Department of Information Science.

Introducing Information Records and Sources

Only study guide for

AIS1503

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HOW TO USE THIS STUDY GUIDE

This study guide is divided into the following two themes:

Part A: General information records and sources

Part B: Reference information sources

The first theme of the study guide (Part A) provides a framework for your studies in Applied Information Science. In particular, this part of the module aims to orientate you to the different types of information sources and records and how they came into being. It is important for you to understand how these record forms have developed.

The second theme of this study guide (Part B) focuses on reference information sources. A reference source supplies authoritative information. Reference sources are intended to be referred to briefly for specific factual information only, and not to be read through at one stretch. By studying these reference sources, you will know where and how to find whatever information you may need personally as well as for other people who may need your professional assistance. Reference work is part of the information retrieval function of an information agency such as a library, archive or museum. Your professional knowledge and skills will enable you to help users of reference services to find what they are looking for. We therefore introduce you here to the main types of reference source that often form the reference collection of the information agency. Be aware, though, that we cannot cover all possible types of reference source in a single study guide. However, we have selected some of the most representative types for you to study.

PART A

General information records and sources

The study of information records and sources deals with the different types of information records and sources. A *record* has two inextricable parts, namely ***content*** and ***medium***. The content is the information, message or intellectual aspect that has been coded by language or other means for the purpose of transmission and preservation. The medium refers to the means by which information is either captured in permanent form or transferred from one place to another. Even though the concept of a *record* can, in fact, refer to many things, owing to the nature of our studies (namely Information Science) we are interested mainly in *information records.*

Information records, as we currently know them, were not available before the development of writing. Most communication and transmission of messages took place orally and communication was possible only between people who were present at the same place and time. However, as human civilisations developed, people invented techniques to break through the barriers that time and space imposed on human communication. These techniques, which resulted in alphabetical writing, not only made permanent recording of information possible, but also the transfer or communication of information by means of these records.

Information records vary according to the type of ***information recorded*** and the ***purpose of the record***. Writing material and recording techniques influence the way in which information is recorded and have influenced the formats that records have assumed through the ages. Until recently, the concept of *information records* has been associated mostly with books and other printed matter. Today, besides books and journals, there is a wide variety of record types, such as **DVDs, compact audio discs (CDs),** and so on. In addition, archives and museums have other types of information records such as real objects.

LEARNING UNIT 1

ORIENTATION

1.1 INTRODUCTION AND OUTCOMES

This learning unit is meant to provide an orientation to this module in the Department of Information Science in order to give you a better understanding of the scope of the module as a whole and how it relates to other modules on the same level.

OUTCOMES

After you have worked through this study unit, you should be able to:

- explain what is involved in the study of information records and sources
- explain why we should study information records and sources

1.2 INFORMATION RECORDS AND SOURCES

The purpose of this module is to acquaint you with the different varieties of recorded information. Generally speaking, information sources include all objects, records, people and even animals that can pass on information. Everything that can possibly provide information can be regarded as an information source. The term "information sources" is therefore a comprehensive concept which includes information records and information objects. However, most of the information sources that we discuss in this module are found in libraries, archives and museums. Information objects are mainly found in museums, but may also be found in libraries and archives.

Definition of a record

In the records management field a record is considered as a document, regardless of form or medium or whether it is created/received, maintained or used by an organisation (public or private) or an individual.

A record is also defined as an account of something put down in writing, usually as a means of documenting facts for legal or historical purposes. In a narrower sense, a record is a formal document in which the content is presented in a named set of standardised data elements and treated as a single unit, for example, **a certificate, deed, lease** or similar**.**

In archives, a record is a document created or received, and subsequently maintained, by an institution, organisation or individual in the transaction of official or personal business or in fulfilment of a legal obligation. (See also: bibliographic record and catalogue record.)

The term "record" comes from the Latin verb recordari (*re* = again, *cor* = heart), meaning "to recall to mind, to remember". This indicates one of the record's functions, that of a memory aid. To record a message is to concretise, write down or register its content. It has now become the objectified embodiment of explicit (externalised) knowledge, that is, **recorded information**.

1.3 WHY SHOULD WE STUDY INFORMATION RECORDS AND SOURCES?

Libraries and other enterprises concerned with information provision or services usually consist of the following four elements:

(a) the physical plant, i.e. building, furniture (e.g. shelves, cabinets, counters, tables and chairs) and machines (e.g. computers, photocopying machines, microform reading machines, etc.)
(b) the supply, i.e. the information-carrying products
(c) people, i.e. users of information and personnel or staff
(d) the theoretical concept of the agency (what it stands for)

This module focuses on "b" – the information-carrying supply. It is important to understand the information sources of any information agency, whether library, archive, record office or whatever, in its totality, in order to appreciate the role of these sources in the mission of the organisation. This is because, to a certain extent:

(i) the role and effectiveness of the information agency is partly determined by its information sources (both its own supply and those obtained from other institutions).
(ii) chronologically, the information source comes first. Without a medium, no records could be created and without records (information sources) there could be no information users. Hence there would be no need to find means of accessing the records and there would be no such things as libraries, archives, documentation centres, museums or librarians and archivists.

This module, AIS1503, is studied alongside AIS1501. AIS1501 introduces information agencies (libraries, museums, archives, record offices, etc.) in which the information sources are provided to users.

ACTIVITY

1. Distinguish between various types of information resources and explain how records, objects, people and animals can be information resources.
2. Why is it important to study information records and sources?

LEARNING UNIT 2

INFORMATION RECORDS AND SOURCES

2.1 INTRODUCTION AND OUTCOMES

The purpose of this learning unit is to introduce a number of broad perspectives on information sources. Primarily, information records are also information sources, that is, codified information. You might be familiar with many of the concepts generally, but the discussion here serves as a foundation for any study of the phenomenon of recorded information – thus also for information sources.

OUTCOMES

After you have worked through this study unit, you should be able to:

- distinguish between information and knowledge
- explain the importance of information storage and transmission
- explain what is meant by an information record and distinguish between the medium and content of a record
- categorise records on the basis of record medium, content, user and usage
- explain record use, record users and their influence on each other
- distinguish between types of print information sources
- apply all the concepts listed above to the information agency

2.2 INFORMATION AND KNOWLEDGE

We perceive with our senses. In this way we obtain information about our environment and about ourselves. The nervous system passes these perceptions or sensations to the brain; the brain absorbs and arranges them and they become part of our memory. We are conscious of these ***perceptions*** – in other words, we experience them. Some experiences remain in our memory longer than others. We form associations between present and past experiences. We are able to recall perceptions when we need them, usually when we are confronted with a problem or have to make a decision. This all boils down to our ability to think and recall – we can have thoughts which help us to decide what we wish to do or say.

Knowledge begins when we relate these perceptions to one another. In other words, we can describe ***knowledge*** as the structured or ordered reservoir of thoughts in our minds. This knowledge may be based on truth (facts), but some elements of it may be false. Each of us is constantly extending our knowledge as we encounter new perceptions. We experience new perceptions, which we then measure against existing ones. We can compare, alter, adjust and add to our perceptions. With all these perceptions, we form an image of reality and acquire our own outlook on life; our own worldview. People interpret and ar-

range their own perceptions differently, which is why people's opinions, outlook on life and worldviews differ.

This sort of knowledge, therefore, is subjective and unique to each individual. The knowledge that exists only within an individual is also referred to as tacit knowledge. Because knowledge exists only in an individual's mind, it is available to that individual only. When the individual dies, his or her knowledge dies too, unless it has been externalised and concretised in some form or another. Knowledge may be externalised in various ways, some of them fleeting, for example through an action or a gesture or by speaking, and some of them longer-lasting such as written or recorded knowledge. To convey perceptions, or a mental version of things, they must be in a form that other people can experience with their senses. The best and most obvious method to convey or express knowledge is through meaningful linguistic signs such as language. Language signs, such as words (spoken or written), are often used to relate to definite objects, events and phenomena.

Externalised knowledge is called information and can also be referred to as explicit knowledge. This knowledge has the potential to inform other people and, through this information, people may be able to acquire new knowledge.

The difference between information and knowledge is that knowledge exists inside the human mind, whereas information is recorded outside the individual. The continued existence of knowledge is therefore ensured when it is made known or conveyed in some form or another as information. Information may be seen as the externalised and/or coded (written or spoken substitute for the) knowledge of an individual or of society.

The relationship between knowledge and information is *symbiotic*, which means that the two are interdependent. We acquire knowledge by absorbing information (either directly through sense perception of the environment or ourselves, or indirectly through recorded information). After this information has been processed, ordered and altered (in someone's mind), it becomes an individual's knowledge. It remains subjective to that person until it is externalised in some form or another as information and, once again, has the potential to inform other people. Information may therefore be regarded as the raw material from which knowledge is built.

2.3 STORAGE AND TRANSMISSION OF INFORMATION

Storage and transmission of information are part of the information communication process. However, information sources only aid this process; they cannot guarantee the completion of the communication cycle. Information sources are primarily concerned with the record (storage) and intrinsic conveyance (transmission) of information. To place the concepts of storage and communication in context, it is useful to take a brief view of the communication process.

Communication is based on a reciprocal relationship – a relationship between two people, between one person and many people, between a collective community and an individual, or between two groups. In current era of information technology, we also hear of people communicating with machines and machines with one another – just remember that this type of communication can take place only within the confines of devices that human beings have produced to

make it possible. The essence of a reciprocal relationship is that the two entities involved must be attuned to the same information. One of these entities, the originator (the one possessing the knowledge or message) of the information is known as the source. The target audience (who will be receiving the new perception) of the information is known as the receiver. For communication to take place, an intermediary medium is necessary, and the most common medium is language.

Language is a system of symbols which can be written or spoken and which the members of a particular community understand. This system must convey meaning to these community members and be sufficiently standardised. This language does not necessarily have to be in verbal form – for example, graphic or pictorial forms, and sometimes art forms (paintings). Likewise, it has been suggested that art is the best form of human expression when language is inadequate, particularly when it comes to conveying emotions. Nevertheless, linguistic or verbal language remains the primary form of human communication. The language used in communication can be fleeting (oral) (e.g. in a speech – unrecorded), or it can be made permanent through recording.

Oral transmission of information relies heavily on the human memory, but this memory has limited capacity. Some people remember more and better than others, but nobody can remember everything. This is why a great deal of information can be lost.

Communication of information in early years/cultures was mainly direct – probably through gestures, body language and the like and, later, primarily through speech. Communication occurred only between two people, or between one person and other people. It was possible only when people were physically in each other's presence. The spread of information could occur only between individuals or, at the most, among small groups of people. In the history of communication, this period is known as the "oral" era, or "the era of oral communication".

In the same way that human beings produced stone tools, clay pots and weapons to make their daily tasks easier, so they searched for methods of facilitating communication. Techniques were developed to overcome the problem of geographic distance and to accelerate the transmission of information. Some of the earliest rock engravings were meant to convey messages and to record information and may therefore be regarded as the earliest form of records. It is important to remember, though, that not all rock engravings or paintings were made for this purpose. Some were meant for decoration while others had ritual or religious purposes. They are regarded as artefacts, and are of interest to archaeologists, art historians and other scientists. In this module we are interested only in artefacts that were produced for conveying information.

Writing developed from the rock engravings and paintings that were meant to convey information. The technique of writing meant that information could be preserved more permanently. The media on which symbols were inscribed, (i.e. clay, papyrus, parchment and paper) and the record forms (i.e. clay tablets, papyrus scrolls and codices) eventually became the most practical for spreading information. Indirect communication of information became possible by means of written and, later, printed records. Today we have electronic records. The recording of information meant that time and distance between sending

and receiving information could be transcended through permanent recording and preservation.

Permanence and preservation are essential for the survival of a culture and for development. For people to benefit from other people's knowledge and skills, some kind of storage and/or transmission system is necessary. In the absence of such a system, each successive generation would have to relearn or rediscover all the skills and knowledge their ancestors or predecessors had acquired. However, the content that is transmitted is determined partly by the *record content* (e.g. the text and illustrations in the book, or image and sound in the film) and partly by the *user* (e.g. his or her powers of comprehension, command of language, experience, background and circumstances) and sometimes also by the *medium*. This is why information records are important.

2.4 INFORMATION RECORDS

The concept **record** can actually refer to many things. A footprint in the sand, for instance, provides us with the information that someone has walked there. A tracker or someone who knows the veld can deduce considerable information from a broken twig or disturbed ground. One could say that, for trackers, broken twigs or disturbed ground serve as their information sources.

However, owing to the nature of the study of information science, our main interest is in studying records that are usually encountered in libraries and other enterprises whose major task **is to provide information services or sources**. In this sense, *a record is an account of something, usually encoded in/on a storage device (using means such as writing and recording) as a way of documenting the facts/information/knowledge*.

A record that provides information is also referred to as an information source. In this section, we shall temporarily ignore or suspend the word "source" and focus on the aspect of a "record", because the word "record" provides us with a convenient way of discussing this concept (as you will soon see). However, bear in mind that, for this purpose, the two terms (i.e. "information record" and "information source") are being used as if they are synonymous. *An information record is the combination of* ***content and a medium*****.** We will discuss each of the two components separately before returning to our discussion of the whole record.

2.4.1 Record content

The record content refers to the knowledge or information – or, in the case of communication, the **message –** that is contained in a record or information source. The content may be spiritual or intellectual, or an idea or perception that needs to be conveyed. The content of a record should not be confused with the medium that conveys it. This may sometimes seem difficult, especially when the content and medium are inextricably intertwined, but it is always important to note that the content can be repackaged into another, different medium. For example, poems can be in a book, but they can also be recited or sung and recorded on a CD. The CD would be the new medium, unlike the book (which is the original medium). But the content (message in words) remains the same. Usually, we refer to the content as the subject or topic of the message.

2.4.2 Record medium

A record medium refers to the signals and **physical representation** of the content. It is the means by which information (content) is placed in a coded, fixed and transferable form so that it can be stored and/or transmitted. It is the means by which tacit knowledge is transformed into explicit knowledge. The term *medium* covers all the elements that help to transfer a message from its source to its destination. It derives from the Latin word medius, which means "middle". This may be, for example, a book or a CD in which the content is encoded.

2.4.3 Record as a whole

The term "record" comes from the Latin verb recordari (*re* = again, *cor* = heart), meaning "to recall to mind, to remember". This indicates one of the record's functions, that of a memory aid. To record a message means to concretise, write down or register its content. It has now become the objectified embodiment of explicit (externalised) knowledge, that is, recorded information. In so far as the message is understood by users, it informs them. To the extent that it does not merely confirm existing knowledge, it can serve as an extension of direct sensory perception.

While the record medium refers to the *means* used to communicate, the record content refers to *what* is being communicated. In the context of information agencies, we tend to think of the record medium in terms of both the preservation of information (product media) and access to information (process media). But we think of the record content primarily in terms of the organisation of information, which assumes the availability and preservation of records.

2.5 CATEGORISATION OF RECORDS

Categorisation refers to the grouping of records based on certain characteristics. In information work, categorisation is important because it helps us to retrieve (find again) information and information sources. Records vary according to the type of information that they contain, the purpose that they must serve and the methods used in the storage and transmission of the information. Because these factors influence the way we find information, it is important to group records into categories that can be easily recognised. Owing to the wide range of information records, it is also much easier and more useful to study them when they have been grouped into different categories. Thus, the categorisation of records helps us to understand the nature and significance of certain records and to know where certain information can be found when needed.

In most cases when we (people) want to find information, we either look for it:

2.5.1 on the basis of the content, or
2.5.2 on the basis of record medium, or
2.5.3 on the basis of the type of users and/or usage

The above criteria are mainly oriented to the library and information services sector. Further research will show that, depending on the sector or perspective used, it is possible to categorise records in various other, different ways. But in this module, as mentioned before, we are interested in the perspective of library and other information services. We will now discuss the criteria used.

2.5.1 Categorisation by record content

In general terms, the best way to categorise content is by *identifying the subject matter* of the content. The subject matter of content is determined by the author or creator of the content who, in turn, is influenced by the kind of perception, message, information or knowledge that he or she wants to share with other people. Content can be about anything – science, technology, social sciences, humanities and so on. According to the content (e.g. the message and sometimes also the presentation), therefore, records can be categorised as follows:

(a) *Fiction/non-fiction*. A general and broad distinction of content is the one between fiction, i.e. content that is based on the imagination of the creator (e.g. stories) and non-fiction, i.e. content that is based on facts or scientific studies (e.g. the content of textbooks). This categorisation was useful in the past – particularly in public libraries where this distinction helped to classify books. Currently, this distinction is still apparent but of lesser significance because of the blurring of boundaries due to ICT (information communication technology) interventions and the transformation of human consciousness. For instance, many novels provide a window onto studying some of the human social phenomena such as personality types, characterisation of individuals and so on, and hence such content, though out of imagination, has a lot to teach the reader. Then there is the whole band of historical fiction, political fiction and the like. However, it is still useful to be able to broadly recognise content that is based on facts and that falls into the structured realm of "scientific" knowledge, as opposed to content that is based on the imagination of the author.

(b) *Subject.* The common distinction of record content is using the subject of a record. This distinction answers the question "What is the ... (book, CD, DVD, article, etc.) about?" One should then distinguish the different subject content either by broad disciplines (e.g. biology, nursing, sociology, geography, history, mathematics, etc.) or by specific topics (e.g. the atom, living with HIV/AIDS, the Orange River, Nelson Mandela, etc.). Categorisation by subject is very important because it is usually the primary focus of anyone looking for information.

(c) *Permanent/transient*. This distinction is very important in the case of archive records. One of the archivist's most important tasks is to distinguish between valuable and ephemeral records, and to decide how long records should be preserved. Some records should be preserved permanently, some should be preserved for a certain period because they have a determinate usefulness while other (ephemeral) records may be destroyed directly after use. The archivist has to be reasonably sure that there will not be any use for these records in future.

(d) *Restriction (i.e. classified/non-classified [e.g. in archives]).* Some records are restricted. This means that only a few, very select people are allowed to know the contents. This is usually because of the "sensitive" nature of the content (for example, if such content were to be disseminated, it would cause more harm than good). In South Africa and many other countries, archive records can be made available for general use after 20 years in the belief that no harm can be caused by that content after so many years. However, there are some records that are subject to some measure of restriction because of their value (in information content or as artefacts) and the fact that such records are rare (hard to come by).

2.5.2 Categorisation by record medium

The meaning attributed to the term "medium" is, that it encompasses all the elements that help to convey a message from its source to its destination, is used throughout this study guide. The record medium is the most complex criterion for categorising records. This is because of the varieties of layers of the concept of a medium, as you will see below. The term "medium" refers to one or more of the following:

(a) *Physical form*. The physical form is the shape in which records are presented. For example, sound recordings can physically be presented on an audio disc (CD).
(b) *Coding*. Coding refers to the alphanumeric symbols (usually Roman letters and Indo-Arabic numerals) with which the message is conveyed as an analogue text. In binary coding, only two Indo-Arabic numerals (0 and 1) are used to represent information digitally (instead of in analogue format). Auditory coding is accomplished through sounds, for example, in speech and music.
(c) *Senses*. The use of the record presupposes the use of the visual, auditory or tactile senses (or a combination of these). For example, a photograph is a visual medium, an audio disc is an auditory medium, a book in embossed type (Braille or Moon) is a haptic medium, and a sound film is an audiovisual medium. (The remaining two senses – taste and smell – are not relevant.)
(d) *Mode*. The concept "mode" includes the numerous other ways in which a record can be presented. The following are some examples: textual versus illustrative; "hardness" versus "softness" of the image; full colour versus black-and-white images and motion versus still (motionless) visual medium.

Information agencies such as libraries, information centres, community centres, archives and museums are concerned with classifying records in such a way as to make their arrangement meaningful or useful for users' purposes. When classifying according to the medium, the most important characteristic, generally speaking, is probably the senses involved in conveying the message (e.g. visual, auditory, etc.). Preferably, the medium should be a combination of these, that is, multi-sensory (rather than mono-sensory). However, most users are more aware of the physical form.

2.5.3 Categorisation by record user and usage

When user and record usage are taken as criteria, records can be categorised as follows:

(a) *Purpose*, i.e. records used for work, occupation or education in contrast to records used during leisure time. There are also records which are consulted with a specifically serious or casual motive, or that are used incidentally.
(b) Records created to suit users with *special needs*, such as Braille for the blind, picture books for small children, large-print books for the near-sighted and so on.
(c) Records *created for a specific type of information*, such as reference information (e.g. dictionaries, directories, etc.); scholarly writing (theses,

dissertations); governance operations (official publications); studying (e.g. textbooks).

(d) In the case of archive records, a distinction can be made between those for *official use and those for private use*. Archives are primarily established as a memory or reference source for the office, department or person of origin.

In conclusion, it is important to note that the categorisation of information and information sources is fundamental to the profession of library and information science. Categorisation makes it possible to know where certain information is likely to be found and hence helps to make the accessing of information efficient.

2.6 PRINT INFORMATION SOURCES

Many libraries and information centres still provide information sources in print format. It is important for you to understand these printed sources. This study unit aims to familiarise you with the different types of printed information sources. Each type of printed source serves a particular purpose and has unique information value.

2.6.1 Books and monographs

A monograph is a record that covers a single subject (or a group of related subjects) complete in one physical piece and is usually written by a specialist in the field.

However, there are monographs in which diverse subjects are covered and these usually take the form of a composite book. Here, works of different authors and/or on different subjects are compiled in one volume to bring these disparate publications together. Generally, monographic treatment is detailed and scholarly, but not extensive in scope. Books, on the other hand, are monographs that are expected to provide greater depth or more detail. We use the term "book" to refer to comprehensive, non-periodical records. Although the role of the book as an information medium is no longer quite as predominant as it was in the past, other media are acceptable to information agency users only in so far as these media compare favourably with the printed book. To be acceptable, they must actually fulfil their function (far) more effectively than the book does, since people's inertia makes them more inclined to stick to what is familiar. The printed book frequently serves as the norm for either the acceptance or the rejection of a medium.

Different types of books are available for different types of use. Books can be divided according to:

- whether they are *non-fiction or fiction*
- the *subjects* they cover
- the *age groups* of likely users
- what they are *used* for (e.g. reference works, textbooks, prescribed, recommended and other works; or those used for either teaching or research)

Non-fiction books

Non-fiction books include any piece of prose writing in which the content is factual; these books describe events that actually occurred rather than events

based on the author's imagination. Until the eighteenth century, the book was the main medium of information, especially in scientific fields such as the natural sciences and medicine. In the nineteenth century, periodicals became more important, while books began to assume a comprehensive and synoptic function. After appearing mainly in periodicals, research reports were then compiled into books. This counteracted the fragmentation of information in the specialised journals.

Trade editions are non-fiction books that are produced by a trade publisher for sale to quality booksellers and libraries. Trade editions are published for the general reader rather than for a specific segment of the market. *Textbooks*, on the other hand, are books written specifically for use by people studying to master a subject. Textbooks represent the type of non-fiction book most frequently found in school and academic libraries. Another type of non-fiction book is the *reference book*. A reference book is designed to be consulted when authoritative but brief information is needed on a topic or subject. Unlike other non-fiction books, which have to be read in their entirety (from cover to cover), reference books consist of a series of discrete topical items, each of which can be studied/read independently.

Usually arranged alphabetically, the series of topics in a reference book provide authenticated basic information. The variety of reference books includes dictionaries, glossaries, concordances, directories, encyclopaedias, almanacs, yearbooks, handbooks, atlases, bibliographies, indexes, biographical dictionaries, sources, catalogues, discographies, filmographies and so on. Some reference books are so long that they are issued in multivolume sets, with an index in the last volume. Most reference works require continuous updating to retain their authoritativeness and may therefore be published in a series. In libraries, reference books are kept in a separate section called the reference collection – that is materials that may not be lent out (because they are constantly needed).

Fiction books

From the Latin *fictio*, meaning to "make" or "counterfeit," fiction refers to literary works in prose, portraying characters and events created in the imagination of the writer and intended to entertain, enlighten, and vicariously expand the reader's experience of life. All fiction is fictitious in the sense of having been invented, but good fiction remains "true to life." In Western literature, the traditional forms of literary fiction include the novel, novelette, and short story. Public libraries usually stock more fiction books than do other types of libraries.

Fiction books are categorised according to genre. Genre is a type, class, or style usually associated with literature, music, film, or art. Initially, genre divided literature into three basic categories: dramatic, epic, and lyric. Today, literary works are classified by form (novel, short story, poetry, drama, etc.) and theme (adventure, fantasy, historical, horror, mystery, romance, science fiction, Westerns, etc.). In *historical fiction*, characters and events usually bear some relationship to what actually happened, but any dialogue is reconstructed or imagined by the author. When the narrative is based on an actual historical event, or sequence of events and closely follows established facts, the book may be referred to as a non-fiction novel, even though it may also include fictional elements, such as conjectural dialogue or one or more characters not known to have participated in the events of the time. The author may leave to the reader the task of distinguishing the real from the imaginary. Such novels are usually

based on contemporary events or events from the recent past (e.g. Truman Capote's *In Cold Blood: A True Account*).

Popular fiction, on the other hand, refers to serious works of narrative fiction that are widely read when first published. Popular fiction is superior in quality to pulp fiction, but not as enduring as literary fiction. The novels of Jeffrey Archer are an example of popular fiction. *Pulp fiction* refers to sensational fiction of no enduring literary value, and was popular from the 1920s until the 1940s. Pulp fiction is written for the mass market, usually according to formulae, printed on poor-quality paper, bound in soft cover, and easily recognised by the lurid designs on the front covers. Popular genres include romance, adventure and Westerns.

Any fiction (or even non-fiction) book can become a *bestseller*. Not to be confused with popular fiction, a bestseller is a highly publicised book currently in such high demand in bookstores and libraries that large numbers of copies are sold and/or circulated. Bestsellers may be more successful as a mass medium than are certain films. Some bestsellers have an enduring claim on the market but, for many, a large number of copies are sold within a short time, after which the demand then drops sharply (e.g. Wilbur Smith's *Monsoon*). Enduring bestsellers, also referred to as steady sellers, are in demand for much longer periods and continue to generate considerable profits (e.g. George Orwell's *Animal Farm* or Shakespeare's works).

Apart from books, there are other kinds of monographs such as pamphlets, dissertations, and other, smaller records.

Pamphlets

A pamphlet may be described as a non-periodical with a minimum of five and a maximum of 48 pages. The reference to pages implies that, like the book, the pamphlet must, strictly speaking, be in codex form. The pamphlet (like certain books) frequently has a soft cover. A pamphlet is monographic in the sense that it deals with a single subject. This applies more often to the pamphlet than to the book, because the pamphlet is smaller, thus making it easier for authors to confine themselves to a single subject. Should authors be unable to publish their work as periodical articles, they may occasionally be published in pamphlet form. When pamphlets are bound together into a composite work, they lose their character as separates and this could complicate retrieval. In such a case, a table of contents should be provided in the front of each composite work and analytical descriptions should be compiled for each pamphlet.

Bibliographic control over the pamphlet is not as effective as it is over the book. Because its contents are less comprehensive than those of a book, the assumption is often mistakenly made that the pamphlet is of less value than the book. In fact, however, some very important material is published in pamphlet form. Just as the desire for bibliographic control over books leads to the publication of periodicals such as the *South African National Bibliography*, which appears quarterly, the existence of pamphlets leads to the publication of periodicals such as the *Vertical file index* which appears monthly and lists pamphlets under subject headings. Since it is possible to publish pamphlets more quickly, more easily and more cheaply than books, it is far more difficult to exercise bibliographic control over them. Books are usually published by well-known publishers, but this is often not true of pamphlets.

Small monographs

Codices that have a smaller format than pamphlets (i.e. strictly speaking, if they are less than five pages excluding the covers) are often referred to as "brochures" (booklets), "leaflets", "handbills", "fly sheets" (broadsheets, broadsides) and "posters" (placards). These publications are never issued in hard cover – in fact, they are seldom provided with any type of paper cover. Given their small scope, features such as the title page, table of contents and index are superfluous.

The information contained in these records is often of ephemeral value. For example, advertisements published on their own are seldom incorporated into the information agency stock. In some cases, these records are placed unprocessed in the information agency and are discarded, say, once a month. However, when they contain more important information, they are usually stored in the same way as (and often together with) pamphlets – that is, in boxes or cabinets.

Brochures are codices bound with thread or staples, usually consisting of more than four pages. The term "brochure" is derived from the French word *brocher*, which means "to stitch". Thus the word "brochure" is often used for small pamphlets (e.g. 20 or fewer pages). Brochures can be used for advertising, news, image-building, advocacy, information, reports and so on. A *leaflet*, on the other hand, usually consists of a small sheet of paper, simply folded to make four (or more – if it is in concertina form) pages. Because there are so few pages, they are usually left unnumbered. Leaflets are usually distributed free of charge.

Handbills are an advertising medium and, as such, they have the same function as the poster or as a signboard. A handbill publicises either a product, a service, or a meeting. Its aim is to persuade the public to buy the product, to make use of the service, or to attend the meeting – whichever the case may be. Handbills are distributed on counters, by post, or by handing them out (hence the term "handbill"). *Flysheets* may contain political and military news, sensational news, predictions or propaganda. The emphasis is on persuasion and opinion forming, rather than on the dissemination of information. *Posters* are single-sheet records on which usually only one side of the sheet can be used effectively. The poster differs from the codex in that it is supposed to remain in a fixed position where the public may come to read its message which, ideally, should be communicable at a glance. All the other media we have discussed are designed to take the message to the user.

Conclusion on monographs and books

It has been found, particularly in the case of non-fiction, that information of more lasting value is available in book form. The quality of the paper used for books is superior to that used for magazines and newspapers, in particular, and the book, on the whole, is better bound. Valuable information that may first have appeared in a periodical is sometimes republished in book form. Conversely, books, in turn, provide material for reviews and other discussions in periodicals. Books are frequently consulted when periodical articles or newspaper reports are being compiled. Books and periodicals therefore influence each other.

As far as information retrieval is concerned, the advantage of the book is that the initial development of retrieval techniques (e.g. conventional cataloguing and classification) was inspired by the book (as the original and, traditionally, predominant library medium). In cataloguing, a separate entry is made for

each macro entity such as the book whereas, in classification, a single subject is selected as the main subject for the entire book, and is then reduced to a shelf number. It is thus far easier to exercise bibliographic control over a book than over a newspaper report or a journal or magazine article. The book is usually dealt with on a macro-retrieval level, whereas the periodical frequently necessitates micro-retrieval.

2.6.2 Serials (continuing resources)

A serial publication is an information source which is issued in successive parts (in a series), with a continuing (serial) title. Each successive part is usually numbered or dated and the publication has no predetermined conclusion. Most serial parts are issued at intervals, which may be regular (daily, weekly, monthly, bimonthly, annually) or irregular. A specific serial title is identified by a unique International Standard Serials Number (ISSN) and the key title is assigned and maintained by the International Serials Data System (ISDS), which is a network of national serials data centres.

Serials are categorised according to *periodicity*, i.e. the interval between successive issues (e.g. daily, weekly, monthly and annual publications). A daily publication basically appears every day of the week, but is still called a daily even if it fails to appear once or even twice in that week. Similarly, we speak of the weekly or monthly, even in those cases where they skip, respectively, a couple of weeks or one month (or even two months) a year. "Semi-weekly" means that the periodical appears twice a week. "Biweekly" indicates that it appears every 14 days (fortnightly) or twice a month (semi-monthly). "Bimonthly" means that the periodical is published every two months. "Quarterly" indicates four publications a year, which are sometimes specified according to seasons: spring, summer, autumn and winter. "Biannually" means that the periodical appears twice a year (semi-annually), and should be distinguished from "biennially", which indicates that it is published every two years.

Serials are published by scholarly societies, university presses, trade and professional associations, government agencies, commercial publishers, and non-profit organisations. There are a number of different types of serial publications including periodicals, newspapers, annual reports, annuals (reports, yearbooks, etc.), continuing proceedings and transactions, and numbered monographic series.

Periodicals

A periodical is a serial publication with its own distinctive title containing a mixture of articles, editorials, reviews, columns, short stories, poems, or other short works written by more than one contributor. Periodicals are issued in softcover format generally at regular intervals of less than a year, without any prior decision as to when the final issue will appear. Although each issue is complete in itself, its relationship to preceding issues is indicated by its number, which usually consists of an issue number and a volume number which are printed on the front cover.

Periodicals usually comprise a variety of contributions by different authors. The content is subject to the editorial policy of each periodical, which is controlled by an editor or editorial board. Periodicals include journals, magazines and newsletters. Newspapers, although they have the same characteristics as

periodicals, are not formally classified as periodicals, nor are the proceedings or the regular publications of corporate bodies.

Journals

The *journal* aims at circulating new (current or the latest) information on a scholarly subject. The journal usually appears at monthly, quarterly, and biannual intervals. All the parts that are issued in one calendar year usually bear the same volume number, while each part within the year has an issue number (e.g. volume 10, number 1; or volume 10, number 2). Whereas the date is the most important factor for a magazine, the issue number is the significant factor for journals. The title may, for example, reflect the type of periodical (bulletin, journal, review), or the subject coverage (e.g. *American libraries*) or the name of the publishing organisation (e.g. *Aslib proceedings*). In terms of content, journals are usually subject-specialised and written for experts in a particular subject field. The level of language in such journals is such that it is barely understandable to the ordinary person. The circulation of journals is therefore inclined to be more limited, but the information contained in journals generally remains in demand for a long time.

The predominant role of the periodical in certain information agencies should be ascribed to the journal (more than to other periodicals). The effective (quick and accurate) retrieval of journals in the information agency is extremely important, because of the major value attached to the contents of journals and also because of the great demand for this type of information. There are also non-primary journals, such as translation, indexing and abstracting journals, all of which play a key role in the retrieval of primary journals. *Indexing journals* provide bibliographic details of journals, while abstracting journals provide, in addition to bibliographical information, a summary of the contents of articles.

One of the primary considerations concerning the journal is that of making current information available as quickly and as cheaply as possible. The selection of material for publication has to be completed as speedily as possible but, at the same time, an attempt is made, on the one hand, to eliminate inferior material and, on the other, to make potentially valuable information available.

Magazine

The *magazine* is often referred to as a popular periodical because it deals with subjects of general interest, uses simple language and therefore reaches the general public. Issued either weekly, fortnightly or monthly, the value of its content is not as transitory as that of the newspaper, but neither is it as long-term as that of journals. Magazines frequently give preference to short, striking titles (*You, Time*), whereas longer, more descriptive titles are preferred for journals. Most popular magazines are geared primarily towards entertaining their readers and also convey information on certain popular topics.

Newsletters

A newsletter is a serial publication consisting of no more than a few pages, devoted to news, announcements, and current information of interest. Newsletters are primarily targeted at a specified group. The group or audience of a newsletter is usually made up of subscribers or members of an association or organisation who receive it as part of their membership. Because of the spe-

cialised and ephemeral nature of the information, most periodical indexes and bibliographic databases do not cover newsletter content.

Periodicals in the information agency

Periodicals have become one of the information agencies' major information sources, but their value varies from subject to subject and from one type of information agency to another. Periodicals cover a large number of subjects by a large variety of authors and, since all this is published under an encompassing title, traditional monographic retrieval techniques (cataloguing and classification) do not suffice. Such publications are referred to as polygraphic works, where the emphasis shifts from macro to micro retrieval. *Analytical retrieval* (i.e. the retrieval of each individual article in the periodical), in terms of both the author of the article and, especially, the subject is preferred. Although the author may be more important as far as the humanities are concerned, subject retrieval takes precedence in the natural sciences, technology and social sciences.

To ensure that the latest information is readily available to everybody, periodicals are usually not loaned out. If a periodical is lost, it usually cannot be replaced because it is extremely difficult to purchase back numbers of periodicals after their dates of publication. Sometimes, however, volumes that have been bound may be available on loan. Rather than lending out periodicals, information agencies nowadays prefer to provide users with photocopies of electronic versions of required periodical articles.

Newspapers

A newspaper is a serial publication, usually printed on newsprint and issued daily, on certain days of the week, or weekly. Newspapers contain news, editorial comments, regular topical columns, letters to the editors, cartoons, advertising, and other items of current and often local interest to a general reader. The mainstay of the newspaper is the regular publication of information on current, recent or topical events – in other words, its priority is news. However, it is not always easy to distinguish the provision of news from the dissemination of information and the forming of opinion. Today, newspapers are gradually placing more emphasis on entertaining their readers.

The basic characteristics of the newspaper include:

- *Actuality* (topicality), which implies that there should be only a brief interval between an event and the publication of information on it. The newspaper publishes whatever can be made known for the first time. It may, therefore, include events that took place long ago, as long as such information is being released for the first time (e.g. facts based on recent archaeological discoveries).
- *Periodicity*, which in this case means that the interval between the different issues should be as short as possible. A daily newspaper should appear not only on a fixed date, but also at a fixed time of day, and it frequently has its deadline fixed at a specific hour or even minute of the day.
- *Continuity*, which implies that a sequel to the preceding one can be expected. Apart from the outward continuity that is apparent in a fixed title, chronological numbering, and dating at set intervals, there is also a great deal of internal continuity: the reader knows more or less what to expect from a particular periodical (e.g. newspapers tend to have either a leftist or a rightist socio- political slant).

- *Publicity*, which implies access for all. Even though no periodical is literally accessible to everybody, the newspaper tries to be as public as possible. If the newspaper propagates a particular point of view, it not only tries to reach those who are in agreement, but also to influence those who disagree.
- *Universality*, in other words, in principle, a newspaper can report on any subject it wants to.

The large format of the print newspaper, plus the small print and division of each page into columns, makes it possible to accommodate a great deal of information on each page. This means that the pages per issue can be kept to a minimum. It also enables the newspaper to be produced very quickly. The ink used is quick-drying ink and, since newspapers are printed on cheap paper, it is possible to sell them at a low price.

2.6.3 Illustrative records

These are information sources that convey their message by way of graphics rather than text. Many illustrative records use the medium of print and include pictures, photographs, paintings, art reproductions and so on. By "illustration" we understand all the non-textual elements of the visually recorded message, that is, the message is obtained by looking at it rather than reading it. This constitutes "viewing material" rather than "reading material". Some examples of illustrations are pictures, photographs, drawings, paintings, portraits and other figures (diagrams, graphs, maps).

Pictures

Pictures are defined as two-dimensional visual representations of abstract ideas and concrete objects. Pictures can include photographs, postcards, drawings, posters, reproductions of artworks and even hand-drawn maps. They can be in colour or black and white. When they form part of a publication, they serve to elucidate, brighten up or supplement the text.

Pictures might vary dramatically in dimension, but they all share one characteristic: they seldom include much text. When text is included, it is usually in pictures intended for study purposes. Pictures are valuable educational tools and, consequently, collections are often found in school media centres and the libraries of teachers' training colleges. They are particularly useful because they do not require special equipment. Pictures are also relatively easy and cheap to produce and reproduce, suit all age groups and can be used for a multitude of purposes.

Photographs

Photographs are pictures or images produced on specially coated paper through the action of light upon sensitised surfaces; they are paper prints derived from negative film. From this definition we can deduce the basic elements making up a photograph: an image, light, photosensitive paper, lenses and a light-sensitive medium. Unlike prints, photographs convey a relatively objective and authentic content or message. They are usually an accurate record of everything within the focus of the camera at that moment and reflect less of the artist's subjective interpretation or the author's imagination. As long as the negatives are not tampered with or changed, photographs can be assumed to be accurate visual records. However, the emergence of digital cameras and digital images has com-

pletely undermined this assumption; nowadays, the authenticity of photographs is highly questionable. Today there are computerised ("digital") cameras on which images are recorded as computer data that can be manipulated, printed and stored. Photographs are more commonly found in archives, often as an addition to, or illustration of, textual information.

Paintings

Paintings and prints are original artworks and are sometimes found in information agencies. A painting is a unique work that has been executed by the artist on canvas or hardboard using a medium such as water paint, oil paint, acrylic, pen and ink, or charcoal. Paintings communicate via a wide range of visual elements such as line, colour, form, texture, space and so on. They can be appreciated at various levels and, in addition, can be enjoyed afresh each time. Given their unique nature, they may be reproduced but never duplicated.

Paintings are more commonly found in museums (particularly art museums and galleries) than in libraries and archives. Since they are unique records, they are usually expensive. They also give status to the particular agency. If kept in archives and libraries, they were usually donated or acquired as part of larger collections, often historical or research collections. There is obviously no better way of acquiring knowledge and appreciating art than by studying original artworks.

In deciding whether paintings should be included in a collection, it is essential to establish whether there is adequate storage space available where the records can be stored under optimal physical conditions (temperature, humidity etc.). Expert advice is essential in ascertaining the correct manner of storage, exhibition, conservation, and so on.

Other illustrative records include posters, art prints, maps, filmstrips, slides and transparencies.

2.7 SUMMARY

The invention of printing placed a powerful and influential commodity in the hands of human beings and it is undoubtedly true that printing has had an enormous impact on society. Literacy and knowledge have become universal property as printed records have earned a place in the centre of human life and consciousness. Human beings have become dependent on printed records for human development and progress.

Library and information science workers have to ensure the availability and accessibility of required records. The responsibility and importance of library and information science work have increased concomitantly with our dependence on recorded information. Since the invention of book printing, libraries and information services are more concerned with the distribution of information than with the production of records. Library and information organisations have their own internal publications, such as staff manuals, policy documents and annual reports.

ACTIVITIES

1. What is the difference between information and knowledge?
2. Discuss information storage and transmission.
3. Distinguish between the following printed information sources: books, serials and illustrative records.

LEARNING UNIT 3

ELECTRONIC AND INTERNET INFORMATION SOURCES

3.1 INTRODUCTION

This learning unit focuses on electronic information sources. We also discuss electronic publishing and the advantages and disadvantages thereof, electronic storage devices, cloud computing, internet sources and resources as well as problems associated with electronic information sources. As a resource, the internet forms a global community where communication and information transfer are quick and effective. As a source, the internet makes vast amounts of information available. Together, the internet and electronic sources of information are continually changing the landscape of Applied Information Science.

OUTCOMES

After you have worked through this study unit, you should:

- be able to discuss electronic publishing
- be able to identify and describe the different devices used for storing electronic information
- understand the information sources available through internet
- understand the problems pertaining to internet sources

3.2 ELECTRONIC PUBLISHING (E-PUBLISHING)

To better understand the process of electronic publishing, we must first look at the traditional print publishing process. An author prepares (writes or types) the text of his or her book or article, which is then submitted to a publisher to be edited, set, printed and distributed. From the publisher, it goes through the book dealer who then sells copies to either libraries or individuals. This old, established process developed along with printing technology (i.e. with moveable metal type) but, today, parts of this process have been computerised. For instance, authors can now prepare their text on a computer and can sent it electronically. However, the end product may still be a paper-based record.

The electronic publishing process works somewhat differently. The author still prepares the text, but the text must be in electronic format (which can become part of a database where it can be stored permanently). From this electronic "manuscript" the book can be sent (via e-mail or on a CD or other electronic storage device) to a publisher. The publisher will still edit and set (format) it ready for publishing. The end product may be a copy of the book on compact disc or CD-ROM (an optical disk related to the CD), an e-book or a file available on a website.

Electronic publishing or **e-publishing** includes the digital publication of e-books and electronic articles and the development of digital libraries and catalogues. Electronic publishing has become common in scientific publishing. Electronic publishing is becoming increasingly popular for works of fiction as well as for scientific articles. Electronic publishers are able to provide quick gratification for late-night readers and in respect of books that customers might not be able to obtain from standard book retailers.

3.2.1 Advantages and disadvantages of electronic publishing

Advantages of electronic publishing

One of the advantages of electronic publication is that it is usually faster than printed publication. Some journals are published within 24 hours, whereas it could take months before an article appears in a printed journal.

As far as scientific communication is concerned, authors can now collaborate to produce articles that are completely different from traditional scientific articles. Now, one author writes the article and sends it to members of his or her interest group and the interest group amends it or adds text and perhaps sends it to an even wider group. Ultimately this can result in a better article, even though it may be very difficult to identify individual contributions.

E-publishing offers more flexibility within the writer/publisher relationship and affords writers a greater say in preparing works for publication. A paper-based publisher might ask a writer to change a character, plot line, or other features of a story to make it more marketable. An e-publisher might also make suggestions, but the writer will generally have more say. The writer might also be instrumental in providing graphics for the work, such as an electronic jacket.

The cost of traditional printing continues to rise. Paper, for instance, becomes more expensive each year and journal subscription fees rise accordingly. The rising cost of journals is accompanied by shrinking library budgets. To cut down on costs, middlemen can be avoided. This is particularly true of network-based journals, where the publisher and book dealer are effectively excluded from the process. Electronic publishing has resulted in libraries establishing electronic-text centres which give access to electronic texts available in that particular library or belonging to another institution.

E-publishing offers greater longevity for works with slower sales. While paper publishers will remove slow movers from active status (print), electronic storage affords unlimited archiving. The works published electronically have an ISBN number, just like printed books. The authors receive a higher percentage of the royalties on their works distributed through e-publishing because the initial financial layout for the publisher is so much less than for a paper publisher. Some writers receive as much as 70% of the profits in royalties.

With e-publishing, writers normally retain all other rights to the work, such as the option to go to a paper publisher later, adapt a screenplay, or use the work in some other capacity. Paper publishers, on the other hand, tend to retain as many rights as possible for themselves in terms of their initial contracts.

Disadvantages of electronic publishing

One of the disadvantages of electronic publishing is that the technology can still create problems. It is tiring to read a long text on a computer screen. Although it is suitable for short chunks of information, we believe that scientific users will still print *hard copies* of important articles. Most of the journals are published in electronic form only (e-journals), however, some people still prefer print articles.

Usage of an electronic publication depends on apparatus. The use of electronic publications is limited to computers and access to the internet.

To date, electronic works have sold far fewer copies than paper books. Many people are not aware of e-publishing and others prefer reading a book in print form rather than electronically. A book might be great, but if nobody knows about it, it will not sell.

Piracy is another concern in the e-publishing industry. Technically speaking it is fairly simple for a recipient of an e-work to edit the file, make copies and sell the work out from under the original e-publisher and author. In any event, the susceptibility of such texts to manipulation may bring the authenticity of the record into question.

Prices are not always significantly cheaper for e-works, despite the lower overhead. This might be a deterrent to sales.

Despite the disadvantages, e-publishing can be a good way for a new writer to gain a following. Romance, science fiction, murder mystery and fantasy are all possible genres for e-publishing. It is also ideal for "how to" books that must be updated frequently. Businesses can also save money on employee manuals and training materials by e-publishing them. An added advantage here is that works can include clickable hyperlinks to other documents.

3.3 ELECTRONIC INFORMATION STORAGE DEVICES

Electronic information storage devices are the physical forms of a medium in which electronic information may be found within a library or information agency. The devices discussed here are the external storage devices. The external electronic storage devices discussed here can be grouped into three categories: audio, audiovisual and multimedia. These categories are not mutually exclusive (as you will see).

Some of the older electronic storage devices are not discussed in this study guide since they are rarely used these days. Examples are audiotapes, data audiotapes, gramophone records, videotape recordings, and films.

3.3.1 Audio records and formats

Audio information sources are important for providing information to people who cannot read, either because of sight impairment or illiteracy. This type of record conveys its message through the sense of hearing. Auditory records communicate through sounds (created by human beings e.g. music, song, spoken language) and noise (produced by inanimate nature, e.g. thunder). The term

"audio recording" includes all auditory information which a person can listen to. Audio recordings are more appropriate than visual records in communicating certain types of information. In learning the pronunciation of a (foreign) language, for example, it is better to use audio recordings than (visual/textual) phonetic transcriptions. However, to learn spelling (i.e. written language) it is preferable to use text rather than audio recordings.

3.3.2 Digital audio discs (compact discs)

The digital audio disc (popularly referred to as compact disc or CD) is a round, shiny, flat disc on which sounds are stored digitally. It works on the same principle as a CD-ROM, the latter having developed from CD technology. Sound is stored on the disc in a rather complicated way – but it is sufficient to know that it is stored according to the binary system in the form of microscopic pits. All kinds of sounds, such as music, the sounds of animals and the human voice, can be stored on a digital audio disc.

To play a CD, a laser beam is needed to scan the disc and to convert the rays emitted into sound waves that the user can hear through loudspeakers or earphones. No physical contact is made between the playback mechanism and the CD. The biggest advantage of the CD is that it produces near-perfect sound quality. There is no background noise (as there is on records and cassettes). This is because there is no physical contact between the reading head and the disc. CDs cannot be damaged during play and, theoretically at least, they can be played an unlimited number of times. They are not easily damaged either, which makes them an ideal library record.

CDs can be used in information agencies to make audio information available. CDs can be used for educational purposes and are more suitable than records or audio cassettes for student use. Because of their durability and the fact that it is virtually impossible to damage them, libraries could consider lending them to users.

3.3.3 Multimedia packages

The term "multimedia" refers to two or more media, dealing with the same subject, which are combined for use as a unit and which are usually packaged together. However, the items can usually be used separately. Multimedia packages are characterised by their variety. Their content can range from a book combined with a sound recording, to a combination of virtually any type of media including slides, filmstrips, CDs, audio cassettes, vinyl records, pictures, printed media, models, maps, transparencies and so on.

The items making up a multimedia package should always be catalogued, classified and stored as a unit. They were combined for use as a unit and, if the items are separated, this defeats their purpose. In some instances it might be more practical to divide the package into separate units. If a package consists of items that can be used individually to meet a particular need, individual items can be made available to various users simultaneously, rather than repeatedly issuing the entire package to individual users.

The value of multimedia packages lies in the fact that sources of information dealing with the same subject can be provided to the users in different formats. Users receive a coordinated group of records rather than a combination of various unrelated individual records on the same subject. Multimedia packages are aimed at more than one sense and thus intensify users' learning experience or pleasure. Packages are usually suitable for people of different ages and levels of expertise. Packages do have their disadvantages: for example, they are difficult to store owing to their different sizes and formats. It is therefore very difficult to integrate them with books and other media and, since they are made up of different items, there is more chance of some of these items being lost or damaged. They are also usually expensive.

A variety of pieces of apparatus are usually required when using multimedia packages and this can influence their usage in a particular information service.

3.4 CLOUD COMPUTING (DROPBOX)

One definition of cloud computing is that it is a service that allows users to locally access an external server via a network or an internet connection, thus permitting users to store and retrieve information and data held in places other than on their own "home" network. Cloud computing is the outsourcing of third-party services which may be accessed remotely over a network, usually the internet. One of the most prevalent cloud computing services is **Dropbox.** Dropbox is a free file-hosting service that offers cloud storage and file synchronisation. It is quickly becoming the staple of cloud computing storage because it is free, easy to use and allows you to "be anywhere".

Advantages of cloud computing

Accessibility: Cloud computing provides users with remote access to any client file, document, folder or application from anywhere with an internet connection. Services such as Dropbox will also "sync" files to any other linked computers or shared folders, further facilitating out-of-office work access.

Safekeeping and document protection: Universal accessibility is merely a by-product of the true function of such services, which is the backing up of data off-site. Cloud services, such as Amazon web services and Dropbox, store a user's virtual documents in remote large-scale data centres. These super-secure data centres store multiple and even redundant copies of data so that, in the event of a catastrophe to a user's personal storage device such as theft, loss or destruction, the data can be readily restored through access to a network connection. These features provide users with the assurance that their data is both backed up and safe from most physical intrusions.

Reducing costs: Cloud computing has dramatically reduced costs in keeping up with ever-evolving technology. Cloud computing provides a risk-shifting alternative in a world where technology has become increasing outdated and has decreased lifespans (e.g. the now-obsolete stiffy disk).

Disadvantages of cloud computing

Security and privacy: Users of "the cloud" may compromise security and surrender absolute control of their data when the information is stored on the

service provider server where you cannot control or restrict access to your information.

Costs: Cloud computing services remove the start-up costs associated with investing in physical IT equipment, but there are ongoing bills such as monthly service fees.

Downtime: No cloud provider is immune to service outage. Cloud computing systems are internet based which means that customer access is fully dependent on an internet connection.

Vulnerability to attack: In cloud computing, every component is potentially accessible from the internet. Nothing connected to the internet is perfectly secure and even the best teams/companies suffer severe attacks and security breaches.

Cloud computing platform dependencies: Deep-rooted differences between vendor systems can sometimes make it impossible to migrate from one cloud platform to another.

3.5 INTERNET SOURCES AND RESOURCES

The internet provides access to many sources of electronic information. These sources include databases that are linked to the internet and websites on the internet. Documents such as e-books, e-journals, e-newspapers, OPACs and so on are found either in databases or on websites.

The internet can be viewed as a tool that enables us to find these sources. However, the nature and structure of the internet are such that both the sources and the tools that enable us to reach (access) the sources are inextricably linked. This close connection causes some confusion among both general and novice users and it is therefore necessary and important that you understand both of them enough to be able to make the distinction. This is why we briefly describe each of the components that give access to electronic information. Please pay special attention so that you can learn to distinguish the *tools* of information from the *sources* of information.

3.5.1 World Wide Web (WWW)

The WWW is a global network of internet servers providing access to documents coded in *Hypertext Markup Language* (HTML). HTML enables content to be interlinked, locally and remotely. HTML is a cross-platform presentation markup language that allows the author to incorporate into a web page text, frames, graphics, audio, video, and links to other documents and applications. Formatting is controlled by "tags" embedded in the text. HTML is used to create the hypertext documents accessible via the WWW and intranets.

The communications protocol used in web browser software to establish the connection between a client's computer and a remote web server is referred to as the *Hypertext Transfer Protocol* (HTTP). This protocol is important in the process of transmitting data files in HTML format over the internet.

3.5.2 Webpages, websites, homepages, URLs

A *webpage* is an electronic document written in HTML language, stored on a web server and accessible using web browser software at a unique internet address, the uniform resource locator (URL). A webpage may include formatted text, graphic material, audio and/or video elements, and links to other files on the internet.

When a group of related, interlinked webpages are installed on a web server, they form a website. Most websites are created to represent the online or internet presence of a company, organisation, or institution or are the work of a group or individual. The main page or welcome screen is called the homepage and usually displays the title of the site, the name of the person (or persons) responsible for creating and maintaining it, and the date of its last update. The homepage also displays a menu of the hyperlinks (links to the webpages) available on the site. Websites are accessible 24 hours a day to internet users who have access to computers or other devices equipped with browser software.

A *web server* is a computer system that is capable of providing internet access to web-based resources and services in response to requests from client computers on which web browser software is installed. A web server includes the necessary hardware, the operating system, TCP/IP protocols and server software plus the information content of the websites installed on the web server. Web server software is designed to accept requests from users to view and download files.

The *uniform resource locator (URL)* is a unique address identifying a resource (including websites, webpages or hypertext documents) accessible on the internet. The URL serves as the routing mechanism allowing the device concerned to reach the resource. An example of a URL would be: **http://www.unisa.ac.za/library/index.html**. It is important for the URL to be typed accurately – a misplaced letter or punctuation mark can result in a broken link.

3.5.3 Browsers, search engines, databases

A *web browser* is client software that interprets the hypertext (HTML) code in which webpages are written and allows documents and other data files available over the internet to be viewed in graphic, as opposed to text-only, format. The appearance of a webpage may vary slightly, depending on the type and version of browser used to view it. Examples of web browsers include Opera, Google Chrome, Firefox and so on.

A *search engine* was initially a hardware device designed to search a text-based database for specific character strings (queries) typed as input by the user. Today a search engine is a computer software program designed to help the user locate information available at sites on the worldwide web by selecting categories from a hierarchical directory of subjects or by entering appropriate keywords or phrases. Examples of search engines include Yahoo, Google and Dogpile. Ananzi and Aardvark are examples of South African search engines.

A database is a large, regularly updated file of digitised information such as bibliographic records, abstracts, full-text documents, directory entries, images, statistics and so on. Each database is related to a specific subject or field that consists of records of uniform format, organised for ease and speed of search and retrieval, and managed with the aid of database management system (DBMS)

software. Most databases used in libraries are catalogues, periodical indexes, abstracting services or full-text reference resources. Some of these databases are leased annually from database vendors under licensing agreements that limit access to registered borrowers and library staff.

Examples:
EBSCOhost database (https://www.ebscohost.com/)
Emeraldinsight (http://www.emeraldinsight.com/)

3.6 PROBLEMS ASSOCIATED WITH INTERNET SOURCES

The internet contains some of the most up-to-date sources of information for diverse needs. However, a word of caution is necessary. On the one hand, the internet user has to learn a new set of skills and a new style of finding and using information. On the other hand, the user must also learn to be critical about information found on the internet. The fact that the internet is open to all people means that anyone can publish anything there. In other words, the large quantity and apparent quality of information may be misleading. Additionally, from an information professional's point of view, the organisation of information on the internet is not always what it should be.

The following are some of the problems you may encounter:

- The internet is not a logically organised collection like a library; there is no standard way of searching internet, nor is there a standard way of making information available on the internet.
- Even if you are a competent searcher who knows how to narrow down a search, you may still retrieve far too many items (many of them similar).
- Irrelevant "garbage" will be retrieved together with worthwhile information.
- Retrieved information cannot always be relied upon – it is thus wise to verify information using at least two additional sources.
- Resources on the internet are not stable. They are often ephemeral (short-lived) or can be changed or moved from one website to another.
- The internet does not provide comprehensive coverage, especially for older information/documents.
- Access to the internet can be frustratingly slow when traffic is heavy and users can also be cut off.
- The internet has become a commercial environment (most of the traffic is of a commercial nature) and is the playground of advertisers.
- In some instances, information is supplied only on a paid basis.

From the point of view of information professionals who are used to effective bibliographic control, one of the greatest disadvantages of the internet is the poor control over the resources, making access time consuming, difficult and often ineffective.

3.7 SUMMARY

There is a lot more information created and published online than the print information. The electronic information sources have given people the power to choose between print and online information. The advantages of electronic information sources include the fact that the necessary information is delivered

from the most appropriate source directly to the user, as well as the fact that the user can specify his or her needs, the information required and even a suitable format. It can also be delivered "just in time" rather than "just in case". The user selects only the information needed to answer the specific question and, finally, the information is stored only if the user wants to store it. Electronic information can therefore provide a number of advantages over traditional print-based sources.

These advantages include the fact that electronic information sources are often faster than consulting print indexes, especially when searching retrospectively, and they are easier to access when using keyword combinations. They make it possible to search multiple files at one time, something that cannot be done with print media. Electronic resources can be printed and searches saved to be repeated at a later date, and electronic sources are updated more often than printed sources.

However, the challenge is that, in order to utilise the growing range of electronic resources, people must acquire the skills necessary to exploit some of these resources. These skills include computer literacy, IT literacy, knowledge of the structure of databases and the instructions which must be used to access the information, and so on.

ACTIVITIES

1. Discuss e-publishing, including its advantages and disadvantages.
2. Distinguish between the following electronic storage devices: CD, and multimedia package.
3. What are the advantages and disadvantages of electronic information sources?
4. What are the advantages and disadvantages of cloud computing?

PART B

REFERENCE INFORMATION SOURCES

In this part of the study guide, we shift our focus away from general information records and sources in order to focus on a very special category of information sources that is extremely important to libraries and information services – reference information sources. A reference source supplies authoritative information. Reference sources are intended to provide specific factual information only, and not to be read through in their entirety. By studying such reference sources you will know where and how to find whatever information you and other people need (i.e. people who require your professional assistance). You will learn about the various categories of reference sources as well as their purpose, use and availability in various formats. This knowledge is very important in reference work and forms part of the information retrieval function of any information agency such as a library, archive or museum. Also, as we have indicated already, your understanding of reference sources will enrich your own professional knowledge and skills, thereby enabling you to help users of reference services to find the information they are looking for. We shall therefore introduce you here to the main types of reference sources that often form the reference collection of an information agency.

In Part B you will also study the general characteristics of each category of reference source and you will learn about specific examples that you will find useful for reference purposes. We will look at both hard-copy reference sources (those which are published in the traditional book form) and online reference sources. Note that the titles that you will study here are only representative examples for each category. There are so many different sources that it would be impossible for us to include them all in this study guide. Instead, you will learn about the various types of reference sources and, by becoming familiar with particular examples, you will be able to transfer this general knowledge to other, similar examples. For example: if you know how to use the *Encyclopaedia Britannica* (in book form, on CD-ROM and online), you will be able to use any other encyclopaedia.

Remember the importance of practical experience. You will need to consult reference sources in a nearby library personally so that you can become familiar with how to use these sources. If you have access to the internet, you will also need to gain experience in using some of the resources which you will learn about in the learning units that follow.

LEARNING UNIT 4

READY-REFERENCE SOURCES

4.1 INTRODUCTION

This study unit focuses on reference sources that are particularly suitable for quick searches in order to obtain factual and current affirmation. You will learn the characteristics of such information sources and the various types of ready-reference sources available.

OUTCOMES

After you have worked through this study unit, you should be able to:

- define "ready reference" with regard to reference work
- describe the characteristics of ready-reference sources
- identify and describe both printed and electronic ready-reference sources
- identify and use relevant bibliographic control tools to find ready-reference sources

KEY CONCEPTS

- almanacs
- directories
- handbooks
- manuals
- statistical sources
- yearbooks

4.2 CHARACTERISTICS OF READY-REFERENCE SOURCES

A ready-reference source is characterised by its ease of access, whether it be manual (e.g. book form) or electronic (e.g. web-based). Most ready-reference sources provide brief, factual and current information and are updated regularly. There are several types of printed and electronic reference sources that are particularly suitable for quick searching of brief facts. Some examples of ready-reference sources are: directories, almanacs, yearbooks, handbooks, manuals, and statistical sources. These appear most commonly in printed form and are usually updated annually. There are also several internet-based resources which are useful for ready-reference purposes, a few being portals, resource guides, directories, virtual libraries and FAQs (frequently asked questions).

In this learning unit we group these various types together and refer to them collectively as "ready-reference sources". Think about what the word "ready" implies. It could mean that something is quick, within easy reach, fit for use

immediately, easy to access, and so on. Combine these meanings with "reference" and you have a description of a source which is quick and easy to use for reference purposes.

4.3 GENERAL READY-REFERENCE SOURCES

Since there are so many reference sources which have been designed for quick and easy access to authoritative information (i.e. information which is correct and reliable), we can look at only a small number of them in this learning unit. We group similar sources together, study their characteristics as a group, and then look at some particular examples of each to give you an idea of the very wide variety of ready-reference sources. The main categories that we study in this unit include:

4.3.1 Directories
4.3.2 Almanacs and yearbooks
4.3.3 Handbooks and manuals
4.3.4 Statistical sources

You are probably already familiar with many of the categories of ready-reference sources. When you read about each main category, try to think of examples of that category which you might have used already. For example, when you read about the characteristics of telecommunications directories, make a point of relating our remarks to the phone directory for your own area. Similarly, you might already be accustomed to using a particular yearbook. It is important to be able to recognise the parameters of ready-reference sources. The geographic parameter is often very important, since many of these sources relate to specific geographic areas or countries.

4.3.1 DIRECTORIES

A directory is a systematic list of persons, organisations or services falling within a particular parameter, such as geographic area or type of service. Brief details (for example, addresses) are given. Phone books (telephone directories) are the most used directories and if you are familiar with these, you will know how directories work. The features which distinguish directories are: defined parameters which determine the scope and consequently the entries; systematic arrangement; names of individuals, organisations or services; and brief details relating to these.

The wide variety of directories which are available to us are very useful reference sources for a diversity of information needs. They may be used to ascertain telephone numbers, addresses, names of persons holding particular positions, brief biographical details, names of individuals or organisations providing particular services, and details relating to these organisations and services. Because the nature of the information contained in directories is subject to constant change, make sure that the directory you use is the latest edition available (many are now available on the internet). Older directories, however, also serve certain purposes, particularly in respect of historical and genealogical research.

The parameters of directories vary considerably. People, organisations and services may be categorised in many different ways. The geographic parameter is usually important when thinking about directories, since this is necessary to

limit the entries to a specific area. The geographic parameter may be narrow, such as one city, or wider, such as one country. Some directories have international coverage, bit this is usually only for very specific organisations or services. We look at three categories of directory: telecommunications directories, organisational directories and professional directories. These categories are very wide, and it is possible to distinguish narrower subcategories.

4.3.1.1 Telecommunications directories

Directories which list persons or organisations which make use of, or offer, certain telecommunication services belong to this category. The first few pages of a phone book usually contain general information and this can prove to be very useful for ready-reference information. This could include the telephone numbers of emergency services (such as ambulances, fire brigade, police), telephone numbers of other services (such as poison information centres, weather forecasts), details on trunk-calls, dialling codes (local and international), world time zones, and general details on various telephone services. Some even contain maps, and lists of public holidays.

All countries with developed telecommunications networks publish telephone directories. The official South African telephone directories (also called the White Pages) are published by Telkom Directory Services. There are over 20 telephone directories for South Africa, each covering a definite geographical area which is identified on the cover, for example Johannesburg, or Mpumalanga. The directory may cover only the city, a city and its adjacent smaller towns, or a number of small towns in one area. Directories which list telephone subscribers in more than one town will be divided into separate sections for each town. Telkom Directory Services also publishes the Yellow Pages (so named for the colour of the paper which is used to distinguish these from the White Pages), which lists business concerns and services as well as professionals. Most South African directories include the Yellow Pages and the White Pages in one book.

Links:

http://www.yellowpages.co.za/
http://www.whitepages.co.za/

4.3.1.2 Organisational directories

The range of directories which list organisations (as opposed to a combination of organisations and individuals, which is the case with telecommunications directories) is very broad. First, we look briefly at one example of a local organisational directory which is available in printed form and also on the web, and we then look at an international example.

Department of Basic education, Republic of South Africa

http://www.education.gov.za/FurtherStudies/Universities.aspx

PRODDER: is an online directory about NGOs and other development organisations in South Africa

http://www.prodder.org.za/
Distance education portal
http://www.distancelearningportal.com/

Rainbow nation directory
http://www.rainbownation.com/index.asp

4.3.1.3 *Professional directories*

Professional directories list individuals and/or organisations related to a particular profession. Such directories may be national or international in scope. Some of the *Who's who* types of biographical source which we will discuss later may also be used as professional directories. We list a few titles below to give you an idea of the parameters of professional directories:

Open Education Professional Directory
http://www.oeconsortium.org/directory/

The ancestry directory
http://search.ancestry.com/search/category.aspx?cat=136

American Mathematical Society
http://www.ams.org/profession/profdir/profdir
http://www.journoz.com/orgs.html

The main categories of directory discussed here do not cover the entire range of different types which are available. You will find many directories which cannot necessarily be categorised under any of the above headings. The categories selected here are therefore not all-encompassing; they merely identify some of the main types of directory. In fact, because of the broad range of categories, there is also much overlap in coverage in the categories mentioned here. A commercial directory, for example, contains a great deal of information which is similar to that found in telephone directories. Each different type of directory has its own advantages. Choosing the best directory for a particular purpose is often simply a matter of preference. Bibliographic control tools may help us to become aware of available directories, and from there onwards it is a matter of becoming familiar with directories relating to different information needs.

4.3.2 ALMANACS AND YEARBOOKS

Almanacs and yearbooks are fairly similar in purpose, scope and usefulness.

We look at almanacs first, starting with a definition.

4.3.2.1 *General almanacs*

An almanac contains a variety of miscellaneous facts and statistical information, presented in brief form. Almanacs are usually published annually.

Almanacs are popular reference sources, with a history dating back many centuries. The earliest almanacs provided information of a somewhat insubstantial and abstract nature. Often compiled by astrologers, they contained forecasts and prophesies about plagues, famines, weather conditions and fires, which may cause their readers discomfort in future.

Eventually information of a more permanent and useful nature (home remedies for medical problems, advice on crop planting, tables of multiplication, calen-

dars of the year, time-tables for stage coaches) was incorporated, and almanacs became valuable ready-reference sources.

Modern-day almanacs are virtually mini-encyclopaedias, containing current facts and figures on a variety of subjects. Most almanacs concentrate on information relating to countries and their officialdom, general personalities, and major news events. However, they contain a wealth of other information ranging from mathematical formulas to Olympic records, and are popular reference sources for facts and figures which one cannot always find quickly in other sources. A notable feature of an almanac in book form is its index which is very thorough, including references to even the smallest items of information. Almanacs generally concentrate on information which is most relevant to their country of publication, but also include facts and figures which are of international and more general relevance.

A popular general almanac is the *Information please almanac*, which is available on the Web where you can browse the site (http://www.infoplease.com/) and also have access to an encyclopaedia and dictionary. There is also an online *Information please kids' almanac*. The hard copy and electronic version provide a variety of information relating to the world in general, people, sports, entertainment, computers and so on. The scope is international although the general slant is American.

Almanacs do not specialise but cover all subjects in general. Yearbooks tend to be more specialised and contain more detailed information.

A yearbook (also called an annual) records the activities of a particular year. The information may relate to a specific subject or cover many subjects, and the scope may be national or international. For example, High School Yearbooks: http://www.balfour.com/students/high-school/yearbooks/.

4.3.2.2 Encyclopaedia yearbooks

An encyclopaedia yearbook updates a specific printed set of encyclopaedias. The yearbook is often referred to as an encyclopaedia supplement or encyclopaedia annual. The purpose of the yearbook is to provide the latest information on subjects treated in the main set, and thus circumvents the need to revise the entire main set each year. In reality, however, most encyclopaedia yearbooks concentrate on providing reviews of the major national and international events of the preceding year, and it is such that they are most useful as ready-reference sources. The publishers of a set of encyclopaedias may annually issue one general yearbook or a number of separate yearbooks, each covering a different aspect.

4.3.2.3 International and national yearbooks

This category of yearbooks concentrates on information relating to countries. An international yearbook covers the whole world or certain regions, whereas the national one is devoted entirely to one country. As you will see from the examples mentioned below, international and national yearbooks contain information which is specific to countries: their physical features, history, political structures and leaders, legislature, economy, tourism and so on. Some examples of international yearbooks are the *Stateman's yearbook*, the *Europa world year*

book, *The Far East and Australasia, The Middle East* and *North Africa*, and *Africa south of the Sahara*.

Most of the developed countries of the world have national yearbooks. Some such yearbooks are more like government directories, listing departments and officials. Others contain a large amount of statistical information and may also be regarded as statistical sources. A true national yearbook also includes information on current aspects relating to daily living in that country. Most are published annually or biennially. A few examples of national yearbooks are *Britain: an official handbook, Book of the states, Yearbook Australia*, and *South Africa Yearbook*.

4.3.2.4 Subject yearbooks

The dividing line between subject yearbooks and the other types of ready-reference source which cover a particular subject is very distinct. Some subject yearbooks contain directory-type information and may therefore be regarded as directories; others contain statistics and may be categorised as statistical sources. A subject yearbook and a handbook share many common attributes. Some encyclopaedia yearbooks may also be regarded as subject yearbooks. As a rule of thumb, we shall take a subject yearbook to be a source which covers one subject, and which is published annually to update the previous edition. The number of sources which may be regarded as subject yearbooks is enormous.

4.3.3 HANDBOOKS AND MANUALS

A handbook provides basic information on a specific subject. A manual contains guidelines, methods, rules, policies or procedures relating to a specific subject.

If we consider the two definitions above, it is clear that although both handbooks and manuals have parameters which limit their coverage to a particular field of knowledge, a handbook concentrates on basic information whereas a manual concentrates on rules and procedures. A manual provides guidelines for performing certain tasks related to the subject it covers. It is essentially a "how to do it" reference source. A car repair manual covers the subject of car repairs; its main purpose is not to provide information on cars, however, but to instruct the user on how to repair the car. A handbook contains basic information on a subject. Basic information on gardening would include soil preparation and fertilisation, plants suitable for certain climates and seasons, watering requirements, and pest control. A gardening handbook would cover these aspects, whereas a gardening manual may cover the same aspects but the emphasis would be on how to prepare and fertilise the soil, how to plant the flowers and shrubs, how to water, and how to spray for pest control. There are many sources which combine the characteristics of both handbooks and manuals.

Handbooks and manuals may be found in all fields, from gardening and car repairs, through word processing and online searching, to highly specific scientific fields such as chemistry. Manuals do not necessarily contain information which becomes outdated quickly; handbooks, however, often need regular updating.

4.3.4 STATISTICAL SOURCES

A statistical reference source provides information in the form of numerical facts. Statistics are facts which are depicted in numerical form. If we want to know what the population of Cape Town is, how many people watch a particular television programme, what the average age of matriculation pupils is, or what the birth rate in countries south of the Zambezi River is, we want information which is of statistical nature. Statistics have become an integral part of our daily lives. Managers, politicians, researchers, administrators and businessmen use statistics for future planning. Most organisations collect statistics which are relevant to their own requirements, and since these statistics are essentially of internal importance they do not necessarily become available beyond the organisation.

Statistics may be found in virtually any type of reference source. Here we concentrate on publicly available reference sources which are devoted entirely or mostly to statistical information. Most of the facts are given in numerical form, either as numbers in a column, or as numbers depicted in some other way such as graph. Publicly available statistics are collected mostly by governments. Governments require statistics to enable them to plan long-term projects. An example of the type of statistics collected by governments is a population census, in which information is collected by questionnaires filled in by each household in the country. Although census information is of prime importance to the collecting government, the results are usually made publicly available to enable other organisations to make use of them for their own requirements.

Statistics which are collected by organisations such as governments or research departments are called **primary statistics**. When these primary statistics are subsequently used, usually in an adapted form, for other purposes by other organisations, they are called **secondary statistics**. The statistics which we find in the majority of reference sources such as encyclopaedias and yearbooks are usually secondary statistics. They were not necessarily collected by the authors, editors or publishers of the reference sources, but may have been obtained from other sources (it is hoped that these were primary), and adapted to reflect a bias. The statistics may correspond to the primary source figures, but the secondary interpretation of the primary statistics may not reflect the original intention of the primary survey which obtained the figures. Likewise, an organisation collecting primary statistics may obtain and publish these in such a way that the truth is not necessarily reflected in the resulting figures. Any search for statistical information should be undertaken with cognisance of, and caution over, the interpretation and bias aspects. When searching for any type of information, it is advisable to check more than one source, but when searching for statistical information this counter-checking becomes more important. Statistics are as honest as the method in which they were collected, analysed, interpreted and adapted.

Have a look at *Statistics South Africa* (http://www.statssa.gov.za).

The internet is a good source for statistical information, since most governments have websites to provide their national statistics. Most yearbooks cover a long period of time, and are therefore used not only to find the latest figures available but also for comparative purposes. Someone wanting to establish trends in motor car sales, for example, would find it easier to consult a yearbook which

covers ten years as opposed to using ten different yearbooks each containing data for one year only.

4.4 SUMMARY

You have now studied several examples of ready-reference sources and can probably add some of your own favourite titles to this list. Hard copy ready-reference sources usually form the backbone of conventional reference collections in libraries, archives and other information agencies. The most-used sources are often kept at the reference desk, or close by, so that they are readily at hand. Indeed, printed ready-reference sources such as directories, almanacs, yearbooks, handbooks, manuals and statistical sources are often the first sources we consult for a query. However, internet sites can also be useful for ready-reference purposes.

ACTIVITIES

1. Define ready-reference sources
2. What are the characteristics of ready-reference sources?
3. Distinguish between the following ready-reference sources:
   - Manuals
   - Statistical sources
   - Directories
   - Almanacs

LEARNING UNIT 5

DICTIONARIES

5.1 INTRODUCTION AND OUTCOMES

This learning unit focuses on the various types of dictionaries and how to use them. You will also learn some of the basic terminology that relates to and is unique to dictionaries. Publishers of dictionaries have taken advantage of all the benefits provided by the advances in ICT to produce electronic dictionaries; these are now available in several forms, including "talking" dictionaries (where you can hear the words pronounced) and online dictionaries (i.e. on the internet). These may be new to you, but conventional printed dictionaries will not.

OUTCOMES

After you have worked through this learning unit, you should be able to:

- state the kind of information that can be obtained from dictionaries
- distinguish between the different types of dictionaries
- explain the various terminology used to describe different types of dictionaries and their uses
- identify electronic dictionaries and the many dictionaries available on the internet
- select suitable dictionaries for specific needs
- look up words in any dictionary

5.2 DEFINITION AND PURPOSE OF DICTIONARIES

According to Pieterse & Kourie (2014:225), the word *dictionary* comes from the medieval Latin origin which was created by combing two words: dicto (meaning *speaking*) and arium (meaning *room*). It literally means a place of words. A dictionary is defined as an alphabetically arranged list of words with their definitions, pronunciations, etymology, scope of usage, variant forms or spellings and so on (Mann, 2010:4471). A dictionary lists words, explains them, provides synonyms or gives their equivalents in another language. You probably already use at least two types of dictionaries on a regular basis: one to find the meaning of words, the other to translate from one language to another. There are two types of dictionaries: general language dictionaries and translating dictionaries. Other types of dictionaries are subject dictionaries and special purpose dictionaries.

Apart from learning about the various types of dictionary and how to use them, in this learning unit you will also master some basic terminology that relates to dictionaries: words such as "lexicography", "term bank" and "polyglot" are unique to the field of dictionaries. You will come to realise how important dictionaries are in that they help to standardise language. Language is dynamic; new words are coined daily and eventually become a permanent part of a language. Think of all the new concepts which have arisen along with the advent

of ICT and the internet, for example. These concepts are automatically added in online dictionaries and their meanings thus become standardised. This is important, since it enables all of us to have the same understanding of what a particular concept means.

Key terminology

There are two lists of key concepts for this learning unit. The first lists the terms which relate directly to the types of dictionary. The second lists some of the concepts which relate to the type of information in which dictionaries specialise. Check their meanings in a language dictionary.

KEY CONCEPTS

- General dictionary
- Subject dictionary
- Translation dictionary
- Special purpose dictionary
- Electronic dictionaries

5.3 CONTENT AND SCOPE

Dictionaries are familiar sources. We have used them in book form since childhood to check the spelling of a word, to find out its meaning, or to find the equivalent of a word in another language. Since word-processing software generally includes a dictionary, the use of dictionaries is quickly increasing in the computer age. Most of the more popular dictionaries are published today in both book and CD-ROM forms. There is also a wide variety of dictionaries available on the internet.

The kinds of dictionary, and their purposes, vary widely. Basically a dictionary is an information source which deals with words. It usually provides the orthography (correct spelling) and signification (meaning) of words. It could also provide guidelines on the pronunciation, and even examples of how to use the word. It may provide synonyms (words with the same meaning), derivation (how the word came into being) and history relating to the word. A dictionary may also give the translation of a word into another language.

We speak of languages as being living or dead. A living language is a language spoken today, such as isiZulu or English; a dead language is one which is no longer spoken, such as Latin or Old English, although it obviously still exists in written form. A living language is a dynamic phenomenon. It alters and grows constantly as new words and phrases are formulated to describe modern concepts, feelings, events and so on. (Think of newcomers in English like “geek”, “having a bad hair day”, and “millennium bug”.) Dictionaries record these alterations and growth in living languages, or alternatively keep a permanent record of words from a dead language.

A number of different synonyms for “dictionary” are used:

- *Glossary:* a list of explanations of words, terms and phrases which relate to a specific subject

- *Lexicon:* a list of the words of a language or languages, used especially for ancient languages such as Latin or Greek
- *Spell-check:* a dictionary within a word processing package
- *Term bank:* electronic dictionary available on the internet
- *Thesaurus:* a list of words which are arranged in a classified, and not an alphabetical, order (the best-known thesaurus is Roget's thesaurus)
- *Vocabulary:* a list of selected words relating to a specific subject
- *Wordbook:* a book with lists of words

"Dictionary" is also used as an adjective to describe a book where entries are arranged in alphabetical order. This becomes rather confusing, since many reference sources call themselves dictionaries even though they are not really dictionaries. Take, for example, a book with the title *A dictionary of cats* which may list (alphabetically), describe and illustrate the various breeds of cats, starting with Abyssinian cats and ending near the end of the alphabet with Turkish Vans. If an information source on a particular subject does not deal with the meaning of words, but rather with the thing represented by the word (e.g. cats), then the information source is not a true dictionary. A true dictionary is concerned with words and gives information about them.

5.4 TYPES OF DICTIONARY

The number of languages – living and dead – and the technical terminology that accompany the variety of specialised subject areas today have resulted in the need for many different types of dictionary. We shall cover four types which are used for a variety of purposes: general language dictionaries, translating dictionaries, subject dictionaries and special purpose dictionaries.

5.4.1 General language dictionaries

A general language dictionary provides information on the words of a particular language, in the words of that language. The parameters of a general language dictionary confine its entries to words which are part of a particular language, for example English. Depending on how comprehensive the dictionary is, the following information may be provided for each word: orthography; pronunciation; meaning; use; synonyms; derivation; and history. The information is provided in the language of that dictionary. Therefore, if you use a general-language Tswana dictionary to look up the meaning of a word, the meaning of the word will be given in Setswana.

In hard-copy form, general language dictionaries range in size from pocket-sized books to multi-volume sets. The number of words listed in the dictionary, and the amount of detail included in the entry for each word, depends on how comprehensive the dictionary sets out to be. The common terms used to describe how comprehensive a dictionary is are *unabridged* and *abridged*. An unabridged dictionary is a comprehensive dictionary, covering all the words of that particular language. An abridged dictionary lists fewer words, and the amount of information given about each word is reduced.

Most general language dictionaries are abridged, and in book form these abridged dictionaries may be divided into certain types according to their purpose. Desk dictionaries are the most common general purpose type, found in homes, offices

and libraries. They provide sufficient details for everyday needs of adults and older children. Pocket dictionaries are the least comprehensive type of dictionary, including only a selection of the most commonly used words. Children's dictionaries contain definitions in simple language, usually have large type and illustrations, and are often based on the frequency with which the words occur in the reading and speech of scholars. A general language dictionary is therefore as comprehensive or select as its parameters dictate.

General language dictionaries may also be regarded as prescriptive or descriptive. A prescriptive dictionary aims to set standards of word acceptability for a language by prescribing how a word should be spelled, what its meaning is, and how it should be used. Prescriptive dictionaries attempt to "fix" a language by virtually dictating what is acceptable. The prescriptive approach is often criticised today as it is felt that language should be allowed to grow, and that the stages of the growth should be recorded. However, it should be remembered that prescriptive dictionaries may be beneficial in certain instances. Prescriptive language dictionaries may have a role to play in developing countries, where the languages are being scientifically recorded for the first time. By prescribing word acceptance, the dictionary may eliminate differences in spelling usage and meaning and thus initially place lexicography (the compiling of dictionaries) on a sound footing.

The descriptive approach accepts that it is natural for a language to change along with the culture of the people who speak it daily. As words alter in meaning or pronunciation, they become standard and part of the culture, and should therefore be acceptable. The answer to the prescriptive versus descriptive approach seems to lie between the two: to record new words, and changes in meaning and pronunciation in older words, but to acknowledge previous usage. Today most dictionaries appear to take the middle road, for example by indicating whether a word is slang or obsolete, and incorporating new words which have been coined to cope with growth.

We shall discuss an example of general language dictionaries, namely the Oxford English Dictionary (http://www.oed.com/), which is one of the major unabridged language dictionaries in the world.

The Oxford English dictionary (OED) is widely regarded as the accepted authority on the English language. It is an unsurpassed guide to the meaning, history, and pronunciation of 600,000 words – past and present – from across the English-speaking world. As a historical dictionary, the OED is very different from dictionaries of current English, in which the focus is on present-day meaning in the OED, but you will also find the history of individual words, and of the language traced through 3 million quotations, from classic literature and specialist periodicals to film scripts and cookery books (www.oed.com).

Information relating to the pronunciation, form, sense, history and etymology of each listed word is given. Differences in meaning, pronunciation, usage and spelling which have occurred since early times are identified, and illustrated by quotations from writers of the relevant period. The history of each word is thus traced from the time it first appeared in print, and changes which occurred to the word with the passing of time are recorded.

Oxford University Press: http://www.oup.co.uk

Several publishers produce authoritative English dictionaries, including HarperCollins, Cambridge University Pres, Longman, Merriam-Webster and Random House. However, Oxford University Press is the world leader in dictionary publishing.

As from its ninth edition, *The Concise Oxford Dictionary* also includes sound on the CD-ROM version or online dictionary, so you can hear the correct pronunciation as the words are read aloud. *The South African Pocket Oxford Dictionary* is an amalgam of the *Pocket Oxford Dictionary*. The local versions include over 2 500 words which are peculiar to South Africa. Words originating from Afrikaans or a local African language, and commonly used in South African English, are briefly explained and their origins indicated. Some examples are *aardvark*, *boeremusiek*, *boerebeskuit*, *fundi*, *fynbos*, *impi*, *inkosi*, *kierie*, *potjiekos*, *suurdeeg*, *takkie*, *tsotsi* and *witdoek*. Other Oxford dictionaries for South Africa include a *Dictionary of South African English, South African Pocket Oxford Speller, Dictionary of South African English on Historical Principles*, and the *South African Oxford School Dictionary* with over 35 000 entries which cover vocabulary for all school subjects. Oxford also publishes dictionaries for other languages (including French, German, Spanish, Italian, Russian and so on).

The Afrikaans language has dozens of dictionaries. The *Woordeboek van die Afrikaanse taal* (WAT) is the equivalent of the OED for the Afrikaans language. If you understand Afrikaans, please have a look at this dictionary.

Although there are many South African dictionaries for translating from African languages into English or Afrikaans and vice versa, there are as yet few general language dictionaries for the numerous African languages of the country. Two examples are *Thanodi ya Setswana ya dikole* (Tswana dictionary for schools/ *Verklarende Tswana woordeboek vir skole*), and *Isichazamazwi,* which is a Zulu general language dictionary intended for secondary and tertiary students.

5.4.2 Translating dictionaries

A translating dictionary is either bilingual or multilingual, and provides the equivalent of the words of one language in the words of another language. We use a translating dictionary to find out what the equivalent of one word is in another language. These dictionaries do not usually include the meaning of the word (a description of what the word stands for, synonyms, etc), but give only the word itself in another language. The purpose of the dictionary is not to define words, but to translate them.

A translating dictionary may be bilingual (covering two languages) or multilingual (covering three or more languages. The multilingual type of translating dictionary is also referred to as polyglot dictionaries.

A translating dictionary may be general in scope in that it lists words commonly used in those languages it covers. The following are some titles of such dictionaries:

Collins Dictionary (http://www.collinsdictionary.com/translator) or (http://dictionary.reverso.net/english-french/)
Bukantswe ya Maleme-Pedi Concise Xhosa-English dictionary
Dikisinare ya Setswana-English-Afrikaans New (*https://glosbe.com/en/tn/)*

Tweetalige woordeboek/Bilingual dictionary Venda dictionary/Tshivenda dictionary
Zulu-English dictionary (https://isizulu.net/)

A dictionary worth singling out here is the *Oxford junior primary dictionary of South Africa*, which is compiled specifically for learners at junior primary level and aimed at English-second-language learners. There are editions that cover English/Zulu/Xhosa/Siswati and English/Northern Sotho/Southern Sotho/Setswana, with an accompanying workbook which teaches basic skills in dictionary use. These dictionaries contain the English words (and the other language equivalents) that learners are most likely to come across when learning English at school. Definitions, sample sentences and illustrations are included.

These types of translating dictionary cover language and subjects in general. Alternatively, it may be limited to words relating to a particular subject. One such example is the *Trilingual legal dictionary/Drietalige regswoordeboek*. It covers legal terms in English, Afrikaans and Latin. Also look at the Multi-language dictionary and phrase book (http://lexikos.journals.ac.za/pub). It covers seven South African languages and also contains illustrations.

5.4.3 Subject dictionaries

A subject dictionary lists words, terms or phrases which relate to a specific subject field only, and defines or explains these words. The words, terms, abbreviations and acronyms of specialised fields might not be included in general language dictionaries, and if they are included, their explanations might not be very detailed. Have a look at the *Internet in plain English* dictionary, for example.

Subject dictionaries often go beyond merely defining a word, and add explanations and commentary which will provide a layperson or specialist with enough information about the word to become completely familiar with its meaning and usage in that particular field. There are also bilingual and polyglot subject dictionaries. An example of a subject dictionary is *Harrod's librarians' glossary (http://www.abc-clio.com/ODLIS/odlis_h.aspx)*. Apart from librarianship, there are also subject fields such as information science, technology (https://www.techopedia.com/dictionary), and archival glossary (http://www2.archivists.org/glossaryglossary).

5.4.4 Special purpose dictionaries

A special purpose dictionary specialises in a particular aspect of a language. They are used to provide more thorough information on a specific aspect of words such as synonyms, antonyms, slang, dialects, obsolete words, new words, pronunciation, names, toponyms, phrases, rhymes, abbreviations, acronyms, etymology, idioms and usage. Since most titles of such dictionaries are self-explanatory, we shall list a few examples only:

Abbreviations dictionary
Barnhart dictionary of etymology http://www.etymonline.com/
Dikapuo maele/Idioms and proverbs http://www.sesotho.web.za/ref1.htm
Pronouncing dictionary of proper names http://www.pronouncenames.com/
Roget's international thesaurus http://www.thesaurus.com/Roget-Alpha-Index.html

5.5 ELECTRONIC DICTIONARIES

The advent of electronic dictionaries has been making a real impact on the dictionary scene by gradually yet dramatically changing users' preference and patterns of use and thus has drawn growing attention from lexicographers, researchers and language teachers across the world (Chen 2010). A lot of people make use of the online dictionaries than print dictionaries because of its portability, ease of use, availability of audible pronunciation help, rapid access to data, and easier search capabilities (Li-Ling, 2013).

Online dictionaries have other advantages, like automatically updating their content, having links to other websites, superior collection of data and being free of charge. Examples of online dictionaries are:

Dictionary.com http://www.dictionary.com/
The free dictionary http://www.thefreedictionary.com/
MacMillan dictionary http://www.macmillandictionary.com/
http://www.visualdictionaryonline.com/

5.5.1 CD-ROMs, compendia and spellcheckers

There are dictionaries that also provide sound (like the latest edition of the *Concise Oxford Dictionary* and the *Oxford talking dictionary*) and several others aimed at children. Electronic dictionaries like these provide audio pronunciations. Most print dictionaries come with CD-ROM dictionaries. **However, the CD-ROMs are merely the electronic form of the print edition**. The attraction of the CD-ROM lies in the ease of use enabled by keyword searching.

A compendium CD-ROM contains a collection of several reference sources on one disc, for example several dictionaries of various types, an encyclopaedia, a gazetteer, and an almanac. Microsoft's *Bookshelf* includes *Roget's thesaurus,* the *Columbia dictionary of quotations*, the *American heritage dictionary of the English language*, a desk encyclopaedia, a world atlas and an almanac.

There are some of the familiar spellcheckers or word processing dictionaries that are part of word processing packages, such as. http://freespellcheckers.com/ and http://www.gingersoftware.com/ .The dictionaries are part of the word processing software and are implemented to check spelling, definitions and synonyms, and do grammar checks within documents that have been compiled on the word processor.

5.5.2 Term banks and online dictionaries

There are numerous dictionaries available on the internet. Dictionaries that are commercially available in print or CD-ROM could also be available on the internet, but this would usually be on a subscription basis. However, there are many dictionaries to which access is free. Some are subject-specific; most are in English, but there are also many translating dictionaries available online. Electronic dictionaries are often called **word lists, term lists or term banks**. You will find some electronic dictionaries on the following websites:

http://www.onelook.com
http://www.encyberpedia.com/glossary.htm

http://www.yourdictionary.com
http://www.travlang.com

5.6 SUMMARY

General language dictionaries and translating dictionaries are only two of the four main types of dictionary available. Each type of dictionary also has subcategories. General language dictionaries can be divided in several ways – abridged or unabridged, desk or pocket, prescriptive or descriptive, adults or children. There are thousands of different languages in the world, but not all have their own general language dictionaries and translating dictionaries. Having said that, there are nevertheless thousands of different dictionaries for hundreds of languages. There are so many diverse special purpose dictionaries that it is impossible even to mention all the different aspects of language covered by these dictionaries in this learning unit. Most major subject fields have their own subject dictionaries – and some of these may also be translating dictionaries.

This learning unit has only scratched the surface of what is available when one is looking for a suitable dictionary. As you continue studying, you will learn a lot more about available dictionaries than those mentioned in this study guide. You should also know that, in order to find the most suitable dictionary for a particular purpose, you can consult guides to reference sources and specialised guides to dictionaries.

ACTIVITIES

1. Define the term "dictionary".
2. Name and discuss four types of dictionary.
3. Why is a dictionary regarded as a reference source?

LEARNING UNIT 6

ENCYCLOPAEDIAS

6.1 INTRODUCTION

In this learning unit you will learn about encyclopaedias. You will learn why encyclopaedias need to have limiting parameters; and then the two main encyclopaedias: general encyclopaedias and subject encyclopaedias. We will look at examples, in both hard copy and electronic multimedia forms.

OUTCOMES

After you have worked through this learning unit, you should be able to:

- explain the purpose and characteristics of encyclopaedias
- explain why the parameters of encyclopaedias need to be specifically defined
- describe the different types of general encyclopaedias
- understand the importance of subject encyclopaedias
- discuss the influence of information technology on how encyclopaedias are used

6.2 DEFINITION AND PURPOSE OF ENCYCLOPAEDIAS (ENCYCLOPEDIAS)

The word "encyclopaedia" comes from the Greek words *enkylios* (general) and *paideia* (education), indicating that early encyclopaedias attempted to offer general education that comprises comprehensive information on all subjects. It is also defined as a "book or set of books giving information on many subjects or on many aspects of one subject and typically arranged alphabetically" (https://en.oxforddictionaries.com/definition/encyclopedia). An encyclopaedia contains information on all branches of knowledge. Alternatively, an encyclopaedia may provide extensive information about a specific discipline or subject field.

The original aim of the encyclopaedia was to encompass all knowledge and arrange it in a systematic manner. Encyclopaedias usually form the backbone of reference collections. Most community, public and school libraries will have access to at least one set of general encyclopaedias, such as *Infoplease* or the *Encyclopaedia Britannica (https://www.britannica.com/) or Wikipedia (https://www.wikipedia.org/)*. University, college and research libraries and large public libraries usually have several encyclopaedias, ranging from single volumes to multi-volume sets. Some will be general, others specialised in that they cover particular subject fields. Some of the encyclopaedias have discontinued print production due to the decrease in demand. For example, Encyclopaedia Britannica stopped producing print volumes in 2012 after 244 years. According to the CEO of Encyclopaedia Britannica, it will focus primarily on its online encyclopaedias and educational curriculum for schools. There are many online encyclopaedias that provide a lot of knowledge and people seek new knowledge from them every day (Y-M Li et al 2014:634). Wikipedia is the world's largest

online encyclopaedia as well as the most widely used (Olson & Rosacker, 2013). Wikipedia is a free encyclopaedia with more than twenty-two millions articles and is ranked sixth in the world. Its readers are often users who browse from work and schools. The other online encyclopaedia is Baidu Baike (https://www.baidu.com/). It is a Chinese collaborative online encyclopaedia with more than 4.9 million articles.

6.3 ENCYCLOPAEDIAS THROUGH THE AGES

Encyclopaedias date back to ancient times. The Greek philosopher Aristotle (384–322 BC) wrote a number of separate treatises on subjects such as ethics, politics, zoology and logic which were encyclopaedic in nature. The first true encyclopaedia is attributed to Pliny the Elder (23–79 AD), who perished in the great eruption of Mount Vesuvius which buried the city of Pompeii in Italy. Pliny's *Historia naturalis* included extensive information on ethnology, geography, physics, physiology, zoology, botany, minerals and art. The information was contained in 37 books, arranged in a systematic manner (not alphabetical) and accompanied by an analytical table of contents. Dating originally from 77 AD, for many centuries the *Historia naturalis* was regarded as a standard reference source .

6.3.1 Parameters today

In past eras it was perhaps possible to organise all of humankind's knowledge, as it was relatively little compared to the amount in the information era. Not even today's electronic encyclopaedias can offer all-round knowledge.

Most people are familiar with the *Britannica*, since it is still the most revered encyclopaedia available. The *Britannica* was established in Edinburgh, Scotland, at the start of Industrial Age by one enterprising editor, an engraver and a printer. Its first edition in 1768 was very utilitarian: articles covered "how to" subjects such as curing baldness, bee-keeping, horsemanship, midwifery and brewing. Today, over 244 years later, the subject coverage is obviously extensive and the editors take a more scientific approach to covering human knowledge. On 14 March 2012, BBC *News Business* announced that, "after 244 years reference book firm Encyclopaedia Britannica has decided to stop publishing its famous and weighty 32-volume print edition." The focus will now be on digital expansion only (for the full article see http://www.bbc.co.uk/news/business-17362698). But still, the encyclopaedia cannot claim to contain the total of humankind's knowledge, as the amount of information is simply too extensive and complex to make available in one source via the internet.

What a general encyclopaedia like the *Britannica* can attempt, however, is to present a **systematic overview** of humankind's accumulated knowledge and provide lists of additional reading, should we require more information. The general encyclopaedia places emphasis on aspects which are most likely to be of interest to the target reader group. The coverage of highly specialised subjects is minimal as this is left to be dealt with by other, more specialised reference sources. Even the major general encyclopaedias such as the *Britannica* have to limit their parameters to encompass only what is today realistically possible. To limit its parameters, the modern encyclopaedia is aimed at a particular readership, a specific field of knowledge, or a combination of these two. A general

encyclopaedia may be aimed at adults, older children or younger children. Alternatively, an encyclopaedia may specialise by covering only a specific discipline or narrower subject field. By limiting its parameters, the encyclopaedia is able to select from the whole body of available knowledge only that which is most relevant to its chosen subject coverage and target reader audience.

6.3.2 Updating

Before the advent of electronic storage methods, encyclopaedia publishers were faced with the tremendous task of keeping the information up to date. They also faced a constant challenge on what to include and what to leave out in new versions. Over sixty years ago, the publishers of the *Britannica* started a policy of continuous revision, and most printed multi-volume sets followed this approach. This implied that each new printing of the set had some changes in the contents (additions, removals, renewals), but not all of the articles or chapters were revised each time. Electronic publishing has simplified, and in fact revolutionised, the updating process. Today the texts of encyclopaedias are stored on databases, and once any changes have been made on the database itself the updated version is basically ready for publication purposes, either in hard copy or electronically.

Online encyclopaedias are usually far more current than their printed equivalents (if they have these). As already mentioned, it is relatively inexpensive to publish online. Online encyclopaedias can be made available in updated form even more regularly than this, since it is only a matter of connecting the updated database to the network on which the encyclopaedia can be accessed.

6.4 CATEGORISATION OF ENCYCLOPAEDIAS

Encyclopaedias can be categorised into general encyclopaedia and subject encyclopaedia. If the encyclopaedia covers all subjects, it is referred to as a **general encyclopaedia**. If the encyclopaedia specialises in a particular subject field, either broad or narrow, it is termed a **subject encyclopaedia**. If we are looking for information on a general topic, or a simple explanation of something, then the general encyclopaedia should provide adequate information. If the information sought covers a specific, more difficult subject and the type of information sought is likely to be sophisticated, then a subject encyclopaedia would provide a better coverage. Almost every discipline has subject encyclopaedias and these complement general encyclopaedias by collectively covering the world's store of knowledge.

The majority of the encyclopaedias popular in South Africa are overseas publications, but there are also several local English and Afrikaans encyclopaedias. As yet there are no general encyclopaedias available in our indigenous African languages, but later we shall examine a single-volume subject encyclopaedia in Zulu.

6.4.1 General encyclopaedia

The general encyclopaedias are the continuation of the "all-round education" sources of yesteryear, with two major differences. First, as it has been mentioned,

the general encyclopaedias can no longer claim to cover all the world's knowledge. Second, the information needs of various categories of user are catered for separately. The earliest encyclopaedias were written for the small group of intellectual elite. Later encyclopaedias were aimed at general adult audiences. The extension of educational opportunities to the masses in modern times resulted in information needs which spread over wider spectra of age and educational level. Encyclopaedias aimed at specific readerships, which reflect those wider spectra, came into existence.

The differences between general encyclopaedias aimed at adults and those aimed at younger users relate essentially to the level of the language of the text and the contents of the source. The contents of an encyclopaedia for children or young adults is usually determined by subjects likely to be covered in school curricula. The level of language, style of writing and method of presenting additional illustrative matter will be suitable for the age group which is the target market. Text is easily readable and understandable, and made interesting with simple illustrations, maps, diagrams and photographs. Colour is important in a children's encyclopaedia, and today the publishers of multimedia encyclopaedias know that the more "excitement" they offer (video clips, sound and games), the more attractive their product will be to children.

General adult encyclopaedias have a more sophisticated approach in that the style of writing is more advanced. Articles are usually written by specialists in a particular subject, and the language and terminology used demand a fairly good reading ability. Complementary illustrations, photographs, diagrams and maps will also be included (as will sound, video and other attractions in multimedia form). An adult encyclopaedia covers a broader spectrum of the world's knowledge than a children's encyclopaedia needs to.

Examples of general encyclopaedia:

Encyclopaedia Britannica: https://www.britannica.com/
Infoplease encyclopaedia: http://www.infoplease.com/
Wikipedia encyclopaedia: https://en.wikipedia.org/wiki/Wikipedia
Baidu Baike encyclopaedia: http://baike.baidu.com/

6.4.2 Subject encyclopaedias

Subject encyclopaedias arose as a result of the inability of general encyclopaedias to encompass all the knowledge available in the world today. The aim of a subject encyclopaedia is to provide extensive information relating to one subject field. The field may be a broad discipline, for example science and technology, or narrow, for example sedimentology. The subject may even be a country or particular region or a specific cultural group or tribe within a country. An encyclopaedia which contains information on aspects that are peculiar to a specific country or region would be regarded as a subject encyclopaedia.

The parameters which are set for the encyclopaedia determine first the exact field or fields which will be covered. The subject field may be covered internationally, nationally, or on a regional basis. Second, the parameters determine how comprehensive the coverage of topics will be. Articles may be short and explanatory, or long, with a detailed analysis of the topic under consideration. Third, the parameters determine the reader audience. There are subject ency-

clopaedias which are aimed at specialist researchers in a particular field; those aimed at the general adult reader; and those written for children. The aims and scope of the encyclopaedia will be outlined in the preface and other introductory material to be found in the source.

The greatest advantage of a subject encyclopaedia is the amount of information which may be found on a topic. A topic which might be dealt with in a few brief paragraphs, or not at all, in a general encyclopaedia will be covered in far more detail in a subject encyclopaedia. As we said earlier, the subject encyclopaedia complements the general encyclopaedia. If the general encyclopaedia does not provide satisfaction, the next step is to establish the existence of encyclopaedias devoted to a specific narrow or broad field in which the information falls. Subject specialists would naturally consult the subject encyclopaedia as a first step.

Examples of subject encyclopaedias:

Encyclopedia of Library and Information Sciences (ELIS): http://www.tandfencys.com/elis/
Encyclopedia of Mathematics: https://www.encyclopediaofmath.org/

The Encyclopedia of Mathematics wiki is an open-access resource designed specifically for the mathematics community. The original articles are from the online Encyclopaedia of Mathematics, published by Kluwer Academic Publisher in 2002. It has more than 8 000 entries. Springer in cooperation with the European Mathematic Society made the content of this encyclopaedia freely available to the public.

MedlinePlus: https://medlineplus.gov/aboutmedlineplus.html
MusicBrainz: https://musicbrainz.org/

Musicbrainz is a community-maintained open-source encyclopaedia of music information. This means that anyone can contribute to the project by adding information about particular artists and related works. This includes various genres of music.

The Plant Encyclopedia: http://www.theplantencyclopedia.org

6.5 ONLINE ENCYCLOPAEDIA VS PRINT ENCYCLOPAEDIA

An encyclopaedia is the obvious choice of reference source when looking for background information on a certain topic, or trying to verify a fact. It incorporates the features and coverage of many other reference sources: dictionaries, biographies, atlases, gazetteers, handbooks, and if one considers the lists of reading provided for topics, bibliographies.

The first step is to decide whether your needs will be best met by a general or subject encyclopaedia. The subject encyclopaedia may be the second choice if a general encyclopaedia did not offer enough assistance, or it will be a first choice if the material sought is very specific or required in great depth and detail.

After consulting a bibliography (like a library catalogue or a guide to reference sources) to ascertain which title will be most likely to contain the required information and where this title is available (print or online encyclopaedia), you

can choose to either consult a general encyclopaedia or a subject encyclopaedia.. Below, we discuss the advantages and disadvantages of both print and electronic encyclopaedias. Some companies have stopped producing print volumes in favour of the online encyclopaedia due to costs and less demand from clients.

6.5.1 Print encyclopaedias

Start by reading the preface and introductory matter, as these usually include instructions on how to use the set or the single volume. Most hard copy encyclopaedias are arranged in alphabetical order. Entry is under the name for the subject or topic of the article. The quickest way to look for information is to go straight to the volume (or section in a single-volume encyclopaedia) which contains the section of the alphabet under which the entry is most likely to be arranged. The contents of the volume will be marked on the spine, for example A–D, or Birds–Chemical. If you do not find a relevant entry, there may be cross references which tell you what name(s) is/are used for that topic. If you find the entry you require, also look out for references (often at the end of the article) which refer to related topics.

Should the quick search not reveal anything, it does not mean that the encyclopaedia does not have the information. It may be hidden under another heading, or contained within an article which is not necessarily directly related to the topic you require. Turn to the index of the encyclopaedia. It may be at the end of the volume, or in a separate volume that relates to the whole set. If there is any explanatory text on how to use the index, first read the instructions before starting to search. The index refers to pages (or volume and page numbers in the case of a set) on which the required information may be found, or to other terms by means of *see* and *see also* references. The list of readings at the end of articles can be useful sources for more information on a topic, but check the publication dates.

Printed encyclopaedias have numerous disadvantages. It may be better to search in an electronic encyclopaedia for more recent and updated information.

6.5.2 Online encyclopaedias

The main advantage of using an online encyclopaedia is that searching is easier and quicker. The computer and software enable searching through a vast body of information that would not always be feasible if done manually. The trouble of moving from one volume to the next in a multi-volume printed set, consulting the index again and again is absent with online encyclopaedias. The online encyclopaedias provide user-friendly searching methods, with instructions on the screen and additional help provided if needed. The usual way of searching is to type keywords (with or without Boolean operators AND, OR, NOT), phrases or even a query in a brief sentence. There may also be clickable menus of subject categories, where you could move down hierarchies until you reach what you are looking for. Links to related articles are usually indicated clearly. All that is required is a click on the highlighted word..

A definite advantage of online encyclopaedias is that the information can be printed immediately. Another advantage is the ability to mark, cut and paste text from the encyclopaedia to another document (e.g. an assignment). Cur-

rency of the information is important. Generally the online encyclopaedia is updated more often than the printed version.

6.6 SUMMARY

You have learnt about the history of encyclopaedias through the ages, noted how the parameters are important, and studied several examples in both printed and online encyclopaedias. You have also been given some hints on how to use encyclopaedias. There is a huge number of encyclopaedias available today. Here you studied two main types (general and subject) and learnt about several examples from each of these two categories. Some examples are aimed at an adult readership, some at children and some at specialists. You have also learnt the importance of using bibliographic control tools when trying to identify a suitable encyclopaedia for your needs.

Searching in electronic encyclopaedias will provide you with an excellent introduction to the use of electronic reference sources, and you could have a bit of fun at the same time. A visit to your local public library or a nearby internet cafe is worth the effort.

ACTIVITIES

1. Define the term “encyclopaedia”.
2. Distinguish between general and subject encyclopaedias.
3. What are the advantages and disadvantages of print and electronic encyclopaedia, respectively?

LEARNING UNIT 7

BIOGRAPHICAL SOURCES

7.1 INTRODUCTION

In this learning unit, you will study various reference sources that provide biographical information. The most important type of biographical source we use in reference work is the collected biography. A collected biography contains information on the lives of many people (these people are usually well known, or people in high office). The biographical details have been collected together and are presented in one reference source. You will study a number of examples of collected biographies. We categorise these collected biographies as being general or universal, national or regional, or specialised.

OUTCOMES

After you have worked through this learning unit, you should be able to:

- explain the purpose of biographies
- distinguish between an autobiography, a biography and a collected biography
- distinguish between the main types of biographical sources
- explain the scope of several examples of collected biographies
- discuss alternative reference sources of biographical information

7.2 DEFINITION AND PURPOSE OF BIOGRAPHICAL SOURCES

A biography is an account of someone's life. The account is written by another person. An autobiography is an account of the life of a person, written by the person himself (or herself). A collected biography is a reference source that contains details about the lives of a number of people.

We often have to write brief details of our lives – for example, when we compile a curriculum vitae (CV). If you were asked to write a general paragraph or two about yourself, you would include biographical information such as your name, date and place of birth, parents' and siblings' names, where you have lived and where you presently live, where you went to school and university, what you are doing now, what your hobbies are, and so on. In short, biographical information relates to the events of a person's life.

The parameters of collected biographies are important. You will see that three main parameters are relevant here: time span, geographical location, and occupational matter or subject. The time span determines whether the collected biography provides current or retrospective information. In this study unit, you will learn what determines the difference between current and retrospective coverage as far as collected biographies are concerned. You will also study bibliographic control tools for biographical reference sources, and then learn about other for biographical information (e.g. newspapers that include obituaries).

7.3 GENERAL

Once again, you should not find this difficult to understand. Try to think about how we can learn about other things (e.g. a particular historical perspective) from biographical details. You will learn how easy it is to find details about famous (and infamous and not so famous) people in reference collections – if you know about the limiting parameters that are important for successfully using collected biographies. As you read further, concentrate on the explanations regarding the types of parameters used for collected biographies. Knowing the parameters of various biographical sources is important if you are to find information about people easily. There is a basic distinction between the sources that list living people and those that list deceased people. Bear these points in mind when you study the examples of biographical sources discussed. Make sure that you understand the following:

- Types of biographical sources
- Collected biographies

Take note of how ICT enables enormous databases, such as Gale's Biography Resource Centre; to be compiled easily and made accessible on the Web.

7.4 INDIVIDUAL AND COLLECTED BIOGRAPHIES

Biographical information can be obtained from many different types of source. We shall look at two main categories of biographical information: individual biography and collected biography, concentrating on the latter as this category is important for reference purposes. In an individual biography the information source covers one main character, whereas in a collected biography many people are covered in one source. In both categories, the biographical details could be written by the person whose life is being described, or could be written by another.

Letters, diaries, notebooks, private papers, memoirs and autobiographies are personal accounts of what happened in the lives of the writers. These are all original, or **primary**, sources of information on those particular people and the events which affected their lives. A biography (the life of one person, written by another person) provides details of the life of a person, but is a **secondary** source as it is not written by the person who is the subject of the biography. Biographies are generally based on other sources, usually those primary sources mentioned above, and sometimes, if the person who is being written about is still alive, also on interviews. The person whose life is described is called the **biographee**, and the person who writes about the biographee is called the **biographer**.

The biographies which make up part of our recreational reading are usually **individual biographies**. These could be autobiographies (the life of a person, written by that person). Alternatively, they could be secondary biographies, where the life story is not self-authored, but is written by another person.

In this unit we concentrate on biographical sources which have been compiled specifically for the purpose of finding out facts concerning the lives of people. These sources do not concentrate on one person, but cover a number of people in one source. We refer to these sources as **collected biographies**.

A collected biography consists of biographies of several people (usually hundreds) which have been collected together and published in one source. In book form, the entries are usually arranged alphabetically according to the surname of the person. Collected biographies are often referred to as biographical dictionaries, because of the alphabetical arrangement within the source. The word "dictionary" is descriptive of the arrangement and not the contents. Although they give the correct spelling of the biographee's name and often the pronunciation, biographical dictionaries are not dictionaries in the true sense of the word.

In collected biographies, the length of the individual biographies may vary from a few lines to many pages. Brief information such as date and place of birth, death, parents' name, education and achievements may be given. Alternatively, the entry may be more detailed, even extending to essay-length and including evaluative comments and lists of further reading.

7.5 PARAMETERS

Collected biographies have very particular parameters and it is necessary to have an understanding of these since the parameters determine who will be included in the source. The scope of the source may be international, national, regional, or limited to the occupation or profession of the biographees. These parameters determine the type of source. We shall look at each type in turn later. The parameter which is of major importance when using collected biographies is the scope. The source may limit its entries to people still alive or to those who have died or, in some cases, list both. The most common method of defining the time parameter is for the collected biography to list either only living or only deceased persons. Thus we have **current** or **retrospective** biographies.

A current biographical source lists persons who are living or who died quite recently. The most common type of current collected biography is the *Who's who* form. The entries of these contemporary sources are often compiled from information obtained from the biographees themselves via questionnaires. The length of an entry in a current source does not necessarily indicate the importance of the biographee. For that matter, the entry is not necessarily balanced either. The biographee who fills in a questionnaire may complete it in as much detail as he/she feels fit, and may emphasise or ignore whatever aspects of his life he chooses. Accuracy and balance in entries may be guaranteed only if the editorial staff of the collected biography judiciously checks facts. If you need completely up-to-date details about a person, current biographical sources can be supplemented, such as with information found in newspapers or on the internet.

Most countries, and many professions and subjects, have a *Who's who* guide. Typical titles include, for example, *Who's who of Southern Africa, Who's who in Africa, Who's who in America, Who's who in Australia, Who's who in labor, Who's who in entertainment, Who's who in African literature* and dozens more. Contemporary collected biographies like these list persons who are currently well known in a particular area or field. Whether their fame will last after their death remains for history to decide.

A retrospective biographical source lists persons who are no longer living. Generally only persons who have left their mark in history will be included. The retrospective collected biography concentrates on persons who remained

well known after their death, or perhaps became famous only after their death. Since the passage of time has allowed the wheat to be separated from the chaff, retrospective collected biographies may be factually more reliable than current collected biographies. However, since error or bias may be carried over from one printing or revision to the next, it is always advisable to check details in another source if necessary. Recently published sources may include facts which have been verified or have come to light as a result of recent research into the life of the biographee.

The equivalent of the *Who's who* type of current collected biography in retrospective collected biography is the *Who was who* source. Examples such as *Who was who in America, Who was who in the theatre* and *Who was who in church history* list deceased persons who were well known in the areas specific to the titles of each source.

The specific limiting parameters for collected biographies are necessary owing to the number of people who have become well known, famous, or even notorious. To this number we must add the names of people who are leaders in certain fields or office-bearers in certain professions, although they might not be famous or well known outside the immediate sphere of their occupation. The parameters of time, place and occupation determine the type of collected biography in which information on a certain person will be found.

When looking for information on a particular person, the search will be simplified if one knows

- whether the person is alive or dead (time parameter)
- where the person lives/lived (place parameter)
- what the reason for the person's inclusion in a reference source would be (fame, occupational or subject parameter)

7.6 TYPES OF COLLECTED BIOGRAPHIES

We shall categorise collected biographies according to their geographical and occupational (or subject) coverage. Within these categories, the parameter of time (i.e. current or retrospective) will also affect the scope of the sources.

Taking geographical coverage as a delimiting factor, we may identify two major categories of collected biography: those that include persons from all over the world, and those that cover less ground. In the second category we may identify sources which are either national or regional in scope.

A collected biography may be limited by subject, or occupation or profession of the biographies. Within these parameters, the geographical parameter may further limit the scope of the source. The length of the biographee's entry could also be regarded as a parameter, since entries could be brief in some collected biographies and quite extensive in others.

7.6.1 General or universal

A general collected biography is universal in scope. It includes persons from all countries, all walks of life and all professions. Internationally well-known personalities from the past or present are included in the source. The reason

for their fame is not relevant; biographies may range from famous people like Nelson Mandela or Princess Diana to infamous people such as Eugene de Kock or Charles Manson.

When looking for information on a person whose nationality you do not know, consult a general collected biography first. Knowledge of whether the person is still alive will help to decide whether a current or a retrospective source should be used. If this is not known, both types of source might have to be checked. Once an entry for the person is found, details on time and place may be established. If more information is required, the search may proceed to a national or regional collected biography which may contain further details on the individual. This national or regional biography would be current or retrospective, depending on whether the biographee is alive, died recently, or died some time ago.

We shall look at a general collected biography, namely the *Current biography* which is a serial publication available in hard copy and electronic form. The second, the *Biography resource center*, is an online resource which combines hundreds of databases of biographies and full-text journals. Finally, we list several biographical websites.

The *Current biography* contains biographies for persons still living, but may also be used in the retrospective sense if any biographees have died since their biographies were included in the source.

Current biography. New York: HW Wilson, 1940–. http://www.hwwilson.com

Current biography is a serial publication which appears monthly in hard copy, except in December when the year's eleven issues are cumulated to form the current biography yearbook. Each monthly issue contains several essay-length profiles of currently prominent persons from various countries, professions and occupations. Details for each biographee include name, birth date, home or business address, profession or field in which he or she is famous, a recent photograph, and then a detailed account of the person's life and career to date.

There are many free websites where you can find biographical information. Most internet resource guides will link you to several biographies.

Some of the links:

http://www.biography.com
http://nobelchannel.com/

7.6.2 National or regional

Collected biographies which are limited to particular countries or regions have smaller geographical parameters than the general collected biographies. They are therefore more likely to be useful when one is looking for information on an individual who is not necessary universally famous. People who have made a particular contribution in a certain country (for example South Africa, or Sweden) or region (for example Southern Africa, or Scandinavia) are listed. It is not a requirement that the biographees should be born in that country or region, only that they should be famous or well known for their involvement in affairs which relate to the area. However, when looking for information

on a person whose nationality is known, the best starting point would be the national biography of the country in which that person was born. People from all professions and occupations are included in these collected biographies.

It is most common for a country to have a retrospective-collected biography, which lists the most famous deceased people relating to that country, and a current collected biography of the *Who's who* type. Retrospective biographies are usually multi-volume sources which contain lengthy articles on the famous people. Current biographies tend to contain brief facts on individuals and are published regularly (usual annually). Both types of source usually contain photographs of the biographees. The best-known national collected biographies are those for the USA *(Who's who in America)* and UK *(Dictionary of national biography).*

7.6.3 Specialised biography

There are hundreds of collected biographies which specialise in listing people who are well known in a particular occupation, profession, or subject. These sources may be current or retrospective, and international in scope or limited to a particular country or region. Most of these specialised biographical sources contain very brief information on the biographee, such as birth date, place of birth, address, education, and then something about the biographee's contribution to the subject or occupation which is covered. The parameters of the source will determine the type of subject or occupational information which will be included for each biographee. For example, a collected biography of authors would include the titles of the works of each author.

It is common for professionals such as those in the medicine, law, teaching and librarianship fields to have collected biographies of people who are active in the profession. Such collected biographies are usually national in scope, and may also be referred to as directories if their information is limited essentially to very brief biographical details and addresses. A wide range of *Who's who* sources exists for various professions, occupations and subjects. There are also specialised collected biographies which list names of people who never existed, such as characters from mythology, folklore and fiction.

Genealogical sources are information sources which trace the history and roots of certain families. These may also be regarded as a type of specialised collected biography. Such sources may cover, for example, royal families or the lineage of any family, specific races, or settlers in countries.

Since it is not always a simple matter to establish where to find information on a particular individual, it is often easier to first consult a bibliographic which specialises in biographies. We look at one example of a bibliographic control tool which lists the names of well-known people and provides entails as to which source may be consulted to find more information about them. *Biography index,* from the HW Wilson stable, indexes biographical information which is contained in collected biographies as well as in periodicals, books and other sources.

> *Biography index: a quarterly index to biographical material in books and magazines.* New York: HW Wilson, 1947–. http://www.hwwilson.com or https://www.ebscohost.com/academic/h-w-wilson-database

7.7 OTHER PLACES TO LOOK

Encyclopaedias and their yearbooks, dictionaries, newspapers, periodicals, directories, and television and radio programmes also provide us with details about the lives of people. Even a library catalogue can provide brief information of a biographical nature: many author entries include the dates of birth and death of the author of the source.

Periodical and newspaper indexes are also useful tools when looking for information on people. Entries for people will be found in general periodical indexes such as the *Index to South African periodicals*, and the *Readers' guide to periodical literature*. Subject periodical indexes such *Library literature, Art index*, and *Music index* will have entries of people who are active in the subject fields the indexes cover. Any bibliographical control tools for periodicals or newspapers will be useful for biographical searches. Major international newspapers especially contain many articles on personalities, and online availability makes a quick search more feasible. The *New York Times Index* and the *Times index* may be used to trace biographical information including obituaries on individuals. However, both of these newspapers publish separate indexes which list only obituaries: *New York Times obituaries index* and *Obituaries from the Times*. For Southern African personalities, NISC's *South African studies* is a useful tool, especially the entries in the lesser-known databases that it includes such as those of the National English Literary Museum (NELM) and the Nasionale Afrikaanse Letterkundemuseum en Navorsingsentrum (NALN). Sabinet's MagNet is also a useful source for local entries, especially *SA News*, which incorporates the databases of the South African Press Association and the *SA media database*.

South African websites provided by newspaper and magazine publishers such as National and Independent Newspapers make good sources of biographic information. Examples are *News24* and *IOL (Independent Newspapers Online).* On a wider scale, using internet resource guides will also help when looking for biographic details.

7.8 SUMMARY

In this learning unit we have discussed individual and collected biographies. You are now aware of the type of information to be found in these reference sources. This information often goes beyond purely biographical details. Biography gives us an oblique view of history, since it gives us an idea of how people personally experienced important events over the course of time.

In public libraries especially, the reference collection is constantly consulted for biographical details. A good selection of collected biographies, as well as individual biographies, is therefore essential.

ACTIVITIES

1. What is a biography?
2. What is the difference between individual and collected biographies?
3. Discuss the following biographies:
   - General biography
   - National biography
   - Specialised biography

LEARNING UNIT 8

GEOGRAPHICAL INFORMATION SOURCES

8.1 INTRODUCTION

Geography is the science of the earth – the distribution and arrangement of all the elements which make up the areal features (i.e. the surface of the earth). Geographical sources are therefore sources which provide details about the areal features of the maps, atlases, gazetteers and travel guides. In this learning unit you will study four types of geographical source in detail, and learn a bit about guides and geographic information systems (GISs) also. In figure 9.1 you can see examples of an atlas and a globe (which is a three-dimensional reference source).

OUTCOMES

After you have worked through this learning unit, you should be able to:

- explain the concept "geographical sources"
- distinguish between different types of maps
- use atlases, gazetteers, travel guides, street guides, and field guides
- explain how to use the internet as a resource for geographical information

8.2 DEFINITION AND PURPOSE OF GEOGRAPHICAL INFORMATION SOURCES

A geographical reference source provides information about the earth, its countries and places, in a pictorial, graphic or written form.

As usual, we will look at printed and online geographical sources, and we shall also consider several aspects over and above the use of these as pure reference sources. For example, we will talk about how maps are compiled (people who draw maps are called cartographers), the organisations that compile primary maps, and the various ways in which maps are used for planning. It is important to establish the parameters of geographical sources; for example, these might be international, national, regional or local. It is important for primary maps, especially, to be kept up to date. In other words, currency is an important evaluation criterion.

KEY TERMINOLOGY

Areal	geographical dictionary	plate
Atlas	geographic information system (GIS)	road atlas
cartographer	geographical name	scale
Chart	Globe	street guide

Fauna	grid	thematic map
field guide	Guidebook	topocadastral
Flora	map	topographical
Gazetteer	onomastics	travel guide

8.3 GENERAL

Overall, this is not a difficult topic to understand, although there is quite a bit of new terminology related to geographical sources. You will learn about:

- maps – types of map, their uses and scales
- atlases – their indexes, grids and the additional information which can be found in them
- gazetteers
- travel guides, field guides
- geographical information sources
- online/internet geographical sources

Geography is the science that studies the distribution and arrangement of all the different elements of the surface of the earth – in other words, the areal features. Geography encompasses the areal environment as well as the relationship of humans in this environment. The word "geography" comes from ancient Greek and means "earth description". Thus we study the various features of the earth, such as its physical surface and form, its climate, population and production, and natural and political divisions into particular land areas. The physical surface and form of the earth include divisions into land and sea, mountains and rivers. The climate includes conditions such as temperature, wind, rainfall and dryness. The population includes creatures (humans and animals) and their relationship to the earth, for example the areas where they are to be found. Production refers to the natural yield of the earth, such as gold deposits, forests and agriculture. Natural divisions are those areal divisions which are not created by humans, for example the separately identifiable continents. Political divisions are devised by humans and are evident in the separation of the world into different countries. Geographical, spatial and environmental reference sources provide information on these various aspects of the study of the earth. Thus we can say that a geographical reference source provides information about the earth, its countries and places, in a pictorial, graphic or written form. Most geographical reference sources concentrate on information about places (countries, cities, towns, villages, administrative areas, and physical features such as mountains and lakes) and the patterns of interconnection between these. Such places and features are given geographical names, for example Johannesburg, Mpumalanga, Table Mountain, the Drakensberg, the Vaal River, or the N3 highway. Therefore, a geographical name is the name of any natural feature of the earth, or a feature made or adapted by human activity.

The most basic geographical reference source is a map, which is a graphic representation of areal features. If a number of maps are bound together to form one information source, we call this an atlas. Since this collection of maps contains a variety of information, an index to the atlas is necessary so that specific information may easily be found on the separate maps. The index to the atlas is called a **gazetteer**. A gazetteer may also exist as a separate source. Apart from maps, atlases and gazetteers, there are several other resources which we could use

for reference purposes for geographical information, but we shall only look at four others, namely travel guides, field guides, geographic information systems, and the internet. Each of these types of source has unique characteristics. We shall look mostly at purely geographical information, but also briefly consider environmental and spatial information.

8.4 MAPS

A map of South Africa would illustrate the shape and outline of the country by showing where its boundaries are, where land adjoins the sea and where land adjoins neighbouring countries. Other varied information on South Africa may be included, such as the divisions into provinces; where the boundaries are rivers, the rivers will be drawn in and identified; where the boundary is the ocean, the name of the ocean will be given. The positions of cities, towns, dams, mountain ranges, game reserves, and so on may also be identified on the map. We can therefore say that a map is a flat, pictorial representation of features on the surface of the earth.

The scope of maps is not limited to the earth. There are also **astral maps** of other celestial bodies such as stars, planets and galaxies. An example would be a map of the moon, showing its craters and other geographical features. A map of the heavens would provide a flat, pictorial representation of the position of the celestial bodies in the sky.

Maps may be **primary** or **secondary**. A primary map is one compiled by an organisation which was responsible for the actual scientific survey of geographical features, such as the measuring of distances and heights. A secondary map is one which is based on details obtained from a primary map. Most primary maps are compiled by official organisations, such as government departments, which undertake national surveys to provide a scientific base for national cartography. Most secondary maps are based on official maps.

National maps are published in various series, the major two being the **topographical** and the **topocadastral**. The topocadastral series are compiled from details obtained from aerial photographs. Topographical maps show features such as land contours, water, vegetation, towns and roads. The topocadastral series are compiled from details supplied by land surveyors who have measured distances, angles and heights at ground level. There are several types of primary map, including aeronautical charts (which are maps used by pilots for navigational purposes), geological survey maps (which indicate geological features such as different types of rock and soil), water and forestry maps, and hydrographic maps (which are compiled by means of surveys of the seabed from the coastline to a few kilometres out to sea). Official maps of South Africa are printed and sold by the Government Printer. These maps appear in separately numbered sheets, each sheet representing a particular geographical area. If all the sheets of the topocadastral series, for example, were to be put together, they would represent a very large map of South Africa, showing various features including magisterial districts and farm boundaries.

A variety of maps are produced by a multitude of public and private agencies, departments, institutes, associations and organisations for their own and public use. Some maps concentrate on special features and these maps are referred to as **thematic maps**, in other words they have a theme or a subject in which they

specialise. Examples would be maps showing rainfall in certain areas, maps indicating the game reserves in Southern Africa, and maps covering only a small area, such as a map of the Kruger National Park.

To understand how to use a map, one must be familiar with the use of **scales**. A scale indicates how the dimensions on a map may be reduced or enlarged, and is expressed as a ratio. Scales are usually found at the bottom of a map, and consist of a line which shows distances in kilometres and a ratio figure. A map with a ratio of 1:50 000 represents a 50 000 times reduction of the area shown.

Maps are a common means of communicating information. Apart from atlases, many other reference sources use maps to complement their textual information. For example, thematic maps are used in sources such as encyclopaedias, newspapers and periodicals. A common map with which you are familiar is a **globe**, where the map of the world is depicted on a sphere to present the shape of the earth. The globe is held within a special stand which allows it to be rotated, so that you can turn the globe.

8.5 ATLASES

An atlas is a collection of maps which have a common parameter. In book form, the maps are arranged in a logical order, accompanied by an index, and bound together. An atlas may be international, national or regional in scope, and may be general or thematic. These aspects are determined by the parameters of the atlas. Atlases can be in book form, online (www.worldatlas.com) , with multimedia features.

8.5.1 General atlases

A general atlas contains maps that depict the geographical features of the earth, such as geographical and political boundaries, cities and towns, rivers and lakes, mountains, seas and oceans. To locate these places on the different maps, it is necessary to consult the index to the atlas, that is, the alphabetical list of geographical names, also referred to as a **gazetteer**.

General atlases are usually either international in scope or devoted to one country or region. A general atlas of the world would contain maps which depict the world as a whole, as well as maps relating to specific continents and countries and certain regions of those countries.

A general atlas which has parameters that confine its coverage to one country or region would contain at least one world map to show the position of that country or region in relation to the continents and countries of the world. The rest of the atlas would be devoted to detailed maps of the various areas of that particular country or region. The advantage of a general national atlas is that its limited scope allows it to cover the geographical aspects of that particular country in greater detail than an international atlas.

8.5.2 Thematic atlases

The theme may relate to virtually any subject, the intention being to superimpose the theme on a geographical distribution. For example, an atlas with a

historical theme may show how world wars, less widespread wars and battles, and political upheavals over the centuries have resulted in shifts in the borders of various countries – these shifting borders will be depicted in relation to time and cause. Thematic atlases may be international, national or regional.

8.5.3 Road atlases and street guides

Road atlases and street guides can be regarded as regional thematic atlases. A street guide maps out the streets of a particular city. A well-known local publisher of street guides is MapStudio (a division of Struik Publishers). In book form a street guide consists of numerous maps and an index. Each map depicts a certain area of the city, and the emphasis lies on identifying the position and names of the streets in each area. The index assists in locating streets.

A road atlas is aimed at the motorist and is a collection of maps showing the roads in an area or region. Many road atlases also include geographical detail, such as information on interesting places to visit en route. There are several organisations which specialise in publishing road atlases, such as the Automobile Association of South Africa.

8.5.4 Atlases guide

The index, or gazetteer, is the key to the contents of the various maps contained within the atlas. Each index entry contains enough details to enable one to locate the required place on the relevant map. Indexes generally contain brief explanatory notes about the symbols they use, and these symbols should be studied to understand how to use the index. The index entry gives the map number and further details such as the lines of longitude and latitude on the map, or grid information. To facilitate location, maps are divided into numbered and lettered blocks, or grids. Each grid has two reference points – usually a number and a letter – which are identified on the sides of the map. Grid information refers to the place on the map where the two reference points intersect. By establishing the block to which the number and letter correspond, the location of the place may be found within the block.

Atlas indexes require a thorough cross-referencing system, since many places have had name changes, and many have more than one acceptable spelling. A world atlas, for example, would need a cross-reference from Salisbury to Harare, from Kaapstad to Cape Town, and from Moskova to Moscow. In cases in which places with the same name are found in several countries, the index would need to indicate the name of the country as well.

Many atlases provide information which goes beyond pure geographic information. Charts, tables, pictures, photographs and articles on aspects such as agriculture, energy and mineral resources, population, animal and plant life are found in many larger atlases. Keep in mind though that the value of an atlas lies in the quality of the information contained in the maps.

There are many atlases to choose from when looking for geographical information. We shall look at one general atlas with international coverage. Most of the online atlases provide geographical information in an interactive manner such as:

National geographic atlas
http://www.nationalgeographic.com/kids-world-atlas/maps.html#

World atlas
http://www.worldatlas.com/aatlas/world.htm
Grolier online atlas
http://go.grolier.com/atlas

8.6 GAZETTEERS

A gazetteer is a list of place names, enabling a global vision of places of interest through the assignment of a point, or region, to a place name (Niccolucci & Hermon, 2016:63). A gazetteer may be a separately published reference source, or an index to an atlas as seen above. It provides information on places of the world, a region, or a country. The places are listed under their geographical names, for example Cape Town, or Namibia, in alphabetical order. Gazetteers are sometimes referred to as geographical dictionaries. Since they do not cover geographical terminology, but rather geographical places, the "dictionary" label refers only to the alphabetical arrangement within the source. Therefore, a gazetteer is an alphabetical list of geographical places, giving brief information about each place. The type of information given about each place may include:

- the spelling, pronunciation and origin of the name
- where the place is geographically situated
- its latitude and longitude
- its agriculture and industries
- its climate and population statistics
- brief historical information

Most separately published gazetteers do not contain maps, whereas gazetteers in atlases rely on the maps within the source to provide information which supplements the brief entry in the gazetteer section. The value of using a separate gazetteer lies in the amount of concise information that it gives about a particular place. They can be international or national in scope. A national gazetteer will list more places in a specific country and possibly provide more details about the places than an international gazetteer. National gazetteers would list smaller places which are unlikely to be found in a gazetteer with international coverage.

Research in onomastics (the study of names) is undertaken by a number of organisations worldwide. Most developed countries have official organisations which aim at standardising geographical names in their countries.

8.7 TRAVEL GUIDES

A travel guide is a source which provides basic information about a place or places, for the use of a traveller or visitor. The information about a place concerns how to get there, where to stay, and what to see.

Although designed to provide the traveller or visitor with information for a journey, travel guides are useful reference sources for any query about a place – whether one is planning to travel there or not. Travel guides, also called **guidebooks**, are important complementary sources to other geographical reference sources in that they provide far more detail about specific places.

As a result of the ease and popularity of international travel today, travel guides are found in abundance. There are travel guides for particular countries – for example, South Africa (http://www.places.co.za/html/south_africa.html), particular regions of a country (e.g. the French Riviera (https://about-france.com/tourism/french-riviera.htm), particular cities (e.g. London), and there are even guidebooks for particular buildings such as museums and historical ruins. Travel guides may be general or thematic (e.g. hotel guides; guides on historical buildings). They may also contain details on local public holidays and festivals, customs, folklore, food, climate, landmarks, and so on.

8.8 FIELD GUIDES

Although field guides are not of a purely geographical nature, we include them here since they are popular reference sources in South Africa, with its magnificent nature reserves and game parks, bountiful wildlife and varied and unique fauna and flora. A field guide provides textual and pictorial information on a particular species of flora (plant) or fauna (animal), or acts as a guide to fauna and flora in a specific region.

The variety of field guides is extensive. They cover flowers, trees, cacti, insects, marine life, birds, reptiles and mammals in general, and some in specified regions only, such as a guide to the dragonflies of the Drakensberg, or a guide to the cycads of South Africa. Some are available in both print and online.

8.9 GEOGRAPHIC INFORMATION SYSTEMS (GISS)

Geographic information systems, usually abbreviated as GISs, are computerised systems which developed in the discipline of geography and are used for various purposes including cadastral mapping, planning and managing facilities (e.g. police, fire and ambulance departments). A GIS is essentially computer software which is used to create a database of spatial information and provides the means to map out and analyse this information. GISs rely on several related technologies, including database technology, computerised cartography (mapping) and CAD (computer-aided drawing or computer-assisted design). A GIS can store, manipulate, analyse and display information of a spatial geographic nature.

GISs are mentioned briefly here as they are sources of information, but they are very specialised sources not used within libraries, but rather for planning and decision making in the business, commercial and government sectors.

8.10 GLOBAL POSITIONING SYSTEMS (GPSS)

The global positioning system (GPS) is a space-based global navigation satellite system (GNSS) that provides reliable location and time information in all weather conditions and at all times and anywhere on or near the earth, when and where there is an unobstructed line of sight to four or more GPS satellites. It is maintained by the United States (US) government and is freely accessible by anyone with a GPS receiver.

The GPS project was started in 1973 to overcome the limitations of previous navigation systems, integrating ideas from several predecessors, including a number of classified engineering design studies from the 1960s. GPS was created

and realised by the US Department of Defence (USDOD) and was originally run with 24 satellites. It became fully operational in 1994.

In addition to GPS, other systems are in use or under development. The Russian Global Navigation Satellite System (GLONASS) was in use by the Russian military only until it was made fully available to civilians in 2007 (http://www.glonass.it/eng/).

8.10.1 Basic concept of GPS

A GPS receiver calculates its position by precisely timing the signals sent by the GPS satellites high above the earth. Each satellite continually transmits messages that include the time the message was transmitted, precise orbital information, and the general system health and rough orbits of all GPS satellites. The receiver uses the message it receives to determine the transit time of each message and computes the distance to each satellite. These distances along with the satellites' locations are used to compute the position of the receiver. This position is then displayed, perhaps with a moving map display or latitude and longitude. Elevation information may be included. Many GPS units show derived information such as direction and speed. While it was originally a military project, GPS is considered a dual-use technology with significant military and civilian applications. GPS has become a widely deployed and useful tool for commerce, scientific users, tracking, and surveillance. GPSs' accurate time facilitates everyday activities such as banking and mobile phone operations.

8.10.2 Civilian applications

Many civilian applications use one or more of GPS's three basic components: absolute location, relative movement, and time transfer. Following are some of the applications:

- Cellular telephony: clock synchronisation enables time transfer, which supports hybrid GPS/cellular position detection for mobile emergency calls and other applications.
- Disaster relief/emergency services: depend on GPS for location and timing capabilities.
- Geofencing: vehicle tracking systems, person tracking systems, and pet tracking systems. These devices are attached to the vehicle, the person, or the pet's collar. The application provides continuous tracking, and mobile or internet updates should the target leave the designated area.
- Geotagging: applying location coordinates to digital objects such as photographs and other documents for purposes such as creating map overlays.
- GPS aircraft tracking.
- GPS tours: location determines what content to display, for example, information about an approaching point of interest.
- Map-making: both civilian and military cartographers use GPS extensively.
- Navigation: navigators value digitally precise velocity and orientation measurements.
- Surveying: surveyors use absolute locations to make maps and determine property boundaries.
- Techtonics: GPS enables direct fault motion measurement in earthquakes.

8.10.3 GPS navigation devices

A GPS navigation device is any device that receives GPS signals for the purpose of determining the device's current location on earth. GPS devices provide latitude and longitude information, and some may also calculate altitude. Such devices are used in military, aviation, marine and consumer product applications. GPS devices may also have additional capabilities, for example:

- Containing maps, which may be displayed in human-readable format via text or in a graphical format.
- Providing suggested directions to a human in charge of a vehicle or vessel via text or speech.
- Providing directions directly to an autonomous vehicle such as a robotic probe.
- Providing information on traffic conditions and suggesting alternative directions.
- Providing information on nearby amenities such as restaurants, petrol stations, and so forth. In other words, all GPS devices can answer the question "Where am I?", and may also be able to answer:

"Which roads or paths are available to me now?"

"Which roads or paths should I take in order to reach my desired destination?"

"If some roads are usually busy at this time, or are busy right now, what would be a better route to take?"

"Where can I get something to eat nearby or where can I get petrol for my vehicle?"

8.11 INTERNET RESOURCES

The internet is a mine of geographical information, ranging from webpages where you can check the weather in a foreign city or the exchange rate of your rand in that country's currency, through to multimedia maps. We shall look at two examples of sites to get an idea of the range.

TravLang
http://www.travlang.com

This website specialises in travel-related services and also in language-related services. Its travel services are extensive: you can even make reservations online for air travel and hotel bookings internationally. Other related links are to currency exchange rates, weather reports and ski conditions, budget travel specials, train timetables, maps around the world, car rental, international traffic signs and road rules, calendars for many countries showing their national holidays; international dialling codes and dozens of other general travel resources.

From the *TravLang* website you can select a language in which you want to learn some basic travel-related words – even isiZulu, Sesotho and Afrikaans are included – and you are taken to a site with relevant information.

The next example is an online travel guide which is also available on a CD-ROM.

World travel guide online
http://www.wtgonline.com

The content of the *World travel guide* is provided by the publisher Columbus Press. At the opening screen of the website you can select a country from a world map or by clicking on an alphabetical list of over 50 countries. If you selected South Africa, for example, you are linked to a page which contains brief details about South Africa's geographic location, the discovery of gold, a few facts about Pretoria, Cape Town and Durban, and mentions that typical South African dishes include sosaties and bobotie. From this page you can move to travel information (including sections for maps and information related to climate, history and government, passports and visas, money and public holidays), or to regions and cities (covering resorts and excursions, popular travel routes, and then each of the nine provinces).

Alternatively, from the home page you can click on the section for city guides, but these are only for the larger cities in the United States and Canada.

Since there are thousands of websites that provide travel information, you will eventually find your favourite and bookmark it for easy reference. Many city councils in South Africa also provide travel guides for their cities or regions, such as

Greater Pretoria Metropolitan Council (Tshwane) http://www.visitpretoria.co.za
saTour (South African Tourist Board) http://www.satour.com

Geonames
www.geoname.org https://www.arcgis.com/home/index.html

8.12 SUMMARY

Many of you were probably already familiar with some of the geographic sources we discussed here. You have probably used various types of map at some or other time – most likely in the form of places in atlases, or road atlases and street guides – without realising that they are regarded as reference sources in libraries too. Travel guides and field guides are popular books in homes and libraries, and there are many which are available online. Gazetteers are less commonly used, with the exception of the gazetteer that is the index to an atlas.

Finally, the geographic resources which are available on the internet cover all types of sources such as maps, atlases and travel guides. Apart from these, there are many websites where you will find excellent geographical information. Internet resources vary widely, from sophisticated GISs to listings of bed-and-breakfast accommodation for travellers.

ACTIVITIES

1. What is a geographic information source?
2. What is the information value of geographic information sources?
3. Distinguish between the following geographic information sources:
   - Maps
   - Atlases
   - Travel guides
   - Field guides
   - GISs

LEARNING UNIT 9

OFFICIAL PUBLICATIONS

9.1 INTRODUCTION AND OUTCOMES

Official publications, which are also commonly known as government publications, have specific defining characteristics. You will learn about the general distinguishing features of these official publications in this study unit. We shall concentrate on several of the official publications of the South African government, including major sources of information such as statutes or Acts (i.e. laws), parliamentary debates, law reports and census reports.

OUTCOMES

After you have worked through this study unit, you should be able to:

- define and explain the purpose of official publications
- explain the information value and importance of official publications
- identify the main types of South African official publications
- locate websites and other collections of official publications
- distinguish between the official publications of one country and those of
- intergovernmental organisations

KEY TERMINOLOGY

Act	government/state	Parliament
Bill	Green Paper	question paper
Cabinet	intergovernmental organisation	standing order
census	judicial	
committee/commission	law report	statute
of inquiry	legislative	tender
debate	minutes of proceedings	White Paper
draft paper or draft bill	order paper	
executive		

As you can see, the above list of key concepts is long. However, many of the words are used in conjunction with the activities of central government and various governmental bodies, therefore you have to be familiar with them. All countries have their own unique official publications which relate to legislative, executive and judicial affairs.

9.2 GENERAL

Since there is a lot of new terminology involved, you might find it confusing at first. You may need to allow extra time for this study unit. The most difficult aspect will probably be the numerous publications arising from the activities

of the Parliament of South Africa. Once you understand how the government of the country works and you grasp the meanings of key concepts such as "legislative", "executive", "judicial", "bill", "statute", "debate" and so forth, you will find it easier to understand the publications related to these activities. You should attempt to become familiar with the following official publications in South Africa (or your own country if you do not live in South Africa).

9.2.1 Government publications
9.2.1.1 Gazettes
9.2.1.2 Parliamentary publications
9.2.1.3 Non-parliamentary publications
9.2.1.4 Statues, law reports
9.2.2 Collections of official publications in South Africa
9.2.3 Publications of intergovernmental organisations

9.3 WHAT IS AN OFFICIAL PUBLICATION?

"Official publications comprise all publications produced under the official auspices of legislative bodies, decision-making and judicial organs, civil service departments, courts of law, independent institutions, committees, people in authority, etc" (Lourenço, 2011). They are information sources that are published by authority, and at the expense, of a governmental body. The concepts "government publication" and "official publication" are synonymous and we shall use them interchangeably in this unit. In South Africa there is a growing preference for the concept "official publication", especially as this is used in acts such as the Legal Deposit Act, No 54 of 1997, which also provides a detailed definition: "**official publication** means a document published by an organ of national, provincial or local government, a parastatal organisation or any other institution listed as a public entity".

Official publications report on the activities of a government. All governments publish documents. In fact, the USA government is the largest publisher in the world, producing far more publications than any of the major commercial publishing houses.

The distinguishing feature of an official publication is its origin: it is an information source which is issued at public expense, either by a governmental body or by a contractee (e.g. a commercial publisher) on the instructions of a governmental body. To serve a country, a government undertakes a myriad of legislative (making of laws), executive (carrying out of laws) and judicial (upholding the laws) activities. Allied to these three main activities are a variety of administrative activities that need to be accomplished so that civilised norms are upheld in the country. Official publications report on all these activities of a government.

9.4 THE IMPORTANCE OF AN OFFICIAL PUBLICATION

The various governments of the world issue an enormous number of publications in a wide variety of forms, ranging from informal wall posters to full-text electronic resources on the internet.

Governments produce reports, statistics and studies not only for their populations, but also about their populations. By analysing the needs of their people, governments establish what information they require, collect the necessary data and compile this data into information sources for distribution to the people. Government publications provide information on virtually any topic, such as health, the military, law, agriculture, industry, energy, education and consumer affairs. The majority of government publications are available to whoever might require them.

Official publications are important sources of **primary information**. By virtue of their authority, governments are in a position to collect, and subsequently analyse, information to which private organisations do not have easy access. Official publications are generally regarded as authoritative and objective sources: accuracy and objectivity in governmental research and findings are a basic requirement of any democratic society – these documents provide the most recent information on a variety of subjects. They also provide the basis for much of the information which is subsequently included in **secondary** reference sources such as commercially published directories, maps, encyclopaedias and yearbooks. Since governments do not publish for commercial gain, the sources are relatively inexpensive. Many official publications such as pamphlets and posters on agriculture, health matters, home economics and social welfare are distributed free to the public.

9.5 STRUCTURE OF GOVERNMENT IN SOUTH AFRICA

In order to understand the official publications of South Africa, one needs a basic understanding of how the government is structured. There are several websites where you can find detailed information on the South African government. We suggest that you access the following two websites (ensure that you get a complete picture of the government):

South African government: http://www.gov.za/

Please note the following: the South African Cabinet consists of the President (head of the Cabinet), a Deputy President and Ministers. The **legislature** is based in Parliament where laws are proposed and passed; the **executive** is the Cabinet, assisted by the civil service; and the **judiciary** sees that the laws are enforced and interprets the laws. Judicial functions are carried out by the courts, for example the Constitutional Court, the Supreme Court and magistrates' courts.

There are three levels of government: national government, provincial government, and local government. National government comprises Parliament. Parliament consists of two parts, namely the National Assembly and the National Council of Provinces.

9.6 SOUTH AFRICAN GOVERNMENT PUBLICATIONS

Official publications emanate from all the sections and levels of government. Like most countries where internet access is available, the South African government makes much of its information available online today, including its official publications. Sabinet also provides access to many official publications.

9.6.1 Gazettes

A gazette is an official newspaper (not to be confused with a gazetteer). South Africa has several gazettes. The main gazette is for the national government (i.e. the central government), but there are also gazettes for the provincial governments.

Government gazette. 1960–. Pretoria: Government Printer.

The *Government gazette* is the official source by which the government communicates with the public concerning its activities. It is published weekly, and each issue is identified by a volume number, an issue number, and a date. The *Government gazette* contains a wide variety of government announcements, as well as legal notices from non-governmental sources. Some examples are Statutes (the laws, also called acts), Proclamations, Government notices which relate to specific acts and are issued by relevant government departments, General and legal notices which concern the private sector, for example applications for liquor licences, name changes, road carrier permits, estate notices, and liquidations of sequestrated estates or companies, and the Government Printer's monthly list of publications. Statutes are published in separate issues of the *Government gazettes*, as well as in the *Statutes of the Republic of South Africa*.

The *Government Gazette* publishes information which has relevance nationwide. The provincial gazettes publish information which concerns their respective provinces. On its MagNet service, Sabinet provides access to the *SA gazettes* database. This contains all the gazettes (national and provincial) and is updated weekly, and the full text of the gazettes can be searched and retrieved.

South African Government and Provincial Gazettes (SA Gazettes) can easily be accessed online via the SABINET collection of SA Gazetted information (www.sabinet.co.za). The SA Gazettes collection includes Government and Provincial Gazettes since 1994 as well as Parliamentary Bills from 1999, and are updated daily, as new gazettes become available.

9.6.2 Parliamentary publications

The successful administering of any country is dependent on laws, therefore legislative activities are the basic concern of Parliament. Legislation passes through several stages before it is placed on the statute books of the country. Laws are first submitted to Parliament as Bills. White Papers and/or Green Papers can be used as consultative or explanatory documents for a Bill. A Bill is a draft proposal of a law. Bills pass through a complex process of introductions, readings, debates and amendments before they are signed by the President and become Statutes (Acts).

Ensure that you are familiar with the following types of parliamentary publication for South Africa. This information can be obtained from the Parliament of the Republic of South Africa (http://www.parliament.gov.za/live/index.php).

Green Papers; Draft Green Papers; White Papers
Draft White Papers Bills; Draft Bills
Acts (Statutes); Debates (Hansard)
Standing Orders; Order Papers
Question Papers

Minutes of Proceedings
Reports of Committees and Commissions of Inquiry

9.6.3 Non-parliamentary publications

The variety of official publications which are not directly related to the activities of the South African Parliament is immense. Government departments issue publications in a wide variety of forms. These information sources inform Parliament and the public of the activities of the departments, are used for internal purposes within the departments concerned, or are issued to provide citizens with information of a general or specific nature. A few major sources are:

9.6.3.1 Departmental publications

Departmental publications include annual reports, budget reports, statistical reports and research reports. These are given numbers called **RP numbers** and these numbers are used to identify and find the report. Departments also issue many other sources, such as yearbooks, periodicals, dictionaries, directories, guidebooks, handbooks, manuals, bibliographies, maps and general information brochures, pamphlets and posters.

9.6.3.2 State tenders

Any supplies or services which are required by governmental bodies are tendered for. These supplies or services are advertised in the *Tender bulletins*. A tender is a written offer to supply goods or render services at a fixed price. The government compares and analyses the various tenders received, and accepts those most suitable for particular services or supplies. Details include the tender number, the name of the successful tenderer, the price and the brand of goods to be supplied. The bulletins are available online, including full-text versions via Sabinet on MagNet's SA Tenders database.

9.6.3.3 National statistics and census reports

The Statistics Act, No 6 of 1999 enables and regulates official statistics. Information required for the compilation of statistics is obtained from the public, business concerns, and records of public institutions such as government departments. The following source is available in print, on Sabinet and online.

South African statistics. 1968–. Pretoria: Stats SA.

The *South African statistics* yearbook contains information in standard form on virtually all facets of the country's economy. The statistics are provided in a time series, covering a number of years, thus making the yearbook a useful source for comparative analyses. It is divided into about 30 chapters according to subject matter. Aspects covered include population, health, education, tourism and migration, labour, agriculture, fishing, mining, internal and foreign trade, currency, banking and general finance, public finance, social security, transport, and meteorological statistics. There is an alphabetical subject index.

The most recent statistics which have become available since the publication of the last issue of *South African statistics* may be accessed online from Stats SA. The organisation's website can be used to obtain statistics in brief for the past couple of years. The most current official statistics appear in the *Statistical releases* that are issued regularly in hard copy and electronically on the Stats SA website (http://www.statssa.gov.za/). Sabinet also provides access to these statistics via its *SA statistics* database.

Stats SA also undertakes a **census** of the South African population. A census is an official survey of a country's population, undertaken with the intention of obtaining statistical information which is necessary for long-term planning. The data obtained during a census is made available in several sources and various hard copy and electronic forms.

9.6.3.4 Patents, trademarks, designs and copyright

Patents are legal documents representing agreements between inventors and the state. Intellectual property – which includes patents, trademarks, designs and copyright issues – is one of the aspects covered by the judicial system in South Africa, and intellectual property ownership is upheld by the courts of law. The Registrars of Patents et cetera of the Ministry of Trade and Industry need to keep the public informed of recent matters related to intellectual property and this is done by means of the *Patent journal*.

The journal is published monthly and covers South African patents, trademarks, designs, and copyright in cinematograph films. The journal contains the abstracts of patents which have recently been granted. It also includes a list of provisional patent applications which have recently been filed. Additional information include applications to amend granted patents, lapsed patents which have been restored and other matters related to patents, trademarks, designs and copyright in cinematograph films. Each issue of the Patent journal has a brief index. The index refers to that specific issue only, and indexes do not cumulate.

9.6.4 Statutes and law reports

The Statutes are parliamentary publications, and they are published in the *Government gazette* and any alterations or amendments to existing laws are also published in this way. This is done to inform the citizens of a country. It is, however, not sensible to have all the laws and their amendments spread over thousands of different copies of the *Government gazette*. There is one source where they are consolidated and published together: the *Statutes of the Republic of South Africa*.

The Statutes are published on behalf of the government by three major commercial publishers which specialise in legal publications: Juta and LexisNexis, and Sabinet. The Statutes are also available electronically from Juta (https://juta.co.za/), LexisNexis (http://www.lexisnexis.co.za/), and Sabinet (https://www.sabinet.co.za/).

The Statutes are also published in a soft-cover set of seven bound volumes by *Juta as Juta's Statutes of South Africa*. There are also law reports. Cases which have been tried in the various divisions of the Supreme Court are important

for the legal profession, since the rulings of the court are an indication of the way in which the Statutes of the country are interpreted. These law reports are published by both Butterworth's and Juta. Have a look at:

South African law reports. 1947–. Cape Town: Juta.

Jutastat (the section of Juta which deals with electronic publications) and LexisNexis South Africa both publish law reports in electronic form as well, including various indexes to the law reports. NetLaw (Sabinet's South African legislation service) provides access to all updated and consolidated South African Principal Acts, Rules and Regulations since 1910. These are updated daily with new legislation or amendments, as they are released.

Following are useful websites:

LexisNexis South Africa
http://www.lexisnexis.co.za

Juta & Co
http://www.juta.co.za

Jutastat
http://www.jutastat.com

Sabinet
http://www.sabinet.co.za

With regard to more recent official publications, the *South African national bibliography* provides a degree of bibliographic control, but not all official publications are received on legal deposit by the NLSA. ISAP indexes the most-used government publications which appear in a series. NISC's *South African studies* can also be used, as some of its databases do include official publications.

9.7 INTERGOVERNMENTAL ORGANISATIONS

Intergovernmental organisations comprise representatives from various countries which are acting together, such as the United Nations (UN), Unesco and the Organisation of African Unity (OAU). These organisations strive towards regional and worldwide economic, social and/or political cooperation to improve conditions in member countries. The activities of the organisations are undertaken through meetings, committees, and research projects. Various information sources result from these activities: discussions held at meetings, proceedings of meetings, and research reports.

Like governments, these organisations are in a position to collect extensive data and provide detailed information sources such as yearbooks. The websites of intergovernmental organisations usually provide details of their latest official publications.

9.8 COLLECTIONS OF OFFICIAL PUBLICATIONS IN SOUTH AFRICA

Large libraries usually organise their official publications in special collections together with their particular bibliographic control tools, including separate catalogues. This separation often results in the underutilisation of official publications, since they are regarded as different and even daunting by users

who prefer to consult more accessible and familiar reference and information sources in the main collection. An advantage of housing official publications in a section of their own is that the information professionals in charge of making the collection accessible to the users become highly specialised and skilled in the field of official publications and tend to have a greater appreciation of the information value of the publications.

9.8.1 Official Publications Section of the NLSA

The NLSA division in Pretoria has a large Official Publications Section which houses not only South African government publications, but also those of other countries. It has a huge collection of USA government publications which are received on exchange, some of which date back to 1864. The extensive collection includes hard copy and electronic forms, and covers an exceptionally wide range of publications. Some examples are debates of the USA Congress and Senate, scientific and technical reports of NASA (National Aeronautics Space Administration), reports from the CIA (Central Intelligence Agency), African Union (AU) and so forth.

The NLSA also has collections of information sources issued by intergovernmental organisations. It is a depository library for receiving publications from the United Nations, and has a comprehensive collection of UN documents.

9.8.2 Official Publications Depositories (OPDs)

An innovation of the Legal Deposit Act, No 54 of 1997 is the establishment of Official Publications Depositories (OPDs), where copies of all South African official publications are to be kept. The intention is to have at least one OPD in each of the nine provinces. The duties of the OPDs are similar to those of the legal deposit libraries. The intension is that OPDs serve as central points for promoting public awareness of government information and providing access to this. The role of the OPDs in South Africa is usually linked to democracy and freedom of information which empower the citizens of the country to have access to government information.

9.9 SUMMARY

We have discussed a number of South African official publications. These relate to the legislative, executive and judicial functions of the country's government. You also know about the OPDs, and understand the importance of their role in ensuring access to government information. In addition, you have become acquainted with international official publications. These do not relate to one particular government, but to international bodies representing various countries. Most government information and many official publications are accessible on the internet today, and you have learnt about a few important South African government websites.

You have seen how official publications have particular characteristics which make them somewhat different from the reference sources we have looked at in earlier units. Official publications are regarded as grey literature, and you will study the concept of grey literature in greater detail in the next study unit.

For more information on online, electronic, internet government publications, consult the following web sites:

Recent gazette publications by the Parliamentary Monitoring Group (PMG):
http://www.pmg.org.za/gazettes

South Africa official publications:

http://www.gov.za/
http://www.polity.org.za/
http://www.parliament.gov.za/live/index.php
http://www.statssa.gov.za
http://www.gcis.gov.za/content/resourcecentre/sa-info/yearbook
http://www.agsa.co.za
http://www.doj.gov.za/trc/index/html

South African government information (FAQs)
http://www.info.gov.za/faq/documents.htm

National gazettes
http://www.greengazette.co.za/pubs/national_gazettes

Official government tenders
http://www.greengazette.co.za/pubs/tender_bulletins

The Unisa library subscribes to most of these resources online. Please use the library online catalogue or website to get full text access to these official publications or to request the printed versions.

ACTIVITIES

1. What is an official publication?
2. What is the information value of an official publication?
3. Distinguish between four types of South African official publications.

LEARNING UNIT 10

GREY LITERATURE

10.1 INTRODUCTION

Grey literature refers to information sources that are essentially non-trade material – publications that are usually not available via the commercial publishing trade. In other words, grey literature is literature that cannot be bought in bookstores. In the previous learning unit you learnt about official publications, which are usually regarded as belonging to the category of grey literature. In this learning unit, we shall discuss other types of grey literature, such as theses, reports, conference records, patents and standards. You will learn about the distinguishing characteristics of grey literature. After this, we shall look in detail at the five major types of grey literature. You will also be briefly introduced to various other forms of grey literature, including trade literature, translations, manuscripts and ephemera.

OUTCOMES

After you have worked through this learning unit, you should be able to:

- define grey literature and identify and explain the major types of grey literature
- explain the primary information value of theses
- explain the primary information value of reports
- explain the primary information value and the different types of conference records
- explain the primary information value of patents and standards
- explain the primary information value and different types of trade literature
- explain the concept of "electronic grey literature" and identify electronic grey literature

10.2 DEFINITION AND CHARACTERISTICS OF GREY LITERATURE

Grey literature includes several types of information sources which are non-conventional when compared with reference sources such as dictionaries, yearbooks, atlases, collected biographies and so on. The concept of grey literature is used to describe a wide range of information sources not available through the normal bookselling channels. In other words, these information sources are non-trade material. Grey literature include trial registries, conference abstracts, books, dissertations, monographs, and reports by government agencies, academics, business and industry (Balshem et al 2013). Raamkumar et al (2015) defines grey literature as information produced on all levels of government, academia, business and industry; in electronic and print format; and not controlled by commercial publishing. While trade material is produced by commercial publishers who edit, set, print and distribute, grey literature is often produced by organisations whose main aim is to make a record of the information and distribute it to interested stakeholders. There is now an enormous amount of

grey literature available on the internet, thus increasing its availability. In all its forms (hard copy, microform and electronic) grey literature provides primary information, and the various types of grey literature are therefore important information sources.

When you consider the information value of these types of sources you will soon realise that there are several issues which influence their accessibility as information sources. Since grey literature forms an important body of primary information sources, a number of organisations are paying particular attention to the compilation of bibliographic control tools. Nevertheless, bibliographic control problems are especially prevalent in the field of grey literature.

Many information sources that are disseminated today do not become available via the commercial publishing trade, but through any number of channels apart from publishing houses, for example national, provincial and local governments and their various departments and sections; public organisations such as educational institutions or research centres; associations for professions or trades; and statutory bodies and research councils. Sources such as theses and dissertations, reports, preprints, conference proceedings, symposia, patents, standards, government and other official publications, trade literature, house journals, translations, manuscripts and ephemera may usually be regarded as grey literature. These sources are seldom submitted for legal deposit, and they generally do not appear in major bibliographies such as national bibliographies. The result is that they are often difficult to identify and locate. In addition, many such sources are printed in limited quantities and distributed randomly by the issuing bodies.

The form in which these sources appear may be anything from a photocopied and stapled document to a high-quality bound volume. Today a great deal of attention is paid to grey literature, owing to the increased awareness of the amount of important **primary information** which is contained in these sources.

The primary information has come about as a result of research, experiments, surveys and investigations. This kind of information may not be available elsewhere. The information may be so new that it has not yet been incorporated in more conventional sources, or it may be so specialised that it is not commercially viable to publish it in the conventional manner. Increasingly, grey literature is being published on the internet.

KEY TERMINOLOGY

The following are some of the terms used in grey literature. You will find these terms explained in the compulsory prescribed reading.

classified report	interim report	R&D report
commercial publishing trade	manuscript	research report
conference paper	non-trade	standard
conference records	non-conventional	standardisation
dissertation	patent	symposium
electronic grey literature	patent specification	thesis
ephemera	patent office	trade literature
final report	pre-print	translation
grey literature proceedings		

10.3 GENERAL

You may want to give yourself extra time to work through this learning unit, since it does contain a lot of information and many of the concepts may well be new to you. However, do not let the strange terminology put you off. Read the unit through once to understand what each source essentially consists of. Then read through the unit a second time. Concentrate on the information value and bibliographic control of these sources, since it is these two aspects that are of particular importance in reference work. While you are reading the first section which introduces you to grey literature, think back to the government publications you studied in the previous unit. Try to assess why official publications are also regarded as grey literature.

10.4 THESES AND DISSERTATIONS

A thesis or dissertation is the report of an academic research project undertaken by a student to qualify for a degree. The author of a theses or dissertation is a student who has undertaken research and reported the findings and conclusions in a formal document. They are part of the requirements for a higher degree (e.g. a dissertation for a master's degree, and a thesis for a doctoral degree). The physical make-up of theses and dissertations are simple: it usually consists of printed pages bound together in a plain binding with the name of the student and the title of the project embossed on the spine and cover of the volume.

10.4.1 Information value

Theses and dissertations are primary sources of information. They contain the reports of original research, investigations, experiments and surveys. A thesis must demonstrate that the student has made an original contribution to existing knowledge. It therefore provides new information which extends the existing knowledge in the subject field. They also contain extensive bibliographies and footnotes that list sources relevant to the particular subject field. Since theses tend to relate the very narrow subject areas, the bibliographies may prove to be useful reference sources. Some theses and dissertations are eventually reworked and appear as commercial books, or are published as articles in scientific journals, or may be presented as papers at conferences.

10.4.2 Registering completed research and research in progress

A researcher planning a new project must first ensure that the proposed project has not already been studied or is not in the process of being investigated. If there were no means of establishing what research has been done or is being done, there would be large-scale duplication of research projects, resulting in wasted time, effort and money. For this reason it is desirable to maintain central registers of all research projects, both completed and in progress, in a country. Institutions involved in research register the titles of new research projects, and later announce the completion of the projects.

Two main types of bibliography are necessary to identify information related to theses and dissertations: bibliographies that list **research in progress** and bibliographies that list **completed research**.

NEXUS database system. Pretoria: National Research Foundation. http://nexus.nrf.ac.za/

The NRF in Pretoria maintains the *NEXUS database system*, which promotes research in South Africa. One of the databases is of completed and current research projects in the human sciences in South Africa. *NEXUS* contains several databases, including:

10.4.2.1 *Current and completed research projects database* provides bibliographic descriptions of over 70 000 research projects, including master's dissertations and doctoral theses. Where the projects were not written in English, the English titles are given. Abstracts are included. Details are collected from universities and other institutions and organisations that register proposed and completed research projects with the NRF.
10.4.2.2 *Talk conference database* contains details on forthcoming national and international conferences in the social sciences and humanities.
10.4.2.3 *Human sciences research organisations database* has information on research organisations.
10.4.2.4 *Human sciences professional associations database* lists professional organisations.
10.4.2.5 *Human sciences research networking database* lists biographical profiles of research experts.
10.4.2.6 Research methodology teachers and courses database.
10.4.2.7 *Periodical submissions requirements database.*

Any person or organisation who plans to undertake a research project in the human sciences can thus search the NEXUS database system online, or alternatively, approach the NRF to request a printout on the proposed study field from the database.

There is also an index of current and completed research projects undertaken at South African technikons, called *Navtech*. It is part of *SACat Plus* on Sabinet's MagNet.

10.5 REPORTS

A report provides a final written description of a completed research project, or an interim description of progress made towards the completion of a research project. Today most organisations are involved in research. There are many large organisations that are concerned essentially with research, for example the National Research Foundation (NRF), the Council for Scientific and Industrial Research (CSIR), the Human Sciences Research Council (HSRC), the Medical Research Council (MRC), the Agricultural Research Council (ARC), the Council of Geoscience, the Council for Mineral Technology (Mintek), and the Atomic Energy Corporation (AEC). Such organisations issue large numbers of reports and tend to standardise the appearance of their reports by issuing them in the same size and bound in a similar fashion.

A report which provides an account of a particular project which has completed, and which describes the results of the project, is called a **final report**. A report which provides a provisional description of work which has been done towards a project which is not yet complete is called an **interim report**. Many reports contain confidential information and to prevent this information from becom-

ing public, distribution of the reports is limited to those people for whom they have relevance. Such reports are called **classified reports**. A common feature of a report is its **report number**, or code reference number. Each separate report is identified by a unique number and/or a series code.

10.5.1 Types of report

We have already mentioned that reports may be referred to as interim, final, or classified. A common phrase used when discussing reports is "research and development", usually referred to as R&D. **R&D reports** are usually interim reports which indicate the current stage of progress on a research project. A **technical report** contains information of an essentially technical nature; an **industrial report** contains information of an industrial nature; a **scientific report** contains information of a scientific nature; a **law report** contains information of a legal nature; and **market research reports** contain information gathered through observation or interrogation of representative samples of people or firms regarding certain products or services. Committees and commissions which have been set up to investigate a particular problem issue **committee reports** and c**ommission reports**. **Annual reports** are reports that describe the general activities of a department, a society, institution, or any other body, for a particular year.

10.5.2 Information value

Reports are primary sources and R&D reports are especially valuable. Access to the latest research results is vital in many fields. Scientists and researchers need to be aware of what research is being undertaken in their specific fields to prevent duplication of research. They also need to know about current research which has expanded the boundaries of knowledge in their fields, so that they may update their own knowledge and use this as a basis for their own research activities.

Information contained in reports includes descriptions, tables, figures and graphs relating to investigations, surveys, experiments and studies. Reports do not necessarily contain only successful results – if a project has failed to achieve what was intended, this failure will also be reported. The failure may prove that a particular process or technique does not work and should therefore be avoided, or it may encourage further research into discovering why the process did not work.

Many issuing bodies do not pay adequate attention to basic bibliographic information in their reports, which is necessary to identify reports for bibliographic control purposes. Most reports are not subject to legal deposit, resulting in very few reports being included in national bibliographies. Significant reports are sometimes included in abstract journals.

10.6 CONFERENCE RECORDS

A conference is a meeting at which particular topics are discussed by a number of invited speakers. Conference records are any information sources which result from a conference. The papers presented at a conference may be combined and

made available as single information sources, often called **conference proceedings**. Conference proceedings are considered as grey literature in the medical, social sciences and humanities disciplines, while the computer science and engineering disciplines consider them as scientific materials (Raamkumar et al, 2015). You may also come across other words used in the subject literature: "symposium", "congress", "seminar", "colloquium", and "workshop".

10.6.1 Sources emanating from conferences

The conference proceedings become a record of the information which was presented at the conference. The proceedings may not be the only record of information which was presented at a conference, as it is possible for papers presented to appear in other forms, for example **preprints** (papers made available before the start of the conference); official **transactions** (papers incorporated in other information sources compiled by the conference organising body); submissions, decisions and resolutions taken at conferences; papers may also appear as reports or articles in scientific journals; **announcement notices** (these include the call for papers; the programme).

Programmes provide more details about the speakers, their papers, and the times of the various presentations and different sessions. Programmes are often made available on the internet from the website for the conference.

10.6.2 Information value

The most valuable conference records are those which include the papers presented at the conference, in other words, the proceedings. If the information contained in a paper is the result of investigation and research, and if this information has not yet appeared in another form (e.g. a report or a thesis), the paper may be regarded as a primary source of information. The announcements that advertise conferences may also be used as information sources. Knowledge of future conferences, and the topics to be discussed, is an important part of keeping up with trends and developments in certain fields. Here the internet is used extensively, especially in the form of mailing lists and newsgroups.

10.7 PATENTS

A patent is a monopoly which is granted by a state to an inventor, or someone who has acquired the right to apply for a patent from the inventor. The patent provides the patentee with a form of protection, thus allowing the whole profit and advantage of the invention to accrue to the patentee for the term of the patent. We can therefore say that a patent represents an agreement between a state and an applicant for the patent. The applicant may be the inventor, or another person (natural or legal) who has acquired the right from the inventor. The patent entitles the applicant to be the sole exploiter of the invention for a limited period (the term of the patent). In South Africa the term of a patent is 20 years. Once the term of the patent has expired, the invention becomes open to anyone to benefit from it.

Each country has a Patent Office which administers its patents in terms of the legislation of that state. All patent applications are filed at the South African

Patent Office (in Pretoria). Patents are applied for and granted in terms of the Patents Act, No 57 of 1978.

Two types of patent application may be filed in South Africa. A **provisional patent application** has a temporary term of one year. After that a **complete patent** application may be filed. The latter application, if granted, is what leads to a patent. The application for a patent consists of particular documentation which contains the information we are interested in.

10.7.1 Contents of a patent

A patent application has three parts:

10.7.1.1 The application form, which contains details such as the name of the applicant, the inventor, the title of the invention, the date on which the application was filed, and other priority information.
10.7.1.2 Documents which support the applicant's right to apply for the patent.
10.7.1.3 Information on the invention. This part is contained in a document called the patent specification, which describes the patent.

The specification describes the invention in detail and explains how the proposed invention may be used, and required drawings are attached. The application is also accompanied by a separate abstract of the patent. The abstracts are important for information searches, since they provide a summary of the details of the patent.

10.7.2 Information value

Patents contain a lot of technical information and are used in essence as information sources in the commercial, industrial, scientific and technological fields. Knowledge of current patents is important for research and development, and provides a basis for further inventions. This awareness prevents duplication of research, and also enables researchers to use existing inventions as springboards for further new inventions. By their very nature patents are primary information sources: for a patent to be valid, it must provide new of unique information at the date of filing.

Patents have the equivalent of bibliographic descriptions. Each patent application filed at the Patent Office is allocated a number, and a Patent Register is kept of these. Against each number, bibliographic details of the patent application are recorded. Patents are grouped into classes, according to the subject matter of the invention. A subject class is decided according to the rules of the *International Patent Classification (IPC)* system, which is administered by the World Intellectual Property Organisation (WIPO). In addition, a patent may be allocated a code number, assigned according to the rules suggested by the Committee for International Cooperation in Information Retrieval among Examining Patent Offices (ICIREPAT). The IPC number and the code number which identify a patent are internationally recognisable, and by studying the classification and code numbers a specialist may be aware of the essential coverage of the patent.

10.7.3 Patent searches

A patent search is a search through the patents of one or many countries. There are many reasons for doing patent searches: one may wish to establish the existence, or non-existence, of a specific patent in a particular country; one may wish to find out whether an existing patent has lapsed or expired; one may wish to gather patent information in a specific subject area, and so on. Patent searches are made possible by bibliographic control tools which enable us to become aware of, identify and locate patents (see par 11.8.2). In South Africa, patents are announced in the Patent Journal, which is an official publication.

10.8 STANDARDS

A standard is a document that provides rules, guidelines or characteristics for activities or results. The standards are established by consensus of interested parties and approved by a recognised body. Standards are aimed at achieving an optimum degree of order in a given context, through their common and repeated use. The purpose of setting standards is to ensure safety, uniformity and reliability in manufactured goods or other fields such as terminology, dimensions, measurements, installations, services rendered, or codes of behaviour.

The types of standard with which we are essentially concerned in the information profession are those which are published by national or international organisations. The South African Bureau of Standards (SABS) is a national organisation involved in developing and publishing standards for goods produced in South Africa (https://www.sabs.co.za/). We are all familiar with the SABS certification marks seen on many goods.

Standardisation in manufacturing entails uniformity in a number of different areas, such as the

- terminology used to describe the product and its manufacture
- actual manufacturing process
- dimensions of the components and the product (proportion, length, height, mass, size, etc)
- quality of the components and product (safety, durability, performance, etc)
- methods by which the components and product are tested for conformity and quality
- way in which the product is to be used by the consumer

The variety of manufactured items which lend themselves to standardisation is enormous, and some examples are engineering components and machines, building materials, chemicals, textiles and packaging.

10.8.1 Standards organisations

For a standard to be compiled and utilised in a country (and eventually internationally), there needs to be cooperation and consensus between a national central administrating organisation and other parties involved or interested in the manufacture and consumption of a product. The SABS in Pretoria undertakes this national activity in South Africa and is involved in the production, publication, selling, and international dissemination of South African standards.

Examples of other national standards organisations are the British Standards Institution (BSI) and the American National Standards Institute (ANSI). A major international standards organisation is the International Organisation for Standardisation (ISO), which has published more than 21 000 standards. ISO aims at developing standards which are accepted worldwide, and ensuring that both international and national standards are easily accessible in various countries. ISO is therefore involved not only in developing standards, but also in furthering their bibliographic control. There are 162 member countries which provide ISO with information on their standards (http://www.iso.org/iso/home/about.htm). Through exchange agreements, the member countries ensure that their own national standards are available worldwide and that they receive the standards of other countries.

The International Electrotechnical Commission (IEC) is another major international organisation which is active in the development and dissemination of standards. The IEC specialises in the field of electrical and electronic engineering (http://www.iec.ch/). There are a number of independent organisations which concentrate on standards in a specific field. Their activities may be national or international. Examples of such independent standards organisations are the Society of Automotive Engineers, the American Society for Testing and Materials, the Institute of Petroleum, and the International Telecommunications Union.

10.8.1.1 SABS Information Centre

The Standards Information Centre at the SABS head office in Pretoria has the largest reference collection of standards in South Africa. The centre provides a free information service to anyone requiring information on standards. As a member of ISO, SABS participates in the international exchange of standards and, apart from South African standards, the Standards Information Centre houses standards of ISO, IEC, BSI and most other countries. The centre also holds bibliographic control tools for the various collections of standards. Annual catalogues and other products issued by the various organisations are important information sources. The centre uses a number of hard copy and electronic databases to retrieve information about standards worldwide (https://www.sabs.co.za/index.asp).

10.8.2 Information value

The type of information found in standard documents relates in essence to the manner in which the product should be manufactured, measured, tested and so on. Although we are concentrating on products here for the sake of simplicity, it should be remembered that standards may also be set for other aspects such as services, terminology, behaviour, dimensions and measurements. ISO, for example, has set many standards which concern people in the information field. There are ISO standards for bibliographic references, microforms, abstracts, ISBNs, the abbreviations of titles of periodicals, the requirements for binding materials and methods used in the manufacturing of books, and many more.

The standard will normally have bibliographic details on the cover and/or front page to assist in its identification. Details such as the name and address of the issuing organisation, the title of the specification, a subject classification number, and an **identifying code number** are given. The code number is usually

alphanumeric, and may also be used to identify the issuing organisation: SABS standards have codes which begin with the initials SABS, followed by a number. Standards are most often referred to by their code number, as opposed to their title. When standards are revised, new standard documents, which replace the previous standard documents, are issued.

Most standards organisations issue annual catalogues of their standards and these catalogues are then updated by regular bulletins or newsletters.

10.9 OTHER TYPES OF GREY LITERATURE

There are many categories of non-trade material. Some of them are covered briefly, merely to broaden our concept of what may be regarded as grey literature. These examples share the usual problems associated with grey literature, such as not being available through normal bookselling channels, selective or haphazard distribution, lack of legal deposit and resulting unsatisfactory bibliographic control.

10.9.1 Trade literature

Trade literature encompasses any sources that are issued by a company to make its activities known. House journals and annual reports may be categorised as trade literature, but the most prolific sources of trade literature are the advertising pamphlets, "catalogues", booklets and brochures which companies issue to make their products and services known to potential buyers. Trade literature is usually distributed by mailing the sources, by inserting the literature in periodicals or newspapers, making it available at retail stores, trade exhibitions and conferences, or placing information on the internet. Trade literature is an important source of information in technical fields where there is strong competition for the marketing of technical products, and it is important for people in these fields to be aware of which products are available for their needs.

10.9.2 Translations

A translation is a source which has been translated from its original language into another language. If it is a book which has been translated, the source would generally not be regarded as grey literature. However, fair numbers of other source types – periodical articles especially – become available as translations. It is common for organisations to commission a translation of a particular source, either through a translation service or by using staff attached to the organisation. These translations usually take the form of typed pages, and although they duplicate the information contained in the original source, they become sources in their own right and as such are important sources of information.

10.9.3 Manuscripts

A manuscript is a source which is handwritten or typed. The manuscript may be the only representation of that particular source, or it may be the original source from which additional copies were eventually produced. Manuscripts are sources of primary information. Examples are diaries, letters, authors' notebooks, authors' original drafts or drafts of a source, artists' sketchbooks,

music scores, and business sources such as account books, invoices and contracts. Manuscripts are important for their historical value – many manuscripts have become collectors' items. They are commonly collected by archives.

Manuscripts are important sources of primary information in virtually any field and are of special interest to biographers, historians and researchers. Manuscripts may also provide general information on a particular period in history: old account books would give an idea of what certain goods cost in years gone by. An old marriage register, or a recent birth registration record, also provides information in manuscript form.

10.9.4 Ephemera

The word "ephemera" is used to describe an extremely wide variety of sources containing verbal information and/or illustrations, produced by means of printing or illustrative processes. What distinguishes these from other sources is that when they were issued they were not intended to become permanent sources of information. Ephemera usually relate to events and items of current interest, for example political meetings, theatre performances, meetings of particular groups of people, and social conditions. Examples are: posters, notices, political handouts, theatre programmes, theatre tickets, handbills, leaflets, postcards, menus, calendars, photographs, permits and printed serviettes. Sources categorised as ephemera are primary information sources. The parameters of what is to be included as ephemera are determined by whoever is looking for, or collecting, the sources.

10.10 ELECTRONIC GREY LITERATURE AND THE INTERNET

We can consider the combination of internet and grey literature in several ways. First, much of the information published on the internet is ephemeral, and so are many websites. Resources on the internet can be volatile; many come and go. Second, the internet has made it possible to publish sources less formally and virtually anyone can make use of the medium. There is plenty of non-trade material on the internet. Some of this duplicates grey literature in the other forms in which it appears; in other cases the electronic form is the only source. Thus we may put forward a new category of grey literature, namely *electronic grey literature.* An important aspect of the internet and grey literature is that the major agencies associated with grey literature – notably in its provision and bibliographic control – now have websites, and these can be used to find details about resources and services.

10.11 GREYNET

GreyNet (the Grey Literature Network Service) is based in Amsterdam in the Netherlands (http://www.greynet.org/). It originated independently, but has now become a branch of the UK publishing house MCB University Press. GreyNet does not concentrate on publishing grey literature, but rather on promoting the use and accessibility of grey literature. This is done by means of encouraging international cooperation, organising conferences, publishing research findings, providing translation and abstracting services, and establishing a global information referral database. GreyNet takes particular note of the

changes which have been brought about by the publication of sources on the internet. GreyNet is also used by commercial publishers and other information producers for making their sources available electronically, either linked to websites or via vendors who use the network to distribute grey literature (http://www.greylit.org/)

10.12 SUMMARY

In this learning unit, you learnt about the distinguishing features of grey literature and studied five main types in detail: theses (which are often called dissertations), reports, conference records, patents and standards. Remember that official publications are also regarded as grey literature. In learning about these "non-trade" information sources you have concentrated on their information value, since they provide primary information which might not be available elsewhere. You also know about the bibliographic control problems related to grey literature and that access to these primary information sources must be improved.

ACTIVITIES

1. What is grey literature?
2. What is the information value of grey literature?
3. Name and discuss five types of grey literature.

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