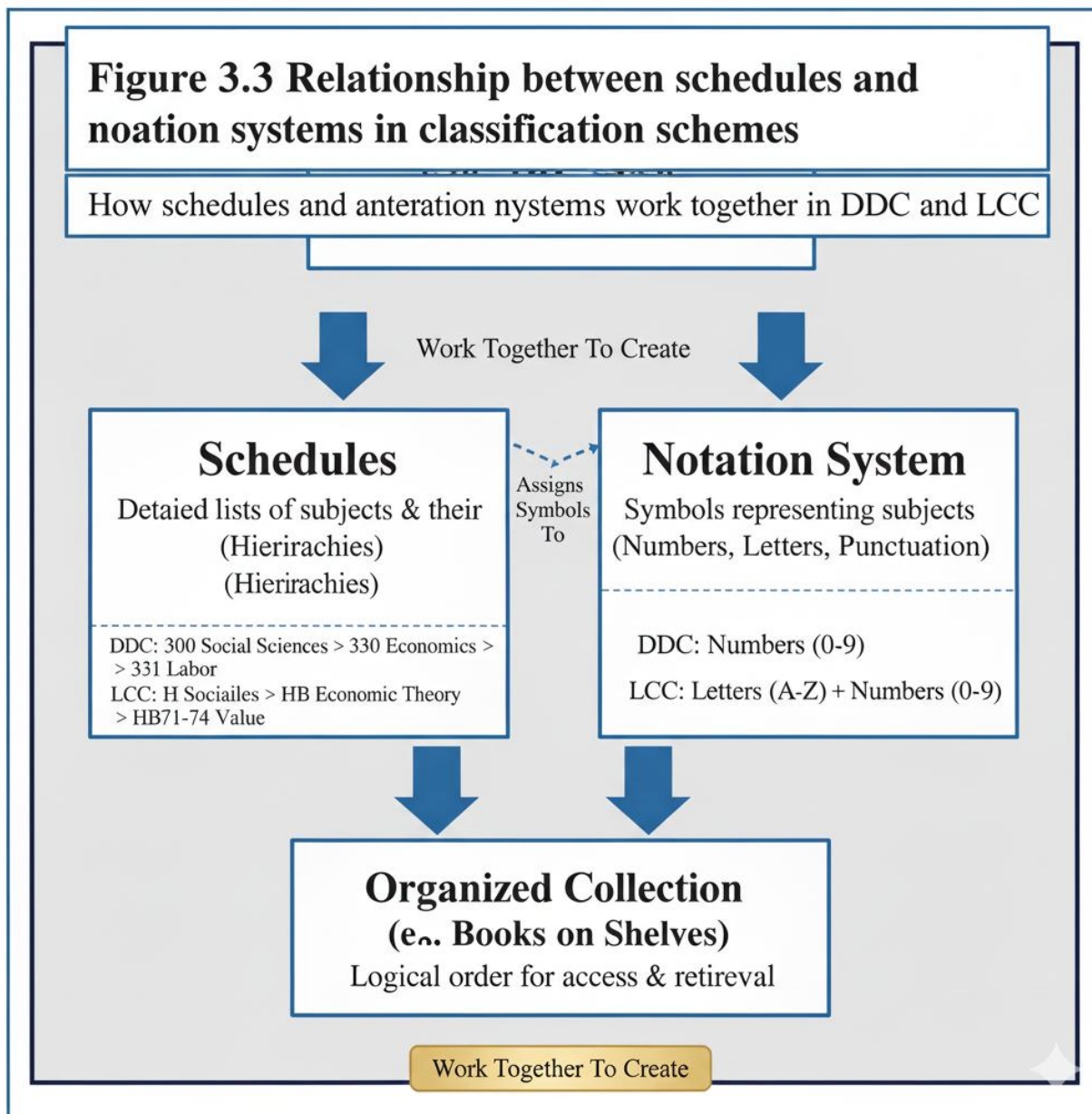
3.2.3 Enhancing user satisfaction

A well-designed classification system enhances user satisfaction by reducing frustration and making collections more intuitive to navigate. When users can find materials easily, they are more likely to trust and value the library or information centre. Classification also supports browsing, which can lead to serendipitous discovery of new resources.

Fill in the blank:



- A well-designed classification system enhances _____ by making collections easier to navigate.



3.3 Components Of Classification Schemes

Classification schemes are made up of several essential components that work together to organise knowledge systematically. In this Part, we will explore these components in detail, focusing on schedules and notation systems, call marks and indexing elements, and examples from major schemes such as DDC, LCC, and UDC.

3.3.1 Schedules and notation systems

Schedules are structured lists of subjects arranged in a logical order within a classification scheme. They provide the framework that determines where each subject fits. **Notation systems**

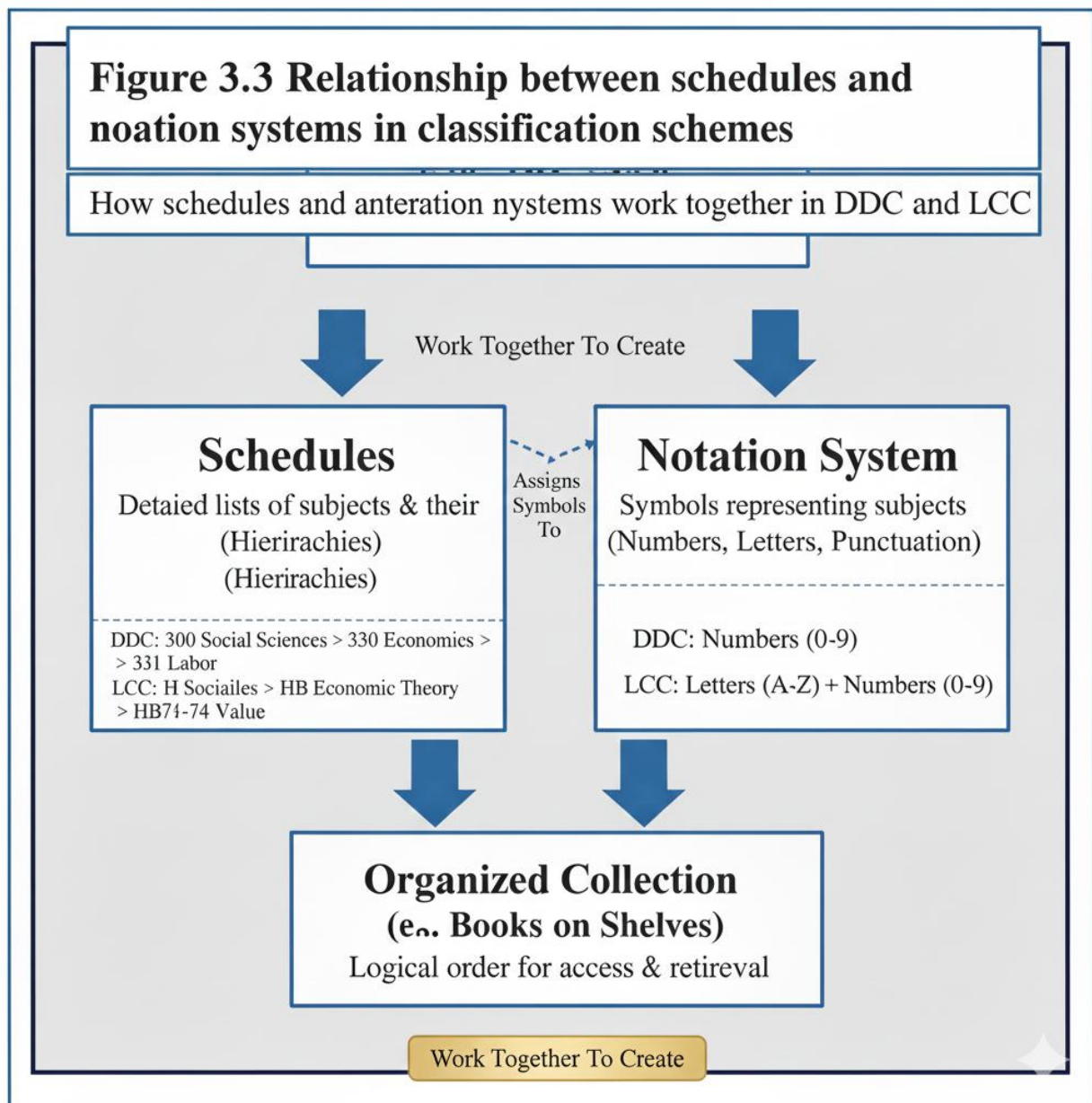


are the symbols, usually numbers or letters, used to represent subjects in the schedules. Together, schedules and notation systems make classification both systematic and easy to use.

For example, in the Dewey Decimal Classification (DDC), schedules divide knowledge into ten main classes, while notation uses numbers (000–900) to represent them. In the Library of Congress Classification (LCC), schedules are arranged by subject fields, and notation uses combinations of letters and numbers.

Fill in the blank:

- In DDC, the notation system uses _____ to represent subjects.



3.3.2 Call marks and indexing elements



A **call mark** (or call number) is the unique identifier assigned to each item in a library, combining classification notation with other elements such as author initials or year of publication. It ensures that each item can be located precisely on the shelves.

Indexing elements are additional tools that help users find materials. They include subject indexes, alphabetical lists, and cross-references that point users to related topics. Together, call marks and indexing elements make collections more navigable and user-friendly.

Fill in the blank:

- A call mark combines classification notation with _____ to uniquely identify an item.

Box 3.1

Features of a call mark

Component	Description/Example
1. Classification Number	Subject-based code (e.g), DDC: 330.9, LCC: HB71)
2. Author Mark/Cutter	First few letters of author's last name (e.g), (e.g), for Smith: SMIT)
3. Year of Publication	Year the item was published (e.g), 2023)

Example full call mark:
330.9 SMIT 2023

3.3.3 Examples from DDC, LCC, and UDC



To appreciate how components work in practice, let us consider three major schemes:

- **Dewey Decimal Classification (DDC):** Uses decimal notation and hierarchical schedules. Call marks are formed by combining numbers with author initials.
- **Library of Congress Classification (LCC):** Uses letters and numbers to represent subjects. Call marks often include cutter numbers for authors.
- **Universal Decimal Classification (UDC):** Extends DDC with auxiliary tables, allowing for more detailed subject representation.

These examples show how different schemes adapt the same basic components to suit their scope and purpose.

Fill in the blank:

- In UDC, auxiliary tables are used to provide _____ subject representation.



Table 3.1 Comparison of components in DDC, LCC, and UDC

A comparative overview of major library classification schemes

Feature	Dewey Decimal Classification	Library of Congress Classification (LCC)	Universal Decimal Classification (UDC)
	Hierarchical, 10 main classes	Hierarchical, 21 main classes (A-Z)	Hierarchical, 10 Arabic numerals
1. Hierarchy/Structure	Purely Arabic numerals(0-9), decimal point	Mixed: Letters + Arabic	Hierarchical, numerals + many enumerative
2. Notation System	Also No. Labeled	Class No. + Cutter Near	No relative minimal (: (I) " ^)
3. Notation System	Class No. + Cutter No. Year	Class No. + Cutter + Year	Class No. Numerals synthesis + Year
3. Call Mark Components	Relative index, some synthesis via auxiliaries	No relative index + Year	Pass No. + Auxiliaries + Year
4. Indexing/Synthesis	Relative index, some synthesis via auxiliaries	No relative index, synthesis, enumerative	Relative index, extensive synthesis auxiliary tables

3.4 Application In Libraries And Information Centres

Classification is not only theoretical; it is applied daily in libraries and information centres to organise collections and support user access. In this Part, we will explore how classification principles are implemented in physical collections, digital resources, and specialised libraries.

3.4.1 Physical collections

In traditional libraries, classification is applied to arrange books and other materials on shelves. Each item is assigned a **call mark**, which combines classification notation with other identifiers such as author initials. This ensures that materials are placed in a logical order, allowing users to browse systematically. Physical application of classification also supports efficient shelving, circulation, and inventory management.

Fill in the blank:



- A call mark ensures that each item can be _____ on the shelves.



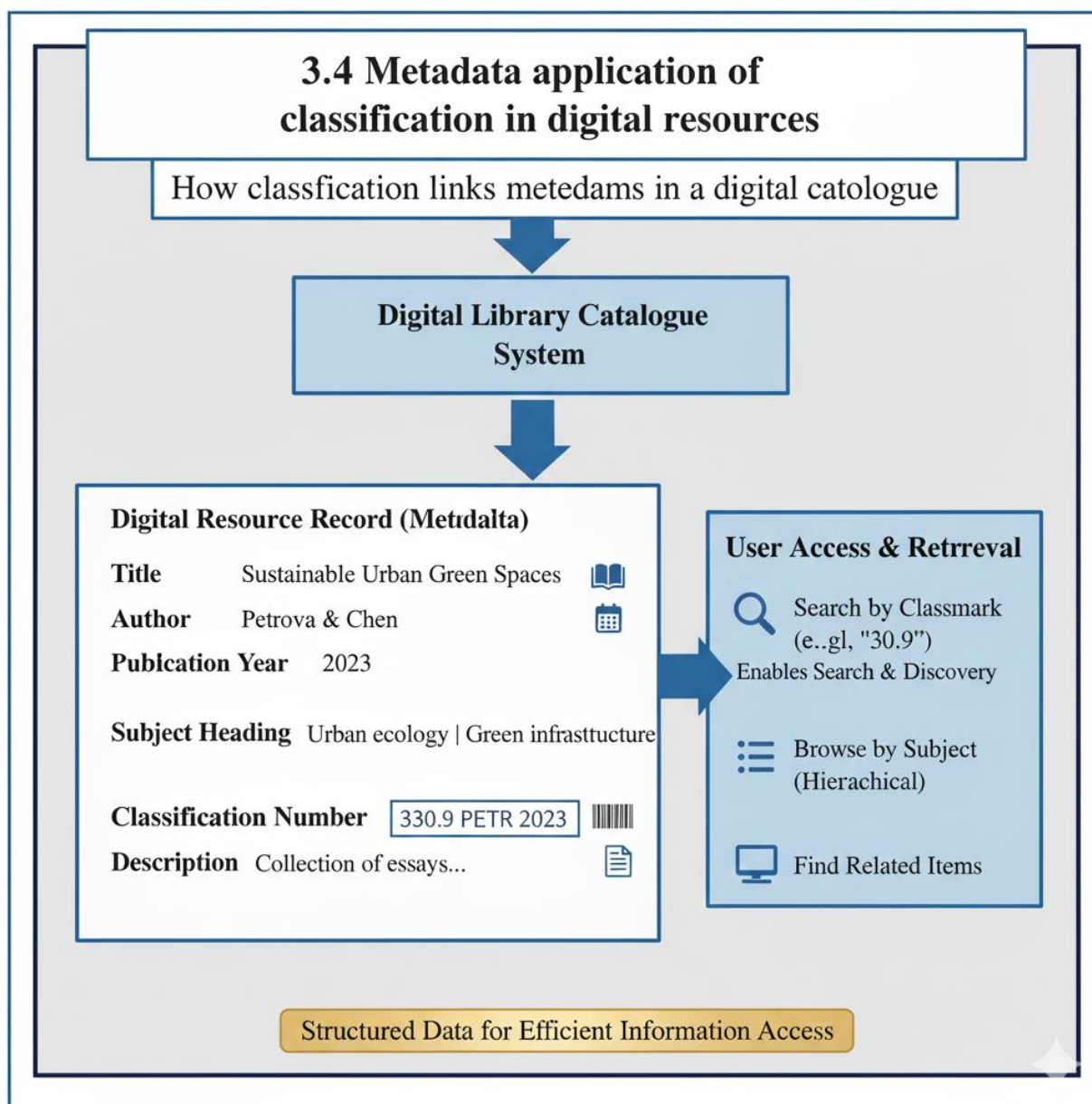
3.4.2 Digital resources and metadata

In digital environments, classification is applied through **metadata**, which are structured data elements that describe resources. Metadata often include subject headings, classification numbers, and keywords. These enable search engines and library databases to retrieve relevant materials quickly. Digital classification also supports interoperability, allowing resources to be shared across platforms.

Fill in the blank:

- In digital environments, classification is applied through structured data elements known as _____.





3.4.3 Case studies in specialised libraries

Specialised libraries, such as medical or legal libraries, often adapt classification schemes to meet their unique needs. For example, a medical library may use a customised scheme to classify resources by disease, treatment, or body system. Similarly, a law library may adopt Elizabeth Moi's law scheme to classify statutes, case law, and commentaries. These adaptations ensure that classification remains relevant and practical in specialised contexts.

Fill in the blank:

- Specialised libraries adapt classification schemes to meet their _____ needs.



Box 3.3 Examples of specialized classification schemes

Case study examples of medical and law libraries adapting classification schemes.

1. Medical Libraries

- National Library of Medicine (NLM) Classification
- Cutter Expansive Classification (adapted)

2. Law Libraries

- Library of Congress Classification - Class K (Law)
- Moys Classification Scheme for Law Books

Series Summary

This Series has focused on the principles and practice of classification, highlighting its importance in organising knowledge and supporting access to information. We began by examining the guiding principles of classification, including consistency, specificity, and exhaustiveness, before moving on to subject analysis and logical arrangement. We then explored the objectives of classification, such as facilitating access and retrieval, supporting cataloguing and indexing, and enhancing user satisfaction. Following that, we studied the components of classification schemes, including schedules, notation systems, call marks, and indexing elements, with practical examples from DDC, LCC, and UDC. Finally, we considered how classification is applied in libraries and information centres, both in physical collections and digital environments, as well as in specialised contexts.



By completing this Series, you should now be able to define the principles of classification, explain its objectives, describe and illustrate its components, and demonstrate how these are applied in practice. These abilities directly align with the Series Learning Outcomes, ensuring that you are equipped with the knowledge and skills to apply classification effectively in diverse information settings.

Glossary of Terms

Call mark A unique identifier assigned to each item in a library, usually combining the classification notation with other elements such as author initials or year of publication, to ensure precise location on the shelves.

Classification The systematic arrangement of knowledge into categories or classes, using defined principles and schemes, to make information easier to organise, access, and retrieve.

Exhaustiveness A principle of classification that ensures all subjects within a domain are covered, so that no topic is left unclassified.

Indexing elements Tools such as subject indexes, alphabetical lists, and cross-references that help users locate and connect related topics within a classification scheme.

Logical arrangement The ordering of subjects in a meaningful sequence, often moving from general to specific, to reflect their relationships and make browsing easier.

Metadata Structured data elements used in digital environments to describe resources, including subject headings, classification numbers, and keywords, which support search and retrieval.

Notation system The use of symbols, usually numbers or letters, to represent subjects within a classification schedule, making the scheme easy to apply and navigate.

Schedules Structured lists of subjects arranged in a logical order within a classification scheme, providing the framework for organising knowledge.

Specificity A principle of classification that requires subjects to be represented as precisely as possible, avoiding overly broad categories.

Subject analysis The process of examining the content of a document to determine its main themes and concepts, which is essential for accurate classification.

Universal Decimal Classification (UDC) A classification scheme that extends the Dewey Decimal Classification by using auxiliary tables to provide more detailed subject representation.

Objective Questions

1. Identify the principle of classification that ensures all subjects within a domain are covered. (*Linked to SLO 3.1*)
2. Which classification scheme uses auxiliary tables to provide more detailed subject representation? (*Linked to SLO 3.4*)
3. A call mark is made up of classification notation and what other element? (*Linked to SLO 3.3*)

Short-Answer Questions



4. Explain how subject analysis contributes to logical arrangement in classification schemes. (*Linked to SLO 3.1*)
5. Describe one way in which classification supports cataloguing and indexing. (*Linked to SLO 3.2*)
6. Give an example of how classification enhances user satisfaction in a library setting. (*Linked to SLO 3.2*)

Long-Answer Questions

7. Analyse the relationship between schedules and notation systems, using examples from DDC and LCC. (*Linked to SLO 3.3*)
8. Evaluate how classification is applied differently in physical collections compared to digital resources. (*Linked to SLO 3.5*)
9. Discuss the importance of adapting classification schemes in specialised libraries, providing examples. (*Linked to SLO 3.5*)

Answers to Concept Check Questions [Series 3]

Objective Questions

1. Exhaustiveness.
2. Universal Decimal Classification (UDC).
3. Author initials (or other identifiers such as year of publication).

Short-Answer Questions

4. Subject analysis identifies the main themes of a document, which are then arranged logically, often from general to specific, ensuring accurate placement within a classification scheme.
5. Classification provides a framework for assigning call numbers and subject headings, making cataloguing records consistent and searchable.
6. By grouping related materials together, classification makes browsing easier and reduces frustration, leading to a more positive user experience.

Long-Answer Questions

7. *Basic response:* Schedules list subjects in a logical order, while notation systems use symbols to represent them. In DDC, numbers (000–900) are used, while LCC uses combinations of letters and numbers. *Value-added response:* Beyond this, schedules and notation systems also reflect cultural and disciplinary priorities. For example, DDC's decimal expansion allows for infinite subdivision, while LCC's letter-based system reflects the structure of academic disciplines in the United States.
8. *Basic response:* In physical collections, classification is applied through call marks on items, ensuring they are shelved systematically. In digital resources, classification is applied through metadata, which supports searching and retrieval. *Value-added response:* Additionally,



digital classification enables interoperability across platforms and supports advanced search functions, while physical classification supports browsing and serendipitous discovery. Together, they complement each other in hybrid library environments.

9. *Basic response*: Specialised libraries adapt schemes to meet their unique needs, such as medical libraries classifying by disease or treatment. *Value-added response*: These adaptations not only improve access but also reflect professional practices. For instance, law libraries may adopt schemes tailored to statutes and case law, ensuring alignment with legal research methods. Such customisation demonstrates the flexibility and relevance of classification in specialised contexts.

Answers to Pilot Questions

Part 1: Principles of Organising Knowledge

- Consistency.
- Main themes and concepts.

Part 2: Objectives of Classification

- Access and retrieval.
- Call numbers and subject headings.
- User satisfaction.

Part 3: Components of Classification Schemes

- Numbers.
- Author initials (or other identifiers such as year of publication).
- Detailed.

Part 4: Application in Libraries and Information Centres

- Located precisely.
- Metadata.
- Specialised.

References and Attributions [Series 3]

This section compiles all references, suggested open educational resources (OERs), and illustration attributions used throughout **Series 3: Principles and Practice of Classification**. Entries are presented in APA style for clarity and consistency.

General References

- Chan, L. M., & Salaba, A. (2016). *Cataloguing and classification: An introduction* (3rd ed.). Lanham, MD: Rowman & Littlefield.
- Satija, M. P. (2013). *The theory and practice of the Dewey Decimal Classification system*. Oxford: Chandos Publishing.



- Taylor, A. G., & Joudrey, D. N. (2009). *The organisation of information* (3rd ed.). Westport, CT: Libraries Unlimited.

Illustrations

Part 1: Principles of Organising Knowledge

- *Figure 3.1 Core principles of classification: AI-generated using prompt “Generate a flowchart showing consistency, specificity, and exhaustiveness as principles of classification” (Microsoft Copilot graphic tool).*
- *Box 3.1 Example of subject analysis: Suggested OER search string “subject analysis example library science OER”.*
- *Figure 3.2 Logical arrangement of subjects in Dewey Decimal Classification: Suggested OER search string “DDC logical arrangement diagram OER”.*

Part 2: Objectives of Classification

- *Figure 3.3 Classification as a tool for access and retrieval: Suggested OER search string “library classification access retrieval diagram OER”.*
- *Box 3.2 Example of a catalogue entry with classification details: Suggested OER search string “library catalogue entry classification example OER”.*
- *Plate 3.1 User browsing shelves organised by classification numbers: Suggested OER search string “library shelves organised by classification OER image”.*

Part 3: Components of Classification Schemes

- *Figure 3.3 Relationship between schedules and notation systems in classification schemes: AI-generated using prompt “Generate a diagram showing schedules as subject lists and notation systems as symbols (numbers/letters) in DDC and LCC” (Microsoft Copilot graphic tool).*
- *Box 3.1 Features of a call mark: Suggested OER search string “library call number components OER”.*
- *Table 3.1 Comparison of components in DDC, LCC, and UDC: Suggested OER search string “DDC LCC UDC comparison table OER”.*

Part 4: Application in Libraries and Information Centres

- *Plate 3.2 Physical application of classification in a library: Suggested OER search string “library shelves arranged by classification numbers OER image”.*
- *Figure 3.4 Metadata application of classification in digital resources: Suggested OER search string “metadata classification in digital library diagram OER”.*
- *Box 3.3 Examples of specialised classification schemes: Suggested OER search string “specialised library classification schemes medical law OER”.*



COURSE CODE: LIS 311

COURSE TITLE: Organization of Knowledge II

COURSE UNIT LOAD: 3 Units

- **Series 1 Foundations and Concepts of Classification**
- **Series 2 Historical Development of Classification Schemes**
- **Series 3 Types and Applications of Classification Schemes**
- **Series 4 Practical Subject Analysis and Organization**
- **Series 5 Challenges and Innovations in African Contexts**

Series 4 Practical Subject Analysis and Organization

Part 1: Dewey Decimal Classification (DDC)

- 4.1.1 Historical background and development
- 4.1.2 Structure and notation system
- 4.1.3 Strengths and limitations

Part 2: Library of Congress Classification (LCC)

- 4.2.1 Historical background and development
- 4.2.2 Structure and notation system
- 4.2.3 Strengths and limitations

Part 3: Universal Decimal Classification (UDC)

- 4.3.1 Historical background and development
- 4.3.2 Structure and notation system
- 4.3.3 Strengths and limitations

Part 4: Comparative Analysis of Major Schemes

- 4.4.1 Key similarities and differences
- 4.4.2 Suitability for different library contexts
- 4.4.3 Emerging trends and adaptations

Introduction

In the last Series, we explored the principles and practice of classification, focusing on how knowledge is organised, the objectives of classification, and its application in libraries and information centres. Building on that foundation, this Series turns to the major classification schemes themselves, which are the practical tools librarians and information professionals use



every day. Understanding these schemes is essential because they shape how collections are arranged, accessed, and maintained across different types of libraries worldwide.

The aim of this Series is to introduce you to the major classification schemes, explain their structures and features, and equip you with the ability to evaluate their strengths and limitations in different contexts.

We shall commence this Series by examining the Dewey Decimal Classification (DDC), looking at its historical background, structure, and practical features. Next, we will move on to the Library of Congress Classification (LCC), considering how it differs from DDC and how it is applied in large academic libraries. Subsequently, we will explore the Universal Decimal Classification (UDC), which extends DDC with auxiliary tables for more detailed subject representation. Finally, we will wrap up by conducting a comparative analysis of these major schemes, highlighting their similarities, differences, and suitability for various library contexts.

Series Learning Outcomes

Series 1: Fundamentals of Classification

Upon completing this Series, you should be able to:

- Define the concept of classification within the context of knowledge organisation,
- Explain the general purpose of classification in libraries and information centres,
- Describe the basic elements that make up a classification scheme,
- Analyse the role of subject analysis in organising knowledge, and
- Demonstrate how classification supports access and retrieval of information in practical settings.

4.1 Foundations Of Subject Analysis

Subject analysis is the cornerstone of organising knowledge in libraries and information centres. It involves carefully examining the content of a document to determine its main themes and concepts, which are then represented in a classification scheme. In this Part, we will explore the process of subject analysis, the techniques used to identify key concepts, and how these are organised systematically for effective retrieval.

4.1.1 Understanding subject analysis

Subject analysis is the process of identifying the central ideas of a document and expressing them in a way that supports classification and indexing. It requires both intellectual judgement and familiarity with classification schemes. Effective subject analysis ensures that users can find materials quickly and that related resources are grouped together.

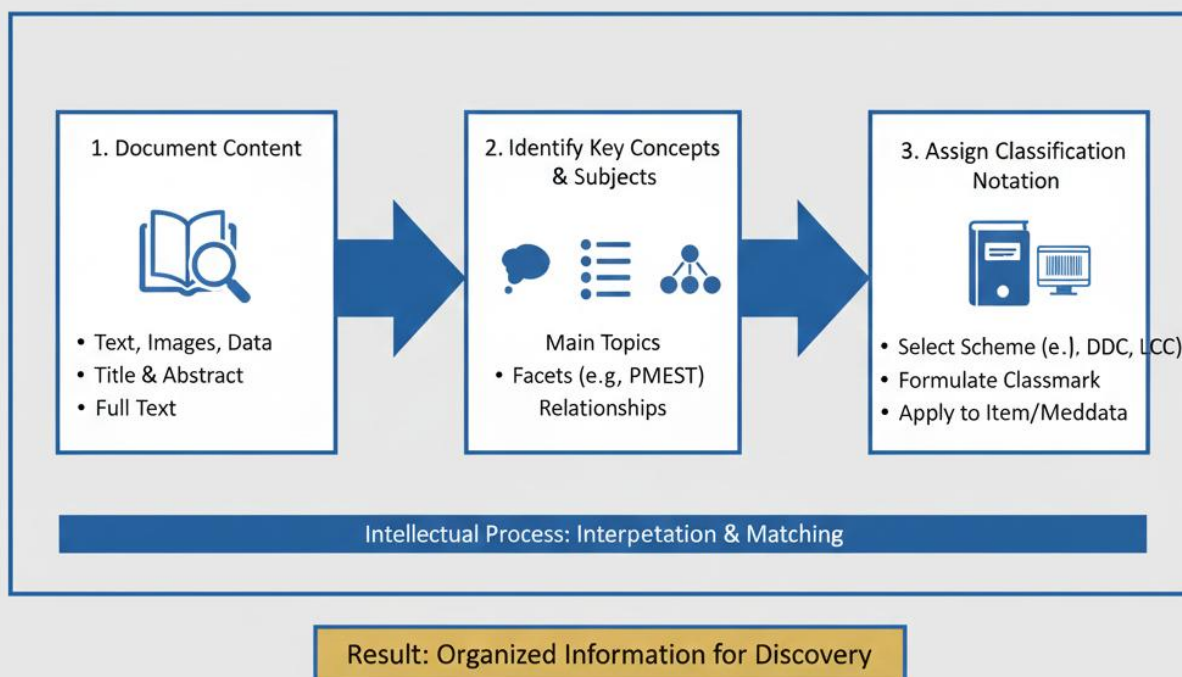
Fill in the blank:

- Subject analysis involves identifying the _____ of a document.



Figure 4.1 The process of subject analysis

Document content to classification notation



4.1.2 Techniques for identifying key concepts

Several techniques can be used to identify key concepts in documents. These include:

- **Title analysis:** examining the title for clues about the subject.
- **Abstract and introduction analysis:** reviewing summaries and opening sections for main themes.
- **Keyword scanning:** identifying repeated or emphasised terms.
- **Contextual reading:** considering the broader context to avoid misinterpretation.

Fill in the blank:



- One technique for identifying key concepts is _____ analysis, which examines the title for subject clues.

Box 4.1

Techniques for identifying key concepts

Table listing techniques such title analysis, abstract keyword scanning, and contextual reading.

1. **Title Analysis:** Examine title for main topic.
2. **Abstract/Summary Analysis:** Read for core themes and scope.
3. **Keyword/Phrase Scanning:** Look for repeated or emphasized terms.
4. **Introduction/Conclusion Review:** Identify stated purpose and findings.
5. **Contextual Reading:** Skim content around key terms for meaning

4.1.3 Organising concepts systematically

Once key concepts are identified, they must be organised systematically. This involves placing them in a logical order within a classification scheme. For example, a book on African agricultural practices may be analysed into concepts such as crops, techniques, and regional focus, which are then arranged hierarchically.

Fill in the blank:

- Organising concepts systematically often involves arranging them from _____ to specific.



[Insert figure here] Short description: Hierarchical diagram showing general to specific organisation of concepts in classification. Caption: *Figure 4.2 Organising concepts systematically in classification* Sample AI prompt: “Generate a hierarchical diagram showing general to specific organisation of concepts in classification.” Search string: “hierarchical organisation of concepts classification diagram OER”

4.2 Tools And Methods Of Organisation

Organising knowledge requires the use of specific tools and methods that ensure information is arranged logically and can be retrieved efficiently. In this Part, we will explore classification schedules, notation systems, and indexing tools, showing how they work together to support subject organisation.

4.2.1 Classification schedules

Classification schedules are structured lists of subjects arranged in a logical order. They provide the framework for placing each subject in its proper position within a classification scheme. For example, in the Dewey Decimal Classification (DDC), schedules divide knowledge into ten broad classes, each of which is further subdivided into more specific topics.

Fill in the blank:

- Classification schedules are structured lists of _____ arranged in a logical order.



Table 4.1 Common indexing tools in classification

A comparative overview of indexing tools in library classification

Tool	Description	Function
1. Subject Index	Alphastical list of subjects/topics	Directs users from a subject term to clas number
	Alphattical (ist), in thesarrus or authority file	Controls synyroms & provides preferred terms
2. Alphibetical Lists	Lists of terms (e.g), in thesarrus or authority file	Controls synonyms e.g. 'See", See Also)
3. Cross-References	Links between related terms (e.g. "See Also)	Navitates users to brooder, narrower, or related subjects

4.2.2 Notation systems

A **notation system** is a set of symbols, usually numbers or letters, used to represent subjects in classification schedules. Notation makes classification practical by providing a shorthand way to record and retrieve subjects. For instance, DDC uses decimal numbers, while the Library of Congress Classification (LCC) uses combinations of letters and numbers.

Fill in the blank:

- In LCC, the notation system uses _____ and numbers to represent subjects.



Box 4.2 Examples of notation systems

Examples of how DDC and LCC use symbols to represent subjects

Classification Scheme	Notation System Examples
DDC (Dewey Decimal Classification)	Numbers: 330.9 (Economics - Geography) 808.8 (Literature - Anthologies)
LCC (Library of Congress Classification)	Letters & Numbers: PN1995.9.H1 (Film History) QK495.O6 (Orchid Botatay)

4.2.3 Indexing tools

Indexing tools are aids that help users locate materials within a classification scheme. They include subject indexes, alphabetical lists, and cross-references. Indexing tools complement schedules and notation by guiding users to the right place, even if they start with a different term or concept.

Fill in the blank:

- Indexing tools include subject indexes, alphabetical lists, and _____.



Table 4.1 Common indexing tools in classification

A comparative overview of indexing tools in library classification

Tool	Description	Function
1. Subject Index	Alphabetical list of subjects/topics	Directs users from a subject term to a classification number
2. Alphabetical Lists (e.g. in thesaurus)	Lists of preferred terms; Controls synonyms	Provides preferred terms (e.g. "See", "See Also")
3. Cross-References	Links between related terms (e.g. "See Also", "See")	Navigates users to broader, narrower, or related subjects

4.3 Practical Application Of Subject Organisation

Subject organisation is not just theoretical; it is applied daily in libraries and information centres to make collections accessible and useful. In this Part, we will look at how subject analysis and organisation are implemented in physical collections, digital environments, and specialised libraries.

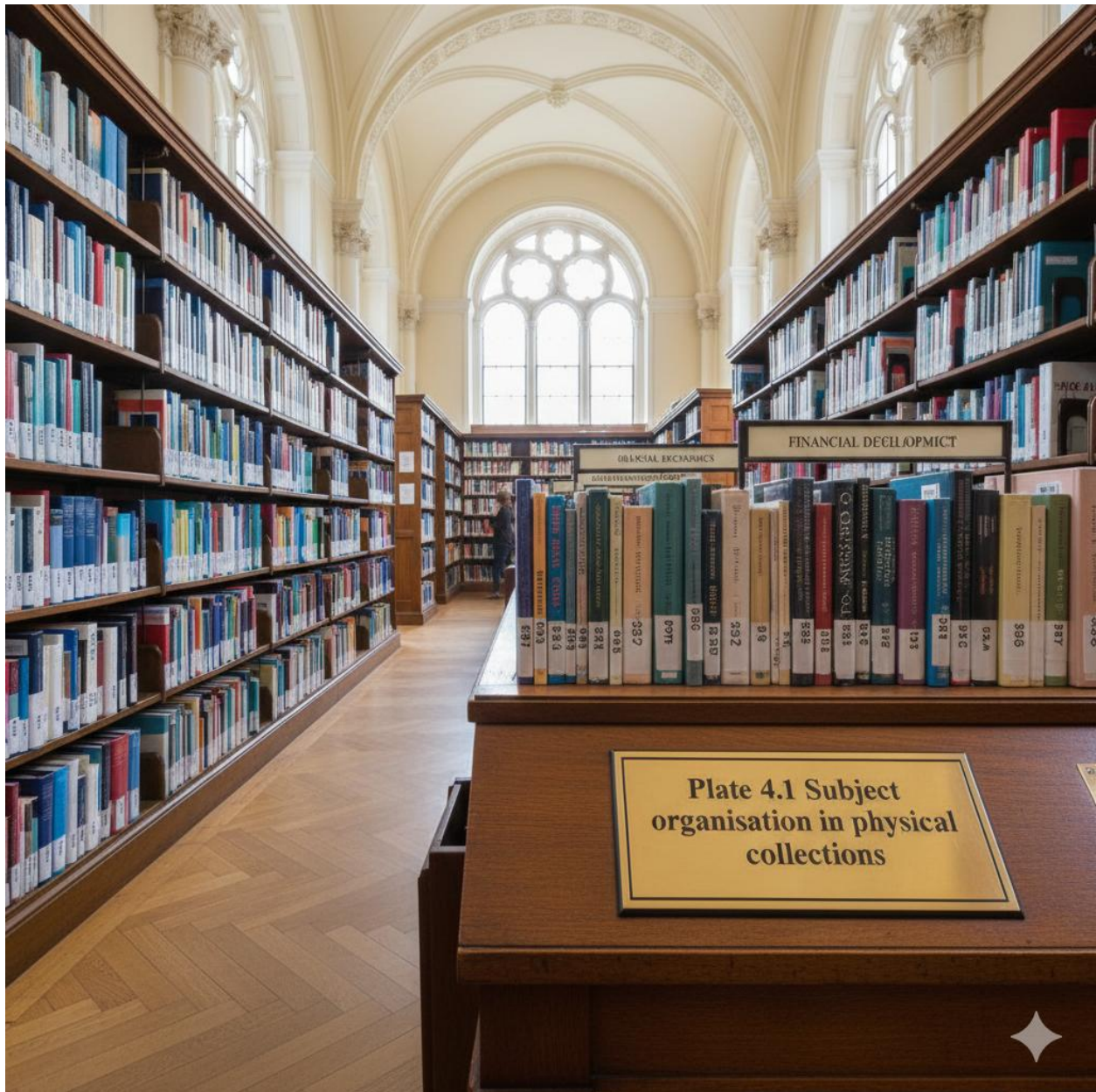
4.3.1 Application in physical collections

In traditional libraries, subject organisation is applied through **shelving systems**, where materials are arranged according to their classification numbers. Each item is assigned a call mark, which ensures it is placed in the correct position on the shelves. This systematic arrangement allows users to browse related materials easily and supports efficient circulation.



Fill in the blank:

- In physical collections, subject organisation is applied through _____ systems.



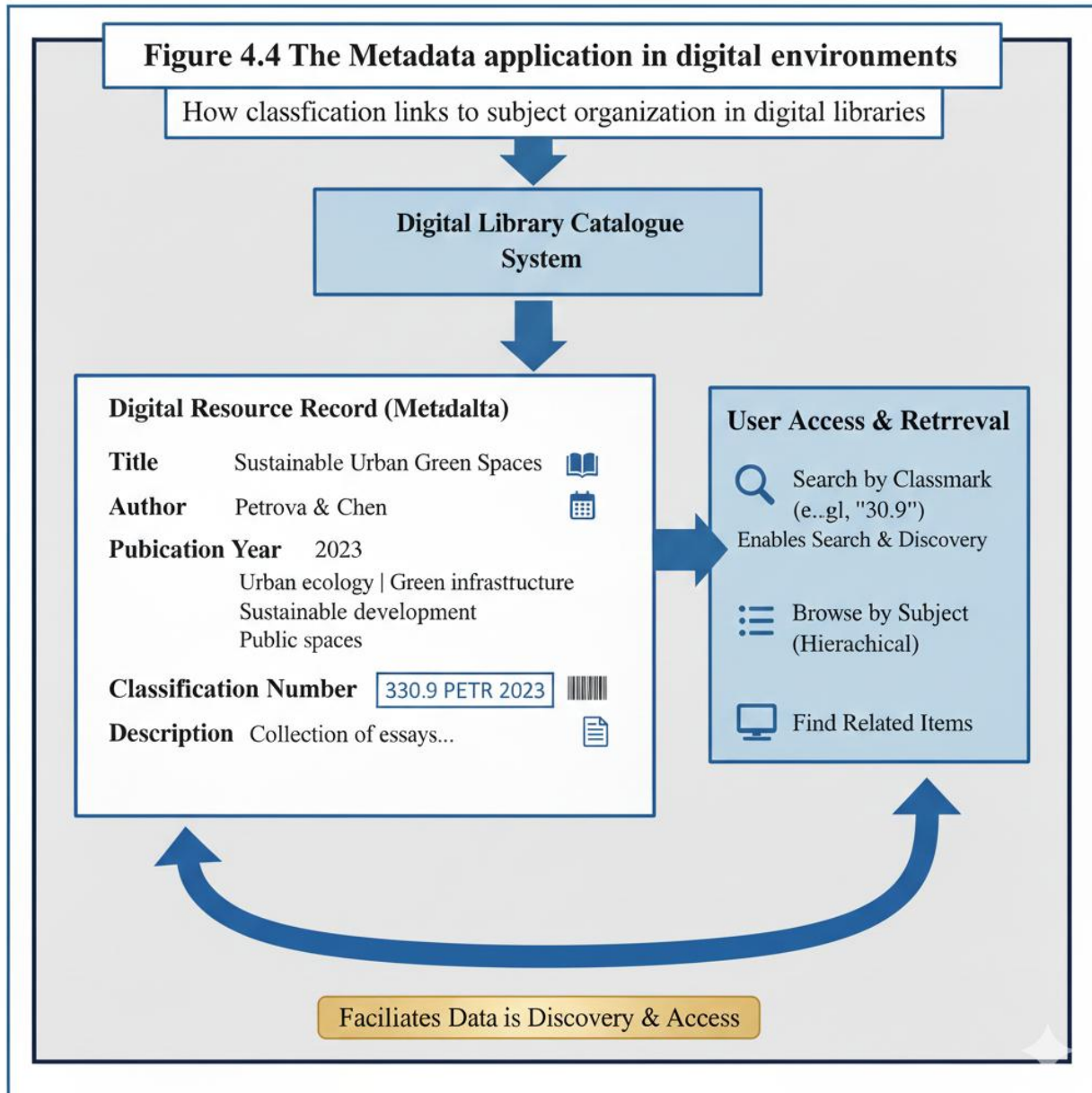
4.3.2 Application in digital environments

In digital libraries and databases, subject organisation is applied through **metadata**, which are structured data elements describing resources. Metadata include subject headings, classification numbers, and keywords, enabling users to search and retrieve materials efficiently. Unlike physical collections, digital organisation allows for multiple access points, such as searching by author, title, or subject.

Fill in the blank:



- In digital environments, subject organisation is applied through structured data elements called _____.



4.3.3 Application in specialised libraries

Specialised libraries, such as medical or legal libraries, often adapt subject organisation to meet their unique needs. For example, a medical library may classify resources by disease, treatment, or body system, while a law library may organise materials by statutes, case law, and commentaries. These adaptations ensure that subject organisation remains relevant and practical in specialised contexts.

Fill in the blank:

- Specialised libraries adapt subject organisation to meet their _____ needs.



Box 4.3 Examples of subject organisation in specialized libraries

Case study examples of medical and law libraries adapting subject organisation.

1. Medical Libraries

- National Library of Medicine (NLM) Classification
- MeSH (Medical Subject Headings) for indexing

2. Law Libraries

- Library of Congress Classification - Class K (Law)
- Moys Classification Scheme for Law Books
- Legal subject headings (e.g., BLACKLAW)

4.4 Challenges And Best Practices In Subject Organisation

Even with well-designed classification schemes and tools, librarians and information professionals face challenges when organising subjects. These challenges arise from the complexity of knowledge, the diversity of user needs, and the limitations of existing systems. In this Part, we will examine common difficulties and highlight best practices that can help overcome them.

4.4.1 Common challenges in subject organisation

Some of the most frequent challenges include:

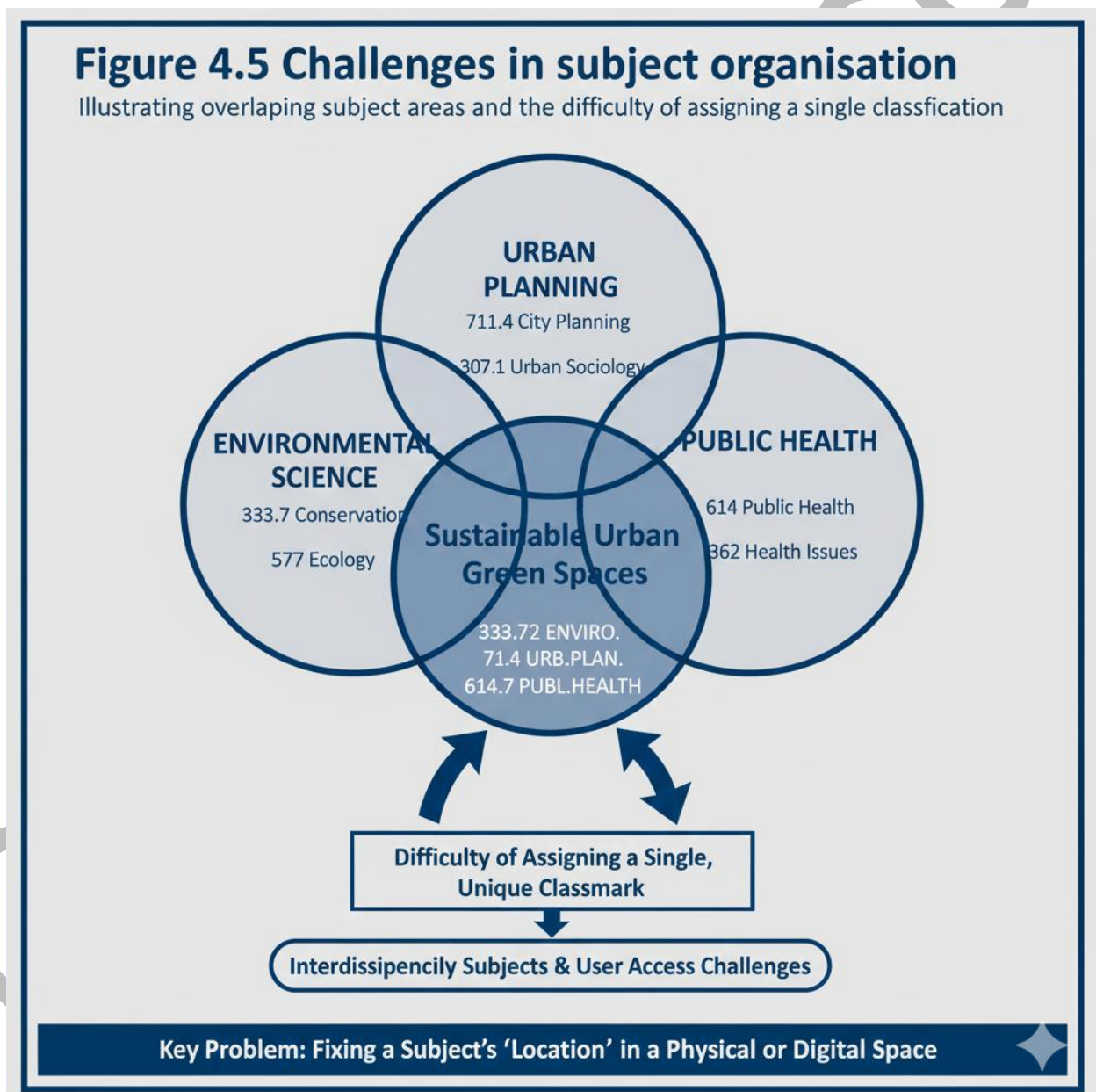
- **Ambiguity of subjects:** when a document covers multiple themes, making it difficult to assign a single classification.



- **Rapidly evolving knowledge:** new disciplines and topics may not fit neatly into existing schemes.
- **User diversity:** different users may approach the same subject from varying perspectives, requiring flexible organisation.
- **System limitations:** classification schemes may lack sufficient granularity for highly specialised topics.

Fill in the blank:

- One challenge in subject organisation is the _____ of subjects when documents cover multiple themes.



4.4.2 Best practices for effective organisation



To address these challenges, librarians adopt best practices such as:

- **Applying subject analysis consistently:** ensuring similar materials are treated in the same way.
- **Using auxiliary tables and cross-references:** to provide more detailed representation of subjects.
- **Updating schemes regularly:** incorporating new topics and disciplines.
- **Balancing specificity and usability:** avoiding overly complex notation that may confuse users.

Fill in the blank:

- One best practice is to update classification schemes regularly to incorporate _____.



Box 4.4 Best practices in subject organisation

Table listing best practices such as consistency, abstract updates, updates, and balance of specificity.

- 1. Consistency:** Apply scheme uniformly across collection.
- 2. Abstract/Phrarry Analysis:** Read for core themes and authority files.
- 3. Use Auxiluiry Tools:** Employ indexes, thesauri, and sereated fil
Stay Upcitation Review: Identif stated purpose regularly.
- 4. Balance Specifficity & Usaility:** Match edtient key
Match detail to user needs and collection size meaning.

4.4.3 Case examples of overcoming challenges

Libraries often demonstrate innovative approaches to overcome subject organisation challenges. For instance, a university library may create local adaptations of DDC to classify emerging fields such as data science. Similarly, a medical library may use customised cross-references to link diseases with treatments and research studies. These examples show how flexibility and creativity can enhance subject organisation.

Fill in the blank:

- A university library may adapt DDC locally to classify emerging fields such as _____.



Table 4.2 Case examples of overcoming subject organisation challenges

Examples of adaptations in university and medical libraries

Library Type / Challenge	Adaptation / Solution
1. University Library: Interdiscineraly Studies	Solution: Use multiple classification numbers and subject metadata for resources covering subjects like "Environmental Economics".
2. Medical Library: Rapidly Evolving Fields	Solution: Frequent updates to National of Medline (NLM) classification and the Medical Subject Headings (MeSH) thesaurus ; local auxiliary tables for emerging topics like "Genomic Therapies".

Series Summary

In this Series, we have focused on **practical subject analysis and organisation**, building on the theoretical foundations introduced earlier. We began by exploring the foundations of subject analysis, including techniques for identifying key concepts and organising them systematically. We then examined the tools and methods of organisation, such as classification schedules, notation systems, and indexing tools, which provide the framework for arranging knowledge. Following that, we considered the practical application of subject organisation in physical collections, digital environments, and specialised libraries. Finally, we addressed common challenges faced by librarians and highlighted best practices and case examples that demonstrate how these challenges can be overcome.



Upon completing this Series, you should now be able to define subject analysis, apply techniques for identifying and organising concepts, explain the role of schedules, notation, and indexing tools, demonstrate how subject organisation is applied in different contexts, and evaluate challenges alongside best practices. These abilities align directly with the Series Learning Outcomes, equipping you with practical skills to manage subject organisation effectively in diverse information settings.

Glossary of Terms

Ambiguity of subjects A challenge in subject organisation that occurs when a document covers multiple themes, making it difficult to assign a single classification.

Call mark A unique identifier assigned to each item in a library, combining classification notation with other elements such as author initials or year of publication, to ensure precise location on the shelves.

Classification schedules Structured lists of subjects arranged in a logical order within a classification scheme, providing the framework for organising knowledge.

Indexing tools Aids such as subject indexes, alphabetical lists, and cross-references that help users locate materials within a classification scheme.

Metadata Structured data elements used in digital environments to describe resources, including subject headings, classification numbers, and keywords, which support search and retrieval.

Notation system A set of symbols, usually numbers or letters, used to represent subjects in classification schedules, making classification practical and easy to apply.

Subject analysis The process of identifying the central ideas of a document and expressing them in a way that supports classification and indexing.

System limitations Restrictions within a classification scheme that prevent it from fully representing highly specialised or emerging topics.

User diversity The variety of perspectives and needs among library users, which can affect how subjects are organised and accessed.

Objective Questions

1. Define subject analysis in the context of knowledge organisation. *(Linked to SLO 4.1)*
2. Which classification scheme uses decimal numbers as its notation system? *(Linked to SLO 4.2)*
3. Metadata in digital environments usually includes subject headings, classification numbers, and _____. *(Linked to SLO 4.3)*

Short-Answer Questions

4. Explain one technique used to identify key concepts during subject analysis. *(Linked to SLO 4.1)*
5. Describe how indexing tools support users in locating materials. *(Linked to SLO 4.2)*



6. Give one example of how subject organisation is adapted in specialised libraries. (*Linked to SLO 4.3*)

Long-Answer Questions

7. Analyse the relationship between classification schedules and notation systems, using examples from DDC and LCC. (*Linked to SLO 4.2*)

8. Evaluate the differences between subject organisation in physical collections and digital environments. (*Linked to SLO 4.3*)

9. Discuss common challenges in subject organisation and propose best practices to overcome them. (*Linked to SLO 4.4*)

Answers to Concept Check Questions [Series 4]

Objective Questions

1. Subject analysis is the process of identifying the central ideas of a document and expressing them for classification and indexing.
2. Dewey Decimal Classification (DDC).
3. Keywords.

Short-Answer Questions

4. Title analysis: examining the title of a document to identify its main subject.

5. Indexing tools such as subject indexes and cross-references guide users to the correct classification even if they start with different terms.

6. A medical library may classify resources by disease or treatment, while a law library may organise materials by statutes and case law.

Long-Answer Questions

7. *Basic response:* Classification schedules list subjects in a logical order, while notation systems provide symbols to represent them. DDC uses decimal numbers, while LCC uses letters and numbers. *Value-added response:* Beyond this, schedules and notation systems reflect disciplinary structures. DDC's decimal expansion allows infinite subdivision, while LCC mirrors academic disciplines in the United States, making it particularly suited for large research libraries.

8. *Basic response:* In physical collections, subject organisation is applied through shelving systems using call marks. In digital environments, it is applied through metadata, which supports searching and retrieval. *Value-added response:* Digital organisation allows multiple access points and interoperability across platforms, while physical organisation supports browsing and serendipitous discovery. Together, they complement each other in hybrid library systems.

9. *Basic response:* Common challenges include ambiguity of subjects, evolving knowledge, user diversity, and system limitations. Best practices include consistency in subject analysis, use of auxiliary tables, regular updates, and balancing specificity with usability. *Value-added response:* Outstanding libraries also innovate by creating local adaptations of schemes for



emerging fields, integrating user feedback, and leveraging technology such as linked data to enhance subject organisation beyond traditional boundaries.

Answers to Pilot Questions [Series 4]

Part 4.1 Foundations of Subject Analysis

- Central ideas.
- Title.
- General.

Part 4.2 Tools and Methods of Organisation

- Subjects.
- Letters.
- Cross-references.

Part 4.3 Practical Application of Subject Organisation

- Shelving.
- Metadata.
- Specialised.

Part 4.4 Challenges and Best Practices in Subject Organisation

- Ambiguity.
- New topics.
- Data science.

References and Attributions [Series 4]

This section compiles all references, suggested open educational resources (OERs), and illustration attributions used throughout **Series 4: Practical Subject Analysis and Organisation**. Entries are presented in APA style for clarity and consistency.

General References

- Chan, L. M., & Salaba, A. (2016). *Cataloguing and classification: An introduction* (3rd ed.). Lanham, MD: Rowman & Littlefield.
- Satija, M. P. (2013). *The theory and practice of the Dewey Decimal Classification system*. Oxford: Chandos Publishing.



- Taylor, A. G., & Joudrey, D. N. (2009). *The organisation of information* (3rd ed.). Westport, CT: Libraries Unlimited.

Illustrations

Part 4.1 Foundations of Subject Analysis

- *Figure 4.1 The process of subject analysis: AI-generated using prompt “Generate a diagram showing subject analysis: document content → key concepts → classification notation” (Microsoft Copilot graphic tool).*
- *Box 4.1 Techniques for identifying key concepts: Suggested OER search string “subject analysis techniques library science OER”.*
- *Figure 4.2 Organising concepts systematically in classification: Suggested OER search string “hierarchical organisation of concepts classification diagram OER”.*

Part 4.2 Tools and Methods of Organisation

- *Figure 4.3 Structure of classification schedules: Suggested OER search string “classification schedules diagram library science OER”.*
- *Box 4.2 Examples of notation systems: Suggested OER search string “notation systems examples DDC LCC OER”.*
- *Table 4.1 Common indexing tools in classification: Suggested OER search string “indexing tools in library classification OER”.*

Part 4.3 Practical Application of Subject Organisation

- *Plate 4.1 Subject organisation in physical collections: Suggested OER search string “library shelves classification arrangement OER image”.*
- *Figure 4.4 Metadata application in digital environments: Suggested OER search string “metadata subject organisation digital library diagram OER”.*
- *Box 4.3 Examples of subject organisation in specialised libraries: Suggested OER search string “specialised library subject organisation medical law OER”.*

Part 4.4 Challenges and Best Practices in Subject Organisation

- *Figure 4.5 Challenges in subject organisation: Suggested OER search string “library classification challenges diagram OER”.*
- *Box 4.4 Best practices in subject organisation: Suggested OER search string “best practices in subject organisation library science OER”.*
- *Table 4.2 Case examples of overcoming subject organisation challenges: Suggested OER search string “library subject organisation case examples OER”.*

COURSE CODE: LIS 311

COURSE TITLE: Organization of Knowledge II

COURSE UNIT LOAD: 3 Units



- **Series 1 Foundations and Concepts of Classification**
- **Series 2 Historical Development of Classification Schemes**
- **Series 3 Types and Applications of Classification Schemes**
- **Series 4 Practical Subject Analysis and Organization**
- **Series 5 Challenges and Innovations in African Contexts**

Part 5.1 Emerging Trends in Classification

- 5.1.1 Technological influences (AI, machine learning, linked data)
- 5.1.2 Integration with digital libraries and metadata standards
- 5.1.3 Globalisation and multilingual classification

Part 5.2 Challenges in Contemporary Classification

- 5.2.1 Representing interdisciplinary subjects
- 5.2.2 Addressing cultural bias and inclusivity
- 5.2.3 Managing rapidly evolving knowledge domains

Part 5.3 Innovations and Best Practices

- 5.3.1 Customisation of schemes for specialised contexts
- 5.3.2 Collaborative approaches and user-centred design
- 5.3.3 Continuous updating and revision of schemes

Part 5.4 Future Directions in Classification

- 5.4.1 Anticipated developments in digital environments
- 5.4.2 Role of open access and OERs
- 5.4.3 Preparing professionals for adaptive practice

Introduction

In the last Series, we examined practical subject analysis and organisation, focusing on how concepts are identified, structured, and applied in both physical and digital collections. As libraries and information centres continue to evolve, professionals must now grapple with new realities brought about by technology, globalisation, and the rapid growth of interdisciplinary knowledge. This Series addresses those contemporary developments, helping you to understand not only the challenges but also the innovations shaping classification today.

The aim of this Series is to equip you with knowledge of current trends, issues, and best practices in classification, while preparing you to anticipate and adapt to future directions in the field.

We shall commence this Series by exploring emerging trends in classification, including technological influences, integration with digital libraries, and multilingual approaches. Next, we



will move on to challenges such as representing interdisciplinary subjects, addressing cultural bias, and managing rapidly evolving domains. Following that, we will consider innovations and best practices, including customisation, collaborative approaches, and continuous updates. Finally, we will wrap up by examining future directions, highlighting anticipated developments in digital environments, the role of open access, and how professionals can prepare for adaptive practice.

Series Learning Outcomes

Series 5: Contemporary Trends and Issues in Classification

Upon completing this Series, you should be able to:

- Analyse emerging trends in classification influenced by technology, digital integration, and globalisation,
- Evaluate challenges in representing interdisciplinary subjects, addressing cultural bias, and managing evolving knowledge domains,
- Apply innovative practices such as customisation, collaborative approaches, and continuous updates to classification schemes, and
- Anticipate future directions in classification by examining digital developments, open access initiatives, and adaptive professional practices.

Classification is not a static practice. It evolves in response to technological advances, globalisation, and the growing complexity of knowledge. In this Part, we will explore how modern influences are reshaping classification systems and practices, making them more dynamic, inclusive, and adaptable to diverse information environments.

5.1.1 Technological influences (AI, machine learning, linked data)

Technology has become a powerful driver of change in classification. **Artificial intelligence (AI)** refers to computer systems capable of performing tasks that normally require human intelligence, such as pattern recognition and decision-making. **Machine learning** is a branch of AI where systems improve automatically through experience and data. These technologies are increasingly used to automate subject analysis, generate metadata, and suggest classification numbers.

Another key development is **linked data**, which is a method of connecting structured information across the web. Linked data allows classification schemes to interact with other datasets, making information more discoverable and interoperable.

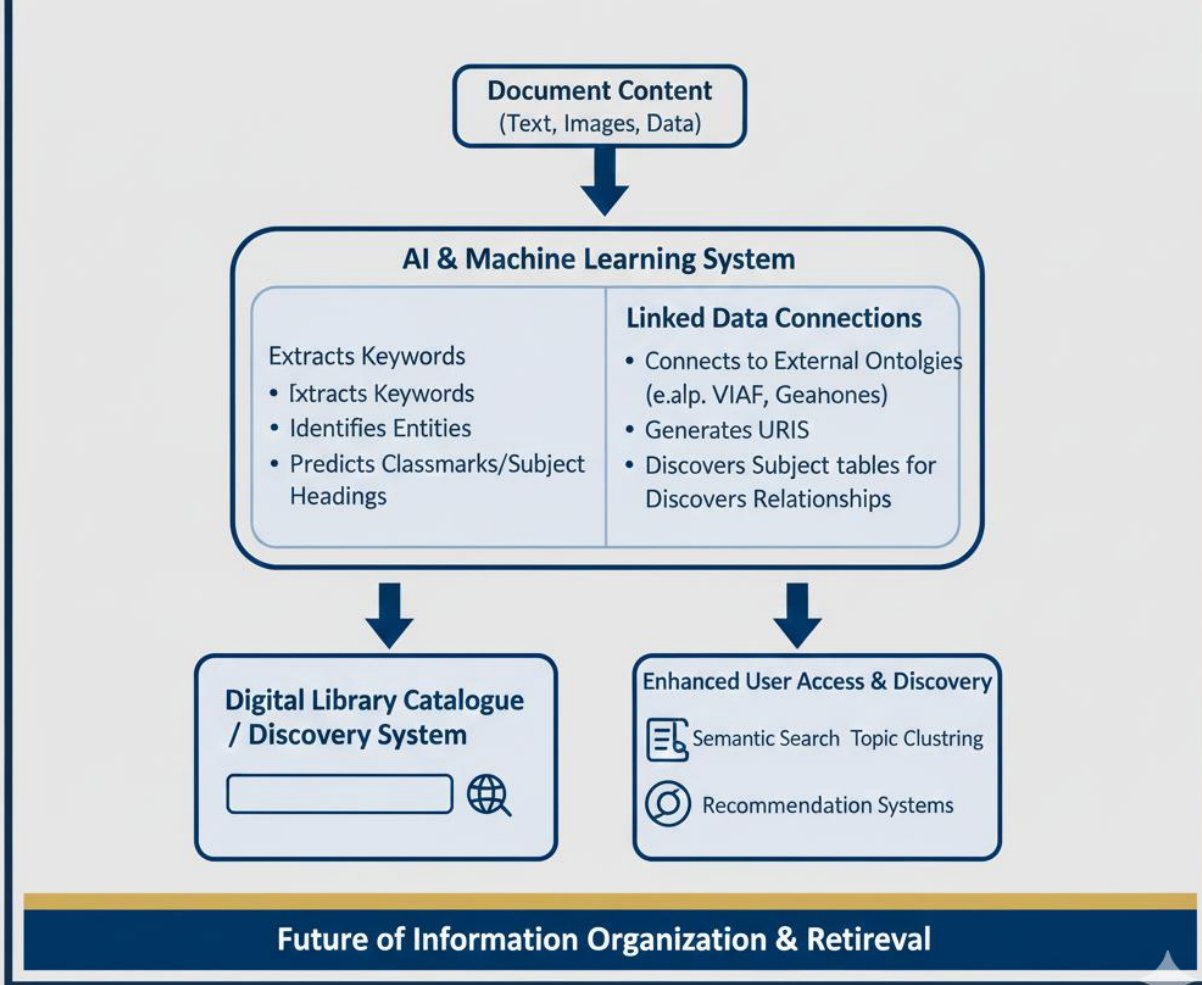
Fill in the blank:

- Machine learning improves automatically through _____ and data.



Figure 5.1 Technological influences on classification

AI and machine learning automating subject analysis, with linked data connections



5.1.2 Integration with digital libraries and metadata standards

Digital libraries rely heavily on **metadata**, which are structured data elements describing resources. Metadata standards such as Dublin Core and MARC ensure consistency across systems. Classification schemes are increasingly integrated with these standards to provide multiple access points for users.

For example, a digital library may allow searching by author, title, subject heading, or classification number. This integration enhances retrieval and supports interoperability across platforms.

Fill in the blank:

- Metadata standards such as _____ and MARC ensure consistency across systems.



Box 5.1 Metadata standards commonly used in digital libraries

A table listing metadata standards such Dublin Core and MARC with their key features.

Standard	Key Features
Dublin Core (DC)	• 15-element set (Title, Creator, Date, Subject, etc.) • Simple, flexible, and widely used • Cross-domain interoperability
MARC (Machine-Readable Cataloging)	• Comprehensive format for hundreds of fields/subfields • Used globally by libraries for cataloging

5.1.3 Globalisation and multilingual classification

Globalisation has increased the demand for classification systems that work across languages and cultures. **Multilingual classification** refers to schemes that provide subject representation in multiple languages, ensuring inclusivity and accessibility. For instance, the Universal Decimal Classification (UDC) has been translated into many languages, making it suitable for international use.

Globalisation also raises issues of cultural bias. Traditional schemes may reflect Western perspectives, so efforts are being made to adapt classification to diverse cultural contexts.

Fill in the blank:



- The Universal Decimal Classification (UDC) has been _____ into many languages for international use.

Table 5.1 Examples of multilingual classification schemes

A table showing UDC translations and initiatives for multilingual subject access

Classification Scheme / Initiative	Key Multilingual Features
Translated into over 40 languages (e., German, Spanish, Russian, Chinese) Universal Decimal Classification (UDC) Universal Decimal	- Supports parallel notation and subject headings in multiple multiple linguistic versions - Core concept is language-independent, facilitating international exchange - MeSH (Medical Application of Language-headings headings listing, linked databases)
Other Multilingual Initiatives (e.), FAST, MeSH)	- FAST (Faceted Application of Subject Terminology: Languages, linked to LCSH) - EU (Medical Subject Heading): Available languages, used for international thesauri for European information systems

5.1.2 Integration with digital libraries and metadata standards

Digital libraries rely heavily on **metadata**, which are structured data elements describing resources. Metadata standards such as Dublin Core and MARC ensure consistency across systems. Classification schemes are increasingly integrated with these standards to provide multiple access points for users.

For example, a digital library may allow searching by author, title, subject heading, or classification number. This integration enhances retrieval and supports interoperability across platforms.



Fill in the blank:

- Metadata standards such as _____ and MARC ensure consistency across systems.

Box 5.1 Mettadate standards commonly used in digital libraries

A table listing metadata standards MARC with their key features.

Standard	Key Features
Dublin Core (DC)	• 15-element set (Title, Creator, Date, Subject, etc.) • Simple, flexible, and widely used • Cross-domain interpretability
MARC (Machine-Readable Cataloging)	• Comprehensive format for hundreds of fields/sufflds for cataloging • Complex and highly detailed

5.1.3 Globalisation and multilingual classification

Globalisation has increased the demand for classification systems that work across languages and cultures. **Multilingual classification** refers to schemes that provide subject representation in multiple languages, ensuring inclusivity and accessibility. For instance, the Universal Decimal Classification (UDC) has been translated into many languages, making it suitable for international use.

Globalisation also raises issues of cultural bias. Traditional schemes may reflect Western perspectives, so efforts are being made to adapt classification to diverse cultural contexts.



Fill in the blank:

- The Universal Decimal Classification (UDC) has been _____ into many languages for international use.

Table 5.1 Examples of multilingual classification schemes

A table showing UDC translations and initiatives for multilingual subject access

Classification Scheme / Initiative	Key Multilingual Features
Universal Decimal Classification (UDC)	Supports parallel notation and subject headings in multiple linguistic versions
• Translated into over 40 languages (e.i., German, Russian, Chinese) • Core concept is language-independent, facilitating international exchange	• Supports parallel notation subject to LCSH • FAST (Faceted Application Term Analysis and Synthesis): Links to LCSH
Other Multilingual Initiatives (e.i., FAST, MeSH)	• MeSH (Medical Application of Headings: Available languages used for indexing medical thesauri for European information systems)

5.2 Challenges In Contemporary Classification

While classification systems provide structure and access to knowledge, they are not without difficulties. In this Part, we will examine the challenges faced by librarians and information professionals in applying classification today. These challenges include representing interdisciplinary subjects, addressing cultural bias, and managing rapidly evolving knowledge domains.

5.2.1 Representing interdisciplinary subjects



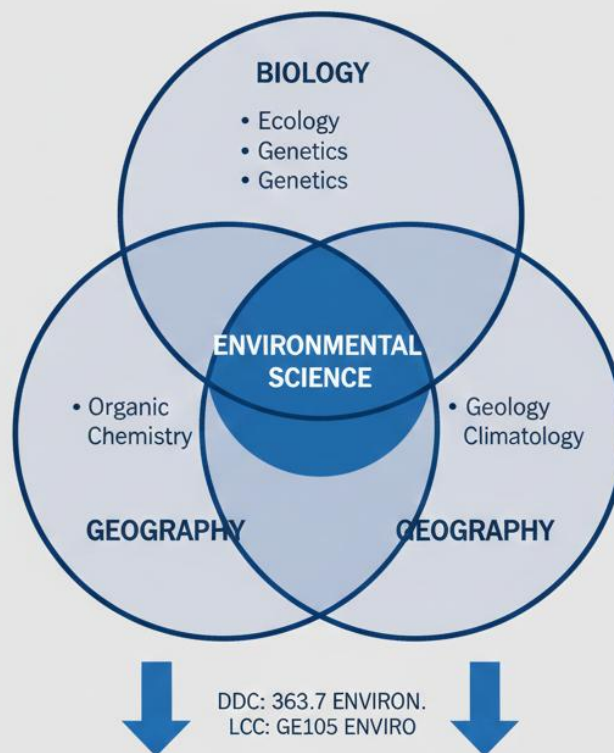
Interdisciplinary subjects are topics that draw upon more than one field of study. For example, environmental science combines elements of biology, chemistry, and geography. Representing such subjects in a single classification scheme can be difficult because traditional systems are designed around distinct disciplines.

Fill in the blank:

- Environmental science is an example of an _____ subject that combines multiple fields of study.

Figure 5.2 Representing interdisciplinary subjects in classification

A Venn diagram showing how multiple disciplines overlap



CHALLENGE: Assigning a single, unique classmark

Representing Complex Knowledge in Library Systems

5.2.2 Addressing cultural bias and inclusivity

Cultural bias occurs when classification schemes reflect the perspectives of a particular culture, often Western, while overlooking or misrepresenting others. Inclusivity requires adapting



schemes to represent diverse cultural contexts fairly. For instance, indigenous knowledge systems may not fit neatly into existing categories, yet they are vital for comprehensive collections.

Fill in the blank:

- Cultural bias in classification often reflects the perspectives of _____ societies.

Box 5.2 Examples of cultural bias in classification

Case examples of cultural bias, such as underrepresentation of knowledge and non-Western perspectives.

1. Eurocentric/Western Bias

- Prioritizes Western knowledge structures and languages
- Underrepresentation of non-Western cultures, religions, and histories

2. Indigenous Knowledge Systems

- Often marginalized or shoehorned into inappropriate categories
- Lack of specific terminology for Indigenous concepts/languages
- Knowledge organized non-linearly, clashing with hierarchical schemes

3. Linguistic & Geographic Bias

- Dominance of English European languages in subject headings
- Geographic divisions favoring Western countries
- Lack of granularity for place names in developing regions

4. Social & Historical terminology for minority groups

- Reflects historical prejudices (e.g., gender, race, sexuality)
- Slow to adapt to changing social values and understanding

5.2.3 Managing rapidly evolving knowledge domains

Knowledge domains such as information technology, biotechnology, and data science evolve quickly. **Rapidly evolving knowledge domains** are areas of study that change so fast that classification schemes struggle to keep up. Librarians must update schemes regularly or create local adaptations to ensure new topics are represented.



Fill in the blank:

- Data science is an example of a _____ knowledge domain that evolves quickly.

Table 5.2 Examples of rapidly evolving knowledge domains

A table listing fast-changing fields and their classification challenges.

Knowledge Domain	Classification Challenges
1. Information Technology (IT) / Computer Science	• New programming languages, AI/ML, cloud computing; rapid obsolescence
2. Biotechnology / Genomics	• Gene editing (CRISPR), bioinformatics, personalized medicine; ethical/social aspects
3. Data Science / AI Ethics	• Big data analytics, machine learning, data privacy, algorithmic bias; interdisciplinary with statistics/ethics
4. Renewable Energy / Cleantech	• Solar, wind, geothermal, energy storage; materials science & policy

5.3 Innovations And Best Practices

In response to the challenges we explored earlier, librarians and information professionals have developed innovative approaches and best practices to make classification more effective and inclusive. This Part will highlight how schemes are customised, how collaboration is encouraged, and how continuous updates ensure relevance.

5.3.1 Customisation of schemes for specialised contexts

Customisation refers to adapting classification schemes to meet the needs of specific libraries or disciplines. For example, a medical library may expand categories related to diseases and



treatments, while a law library may refine sections on statutes and case law. Customisation ensures that classification remains practical and relevant to specialised collections.

Fill in the blank:

- Customisation of schemes ensures classification remains _____ to specialised collections.

Box 5.3 Examples of customied classification schemes

Case study examples of medical and law libraries adapting schemes for specialized contexts.

1. Medical Libraries

- National Library of Medicine (NLM) Classification (extended local drug formularies)
- Cutter Expansive Classification (adapted for rare disease collections)
- Cutter Expansive Classification – (Law) (modified for intenations)

2. Law Libraries

- Library of Loccress Classification – Class K (Law) (for international law)
- Moys Classification Scheme for Law Books (local expansions for regioinal case law)

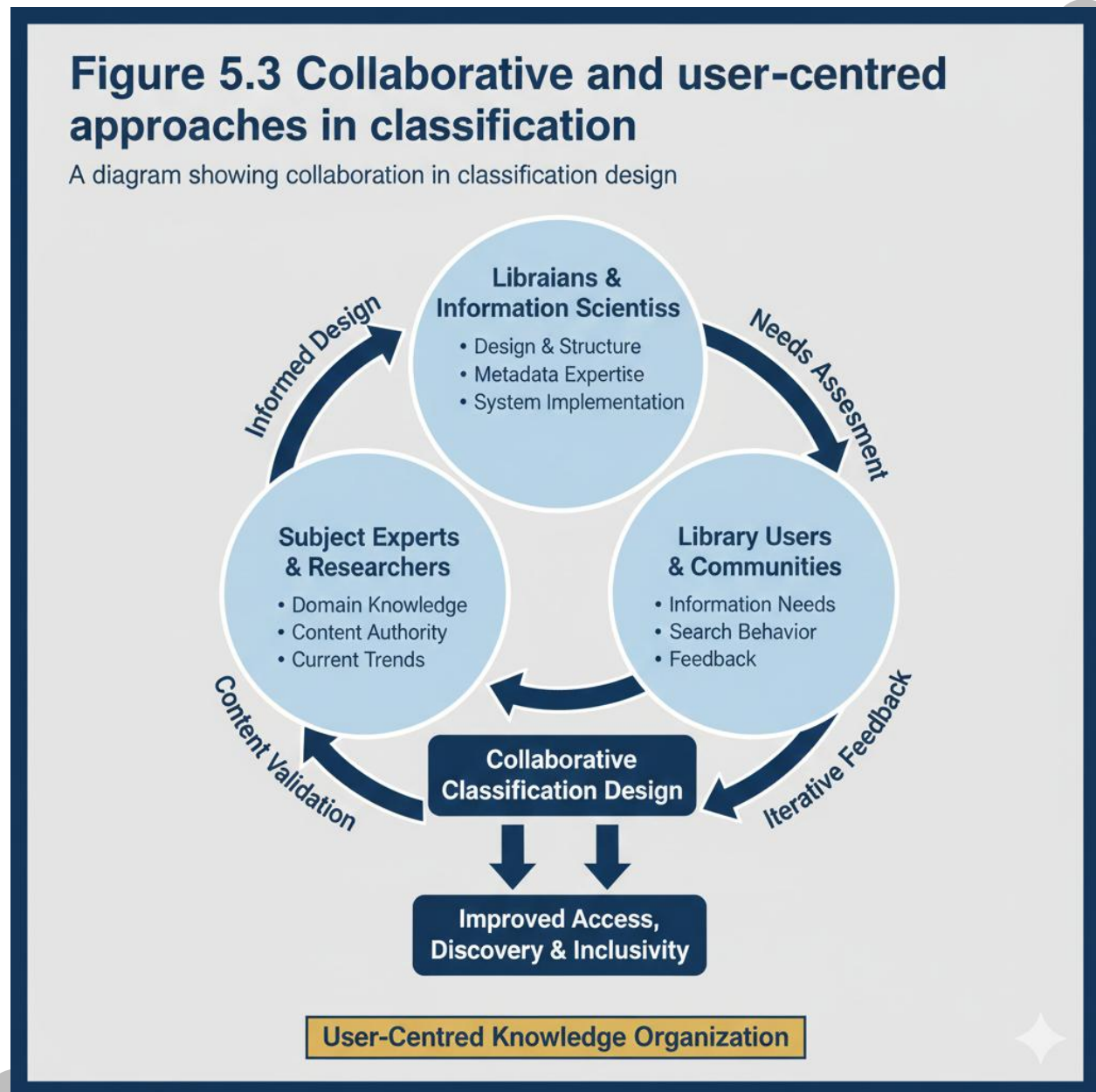
5.3.2 Collaborative approaches and user-centred design

Collaborative approaches involve librarians, subject experts, and users working together to refine classification schemes. **User-centred design** means creating systems that reflect how users search for and access information. These approaches ensure that classification is not only accurate but also practical for everyday use.



Fill in the blank:

- User-centred design ensures classification reflects how _____ search for and access information.



5.3.3 Continuous updating and revision of schemes

Continuous updating refers to the regular revision of classification schemes to incorporate new subjects and disciplines. Without updates, schemes quickly become outdated and fail to represent emerging knowledge domains. Best practice involves scheduled reviews, feedback from users, and integration of new categories.

Fill in the blank:



- Continuous updating of schemes ensures new _____ are incorporated into classification.

Table 5.3 Practices for continuous updating of classification schemes

A table listing practices for ongoing maintenance of evolution of knowledge organization systems.

Practice	Description/Function
1. Scheduled Reviews	Regular, periodic review (e.p.l, annually) of schedules and indxs by editorial boards
2. User Feedback Integration	Collecting and analyzizz input from users and cataloguers on missing subjects, unlear notations, or necessary revisions
3. Integration of New Categories classes, sund termnocloity for emerging suthics, Renewable Energy	Developing and incoprating new classes, subvissions, and temerging subjects (e. g.), AI Ethics Energy
4. Authority File Maintenance	Constantly updating subject headings and authority records to reflect to reflect current language and knowledge

5.4 Future Directions In Classification

Classification continues to evolve, and professionals must anticipate future developments to remain effective in organising knowledge. In this Part, we will explore anticipated changes in digital environments, the role of open access and open educational resources (OERs), and how professionals can prepare for adaptive practice.

5.4.1 Anticipated developments in digital environments

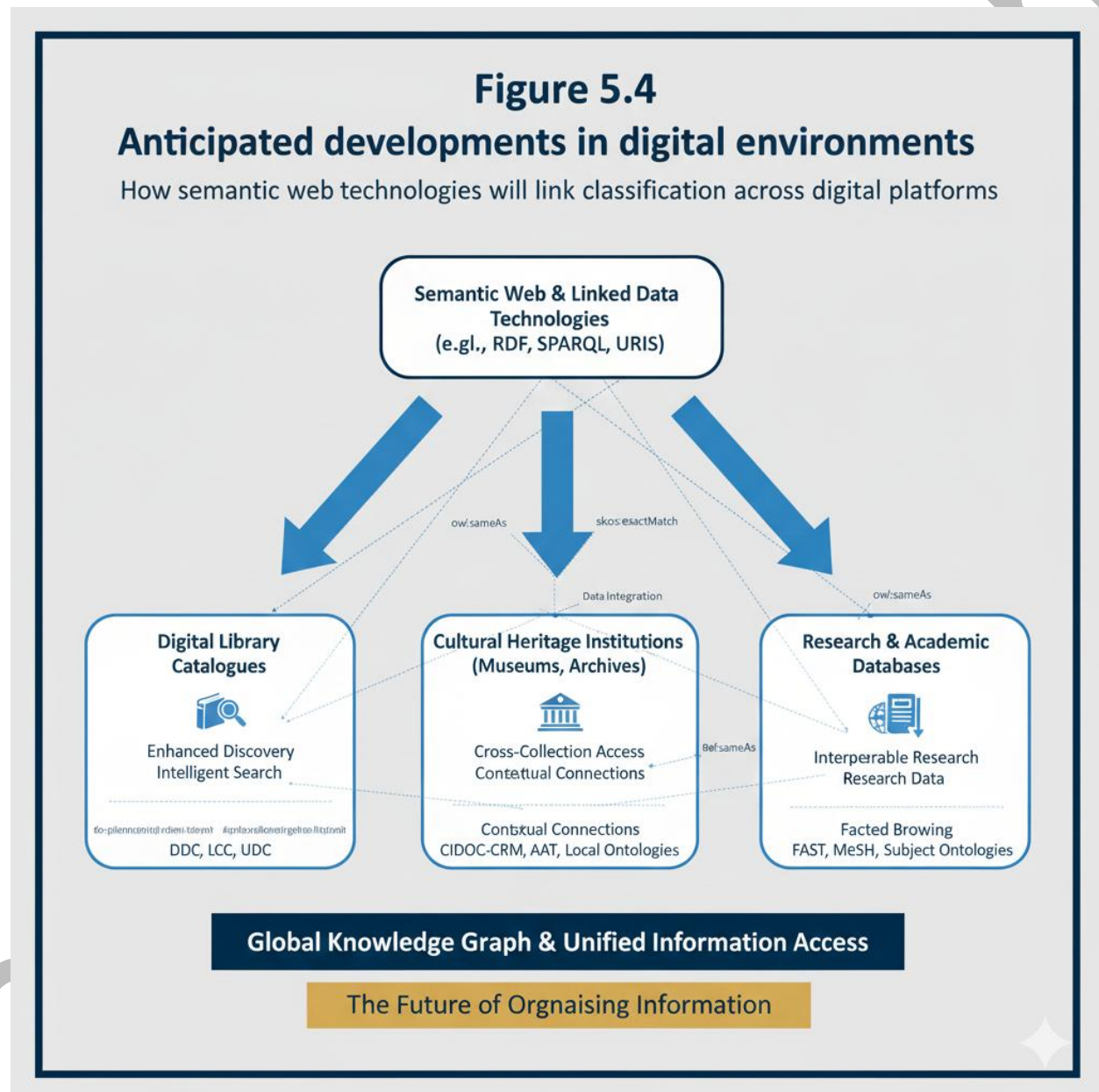
Digital environments are expected to become more interconnected, with classification schemes integrated into global networks of information. **Semantic web technologies** will allow machines



to interpret and connect data more intelligently, while **linked data** will continue to expand interoperability across platforms. These developments will make classification more dynamic and responsive to user needs.

Fill in the blank:

- Semantic web technologies allow machines to _____ and connect data more intelligently.



5.4.2 Role of open access and OERs

Open access refers to making scholarly resources freely available online, while **open educational resources (OERs)** are teaching and learning materials that can be freely used and adapted. Both movements influence classification by increasing the volume of digital content



and requiring systems that can organise freely shared resources effectively. Classification must adapt to ensure open materials are discoverable and integrated with traditional collections.

Fill in the blank:

- Open educational resources (OERs) are teaching and learning materials that can be freely _____ and adapted.

Box 5.4 Role of open access and OERs in classification

Case examples of how access and OERs influence classification practices.

1. Open Access (OA) & Open Data

- Increased visibility of diverse research outputs metadata
- Demand for open, between repositories and database databases
- Facilitates linking between repositories and databases
- Promotes transparency in cataloguing decisions

2. Open Educational Resources OERs

- Freely available learning materials on classification theory & practice
- Collaborative development of open subject terminologies
- Supports capacity building technically
- Supports capacity building and training globally
- Encourages adaptation and localisation of classification schemes

5.4.3 Preparing professionals for adaptive practice

To remain effective, professionals must adopt **adaptive practice**, which means being flexible and responsive to changes in knowledge organisation. This involves continuous professional development, engagement with new technologies, and openness to collaborative innovation.



Adaptive practice ensures that librarians and information specialists remain relevant in rapidly changing environments.

Fill in the blank:

- Adaptive practice requires professionals to remain _____ and responsive to changes in knowledge organisation.

Table 5.4 Preparing professionals for adaptive practice

Strategies for continuous learning and innovation in library classification

Strategy	Description/Outcome
Continuous Professional (CPD)	Regular training on new classification standards, (e.lked data, AI), and metadata schemas; workshops on subject analysis for evolving fields.
Engagement with Emerging Technologies Collaborative Innovation	Learning to use AI/mache learning tools subject analysis; implementing semantic web technologies, technologe projects; sharing knowldge developing new classification approaches collectively.
User-Centered Design Thinking	Gathering user feedback to refine classification systems; designing designing intutive interfaces for browsing and as discovery; tailoving, tailoring schemes to local user needs

Series Summary

In this Series, we have examined **contemporary trends and issues in classification**, building on the practical foundations covered earlier. We began by exploring emerging trends, focusing on technological influences such as artificial intelligence, machine learning, and linked data, as well as integration with digital libraries and the importance of multilingual classification. We then



moved on to challenges, including the representation of interdisciplinary subjects, cultural bias, and the difficulties posed by rapidly evolving knowledge domains. Following that, we considered innovations and best practices, highlighting customisation of schemes, collaborative approaches, and the importance of continuous updates. Finally, we concluded with future directions, looking at anticipated developments in digital environments, the role of open access and OERs, and how professionals can prepare for adaptive practice.

Upon completing this Series, you should now be able to analyse emerging trends, evaluate contemporary challenges, apply innovative practices, and anticipate future directions in classification. These abilities align directly with the Series Learning Outcomes, equipping you with the skills to engage critically and adaptively with classification in modern information

Glossary of Terms

Adaptive practice A flexible approach to professional work in classification, requiring responsiveness to changes in knowledge organisation and technology.

Artificial intelligence (AI) Computer systems capable of performing tasks that normally require human intelligence, such as pattern recognition and decision-making.

Cultural bias The tendency of classification schemes to reflect the perspectives of a particular culture, often Western, while overlooking or misrepresenting others.

Interdisciplinary subjects Topics that draw upon more than one field of study, such as environmental science, which combines biology, chemistry, and geography.

Linked data A method of connecting structured information across the web, allowing classification schemes to interact with other datasets for improved discoverability.

Machine learning A branch of AI where systems improve automatically through experience and data, often used to automate subject analysis.

Metadata Structured data elements describing resources, such as subject headings, classification numbers, and keywords, which support search and retrieval in digital environments.

Multilingual classification Classification schemes that provide subject representation in multiple languages, ensuring inclusivity and accessibility across cultures.

Open access The practice of making scholarly resources freely available online without subscription or payment barriers.

Open educational resources (OERs) Teaching and learning materials that can be freely used, shared, and adapted to support education and knowledge dissemination.

Semantic web technologies Digital tools that enable machines to interpret and connect data more intelligently, enhancing interoperability in classification systems.

User-centred design An approach to classification that focuses on how users search for and access information, ensuring systems are practical and intuitive.

Concept Check Questions [Series 5]

Objective Questions



1. Define artificial intelligence (AI) in the context of classification. *(Linked to SLO 5.1)*
2. Which metadata standard is widely used in digital libraries alongside Dublin Core? *(Linked to SLO 5.1)*
3. The Universal Decimal Classification (UDC) has been translated into many _____ for international use. *(Linked to SLO 5.1)*

Short-Answer Questions

4. Explain one challenge faced when representing interdisciplinary subjects in classification schemes. *(Linked to SLO 5.2)*
5. Describe how cultural bias can affect inclusivity in classification. *(Linked to SLO 5.2)*
6. Give one example of a rapidly evolving knowledge domain that requires continuous updates in classification. *(Linked to SLO 5.2)*

Long-Answer Questions

7. Analyse how customisation of schemes benefits specialised libraries, using examples from medical and law contexts. *(Linked to SLO 5.3)*
8. Evaluate the importance of collaborative approaches and user-centred design in modern classification systems. *(Linked to SLO 5.3)*
9. Discuss anticipated developments in digital environments and explain how they will influence classification practices. *(Linked to SLO 5.4)*
10. Assess the role of open access and OERs in shaping future classification, and suggest how professionals can prepare for adaptive practice. *(Linked to SLO 5.4)*

Answers to Concept Check Questions [Series 5]

Objective Questions

1. Artificial intelligence (AI) refers to computer systems capable of performing tasks that normally require human intelligence.
2. MARC.
3. Languages.

Short-Answer Questions

4. Interdisciplinary subjects combine multiple fields, making it difficult to assign a single classification number.
5. Cultural bias can lead to underrepresentation or misrepresentation of non-Western knowledge systems, reducing inclusivity.
6. Data science.

Long-Answer Questions



7. *Basic response:* Customisation allows libraries to adapt schemes to their specialised needs. Medical libraries expand disease categories, while law libraries refine statutes and case law. *Value-added response:* Beyond this, customisation ensures precision and relevance, enabling specialised libraries to serve their communities effectively while still aligning with broader schemes for interoperability.
8. *Basic response:* Collaborative approaches involve librarians, subject experts, and users, while user-centred design ensures systems reflect user behaviour. *Value-added response:* These practices enhance usability, reduce barriers to access, and foster innovation by incorporating diverse perspectives, making classification more responsive and inclusive.
9. *Basic response:* Anticipated developments include semantic web technologies and linked data, which improve interoperability and discovery. *Value-added response:* These technologies will transform classification into a dynamic, interconnected system, enabling global access and intelligent retrieval across platforms.
10. *Basic response:* Open access and OERs increase the volume of freely available content, requiring classification systems to adapt. *Value-added response:* Professionals must prepare by adopting adaptive practices, engaging with technology, and integrating open resources into traditional frameworks, ensuring equitable access and discoverability.

Answers to Pilot Questions [Series 5]

Part 5.1 Emerging Trends in Classification

- Experience.
- Dublin Core.
- Translated.

Part 5.2 Challenges in Contemporary Classification

- Interdisciplinary.
- Western.
- Rapidly evolving.

Part 5.3 Innovations and Best Practices

- Relevant.
- Users.
- Subjects.

Part 5.4 Future Directions in Classification

- Interpret.
- Used.
- Flexible.



References and Attributions [Series 5]

This section compiles all references, suggested open educational resources (OERs), and illustration attributions used throughout **Series 5: Contemporary Trends and Issues in Classification**. Entries are presented in APA style for clarity and consistency.

General References

- Broughton, V. (2015). *Essential classification* (2nd ed.). London: Facet Publishing.
- Chan, L. M., & Salaba, A. (2016). *Cataloguing and classification: An introduction* (3rd ed.). Lanham, MD: Rowman & Littlefield.
- Hjørland, B. (2013). *Library and information science and the philosophy of science*. *Journal of Documentation*, 69(1), 4–44.
- Satija, M. P. (2013). *The theory and practice of the Dewey Decimal Classification system*. Oxford: Chandos Publishing.

Illustrations

Part 5.1 Emerging Trends in Classification

- *Figure 5.1 Technological influences on classification: AI-generated using prompt “Generate a diagram showing AI and machine learning automating subject analysis, with linked data connections” (Microsoft Copilot graphic tool).*
- *Box 5.1 Metadata standards commonly used in digital libraries: Suggested OER search string “metadata standards Dublin Core MARC library science OER”.*
- *Table 5.1 Examples of multilingual classification schemes: Suggested OER search string “multilingual classification schemes UDC translations OER”.*

Part 5.2 Challenges in Contemporary Classification

- *Figure 5.2 Representing interdisciplinary subjects in classification: Suggested OER search string “interdisciplinary subjects classification diagram OER”.*
- *Box 5.2 Examples of cultural bias in classification: Suggested OER search string “cultural bias in library classification OER”.*
- *Table 5.2 Examples of rapidly evolving knowledge domains: Suggested OER search string “rapidly evolving knowledge domains library classification OER”.*

Part 5.3 Innovations and Best Practices

- *Box 5.3 Examples of customised classification schemes: Suggested OER search string “customised classification schemes medical law libraries OER”.*
- *Figure 5.3 Collaborative and user-centred approaches in classification: Suggested OER search string “collaborative user-centred classification design diagram OER”.*
- *Table 5.3 Practices for continuous updating of classification schemes: Suggested OER search string “continuous updating classification schemes practices OER”.*



Part 5.4 Future Directions in Classification

- *Figure 5.4 Anticipated developments in digital environments: Suggested OER search string “semantic web linked data classification diagram OER”.*
- *Box 5.4 Role of open access and OERs in classification: Suggested OER search string “open access OERs classification library science OER”.*
- *Table 5.4 Preparing professionals for adaptive practice: Suggested OER search string “adaptive practice librarians classification professional development OER”.*

