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What are Speech, Language and Literacy?

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Objectives

In this chapter, you will learn about:

- speech, language and literacy
- the languages of the world
- Australia’s and New Zealand’s linguistic landscapes
- indigenous languages of Australia and New Zealand
- the role and importance of speech, language and literacy in society
- difficulties associated with speech, language and literacy
- professionals who focus on communication: educators, speech pathologists and linguists
- how to use this book
- the children and adults who are profiled throughout this book as video case studies
- resources to extend your understanding of speech, language and literacy.

Communication is part of everyone’s daily life and having the opportunity and means to communicate is a basic human right (International Communication Project, 2014). Communication may be in written, spoken, symbolic or gestural form, but is always deeply connected to how we perceive ourselves and how we share this perception

with others. Through successful communicative interactions, we experience a sense of empowerment and dignity, and we express our identity and connect with others. Think of instances when you may have lost your voice due to a health condition, been unable to write/type messages because of an injured hand or been in an environment where you haven't spoken the same language as those around you. How did you feel? What impact did it have? Oftentimes, it's not until we are unable to communicate that we recognise the essential role communication has in enabling us to work, play and socialise with others in our environment.

In this chapter, we describe three components of communication: speech, language and literacy. We identify features of each that are unique to the Australian and New Zealand contexts and outline ways that our unique style of communication has developed over time. We also discuss the importance of communication in society, including the role that it plays in our development of other skills and participation in life activities, and the impact that communication difficulties may have on development and participation. Next, we introduce three professional groups that work in the field of communication—educators, speech pathologists and linguists—and list resources for further information about communication development and use. Finally, we describe how this book works and introduce you to the children, adolescents and adults who have participated in the video case studies that accompany this book.

Definitions of speech, language and literacy

Communication is a process that involves us being able to perceive and understand the messages expressed by others, as well as being able to plan and produce our own messages. **Speech** is the means by which we communicate messages orally; however, we can communicate messages in other forms, including via written text. **Language** refers to the content that we communicate in our messages and the rules governing how we do so. **Literacy** refers to reading and creating written messages.

Models of speech and language processing are useful for helping us to conceptualise the steps involved in understanding and producing spoken and written communication, as these models detail the components of the speech, language and literacy systems and the ways that these interact in order to enable effective communication (Ellis & Young, 1996; Kay, Lesser & Coltheart, 1996; Stackhouse & Wells, 1997). An example of a cognitive neuropsychological model of speech and language processing from McCormack, Jacobs and Washington (2012) is presented in Figure 1.1.

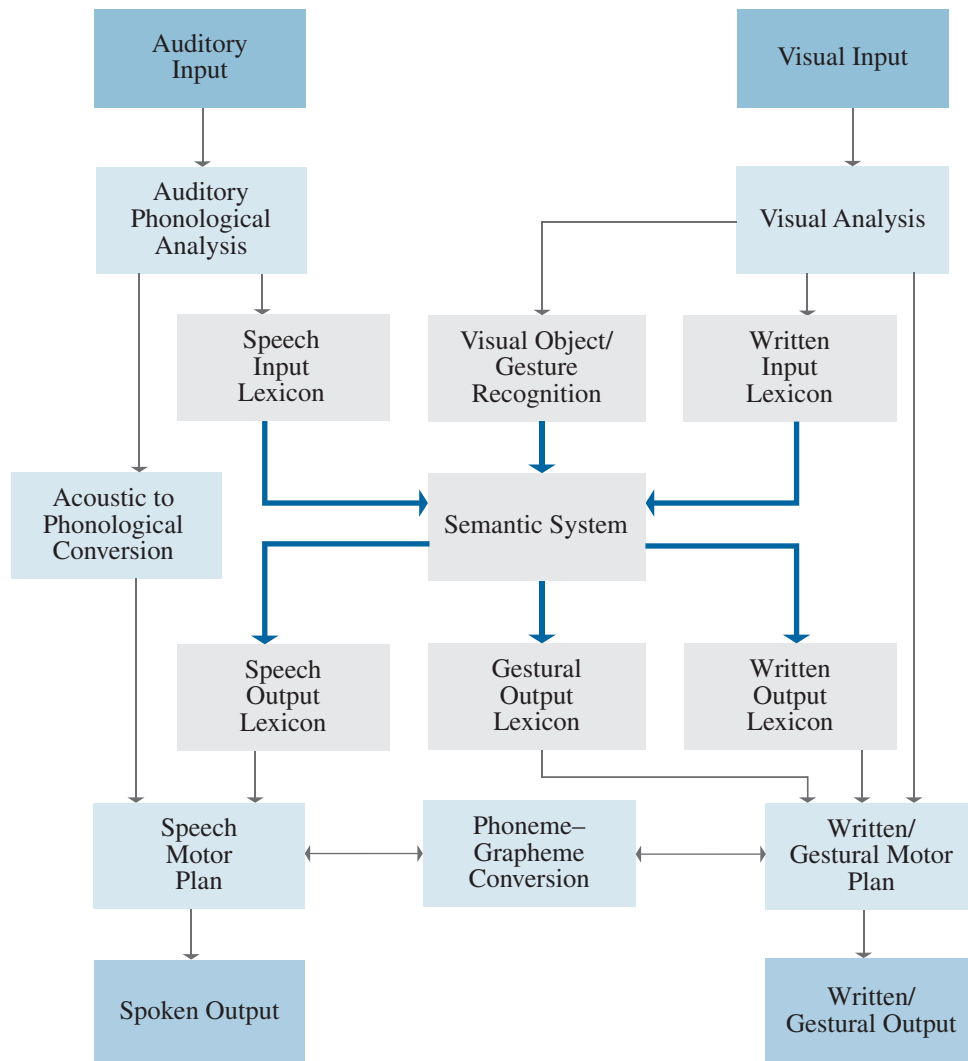


Figure 1.1 Cognitive neuropsychological model of the language processing system. Reprinted with permission from McCormack, J., Jacobs, D., & Washington, K. (2012). Specific mental functions—Language (b167). In A. Majnemer (Ed.), *Measures for children with developmental disabilities: Framed by the ICF-CY* (pp. 129–153). London: Mac Keith Press (p. 130) (adapted from Kay, Lesser & Coltheart, 1996 and Ellis & Young, 1996).

Models of speech and language processing, such as the one presented in Figure 1.1, recognise not only the steps involved in communication, but also the multiple modes of communication that exist. In the sections that follow, we describe speech, language and literacy in more detail, guided by the cognitive neuropsychological framework presented in Figure 1.1.

Phonetics refers to the production and perception of speech sounds. This linguistic science also includes study of articulation, aerodynamics, acoustics, sociophonetics and neurophonetics.

Phonology is the study of the rules or systems of speech sounds within languages.

Form refers to the knowledge and skills required to produce and understand grammatical sentences and includes phonology (sound combinations), morphology (grammatical units) and syntax (sentence structure).

Morphology refers to grammatical units.

Syntax refers to sentence structure.

Content refers to the knowledge and skills required to use and understand meaningful and appropriate vocabulary and includes semantics (vocabulary).

Speech

Speech refers to the perception, planning and production of speech sounds and has two elements: phonetics and phonology. **Phonetics** comprises the knowledge and skills required for the perception and production of speech sounds, while **phonology** comprises the knowledge and skills required to understand and use linguistically appropriate speech sound rules.

Speech perception involves auditory phonological analysis. That is, we need to discriminate between sensory information (e.g. an auditory signal) that potentially communicates language meaning and other, non-language sensory information (e.g. environmental sounds). Stackhouse and Wells (1997) refer to this as speech/non-speech discrimination. In order to understand this spoken input, we also need to determine whether or not the speech sounds are familiar. Stackhouse and Wells refer to this as phonological recognition. In other words, can we recognise the spoken language that we can hear (based on the sounds, words and grammatical rules being used)? A monolingual English speaker might hear a speaker of another language talking and recognise that the sounds are communicating meaning, but be unable to understand the meaning being expressed. If we are familiar with the phonology (patterns of speech sounds), we can then attach meaning to the information we hear through accessing our speech input lexicon and semantic system. We draw on our knowledge of the sound combinations that we have heard (e.g. d-o-g) and our prior experiences of hearing that combination of sounds while playing with pets, viewing animal pictures and so on, in order to recognise the meaning associated with that sound combination. Stackhouse and Wells (1997) refer to this as accessing the phonological and semantic representations of the words.

Regardless of whether our spoken language consists of real or nonsense words, the production of speech requires a number of steps, just as the perception of speech does. Initially we need to conceptualise the message, then access and retrieve stored representations of the conceptualised information necessary to convey the message (e.g. the words and sound combinations present in our output lexicon). We then need to plan and implement the motor movements required to produce the sound combinations that will enable our chosen message to be expressed. The success of our motor plan and production requires that our articulators (e.g. tongue, lips, palate, teeth) are functional.

Language

Understanding and producing messages (communication) requires language. Language is the set of symbols (e.g. sounds, letters, words, gestures) and the rules for combining those symbols (e.g. syntax/sentence structure, pragmatics) that we

use to communicate with others in our environment. We can think of language as being comprised of three key areas: form, content and use (Bloom & Lahey, 1978). **Form** comprises the knowledge and skills required to produce and understand grammatical sentences. It includes knowledge and skills related to how sounds can be combined to form words, which is referred to as phonology, and how words are structured (e.g. prefixes, suffixes, plurals, past tense), which is referred to as **morphology**, as well as knowledge and skills related to sentence structure (e.g. phrases, clauses), which is referred to as **syntax**. **Content** comprises the knowledge and skills required to use and understand meaningful and appropriate vocabulary. It includes the knowledge and skills required to retain and retrieve words to make sense of what we hear and to generate intentional and successful messages. This is referred to as **semantics**. Finally, **use** refers to the knowledge and skills required for producing and understanding language appropriate to the context. This is referred to as **pragmatics**. In order for communication to be successful, speakers and listeners need to draw on each of these areas (form, content and use) as well as other skills including memory, attention, general knowledge and experience.

Language may be communicated in spoken, written, manual (sign language) or symbolic (gestural, pictorial) formats. Regardless of the mode of communication, the process of understanding and producing messages requires multiple steps. That is, in order for us to understand the spoken or written messages of someone else, we need to receive the message, analyse the information it contains (the form, content and use) and assign meaning to it. In order to produce a message for others, we need to determine what meaning we want to express, select a mode of communication, and establish and carry out the motor plan. To do so requires us to select appropriate vocabulary (from within our semantic system) and to determine how to combine the vocabulary into a meaningful structure. This in turn requires us to understand the rules governing the language that we are using (our syntactic knowledge). For instance, in English, our sentences must contain one main **clause** (a group of words including a **verb** e.g. ‘the people in the audience *are laughing*’) and often contain **phrases** (meaningful groups of words e.g. ‘the people in the audience’) as part of that clause.

Literacy

Literacy (or **literacies**) involves processes involved in **reading** (decoding and understanding written material) and **writing** (creating and producing written material). As shown in Figure 1.1, the first step in reading involves visual analysis. That is, we need to discriminate between written information that potentially communicates language meaning and other, non-language written material

Semantics refers to the study of vocabulary and the meaning of words, utterances and sentences.

Use refers to the knowledge and skills required for producing and understanding language appropriate to the context and is also known as pragmatics.

Pragmatics refers to language in use, focusing on the social exchange of meanings.

A **clause** is another way of referring to a sentence.

This term is used to distinguish the main clause (a clause that can stand on its own) from an embedded clause (one contained within a main clause).

Phrases are words or groups of words that work together as a unit (e.g. *noun phrases* and *verb phrases*).

LANGUAGE	DIRECTION OF WRITING	DO YOU UNDERSTAND YOUR CHILD?
Khmer	Left to right	តើអ្នកយល់អំពីកូន របស់អ្នកទេ?
Korean	Left to right	당신은 당신의 아이를 이해합니까?
Malay	Left to right	Adakah anda memahami anak anda?
Polish	Left to right	Czy rozumiesz swoje dziecko?
Punjabi	Left to right	ਕੀ ਤੁਸੀਂ ਅਪਣੇ ਬੱਚੇ/ਬੱਚੀ ਨੂੰ ਸਮਝਦੇ ਹੋ?
Russian	Left to right	Понимаете ли Вашего ребёнка Вы?
Serbian	Left to right	Да ли ви разумете ваше дете?
Somali	Left to right	Adiga miyaad garan kartaa cunuggaaga?
Spanish	Left to right	¿Usted le entiende a su hijo/a?
Thai	Left to right	คุณฟังเข้าใจคำพูดของเด็กไหม
Turkish	Left to right	Çocuğunuzu anlayor musunuz?
Vietnamese	Left to right	Anh/chị có hiểu con mình không?
isiZulu	Left to right	Uyayizwa ingane yakho uma ikhuluma?

^aTranslations of this sentence are from the Intelligibility in Context Scale (ICS; McLeod, Harrison & McCormack, 2012) available in 60 languages from www.csu.edu.au/research/multilingual-speech/ics.

^bChinese and Japanese were traditionally written in columns going from top to bottom, with columns ordered from right to left.

The process of writing requires us to conceptualise the message, then access and retrieve stored representations of the conceptualised information necessary to convey the message (e.g. the words and letters present in our output lexicon). We then need to plan and implement the motor movements required to write the letters that enable our chosen message to be expressed.

Speech, language and literacy over the lifespan

Successful communication includes the production and comprehension of messages in spoken, gestural or written form. The first communicative interactions occur when babies' cries are responded to by their parents with hugs and attention. Cooing, babbling and sound play transform into first words around a child's first birthday. Words (which are not necessarily pronounced correctly) are added until children begin to make two-word sentences around their second birthdays. Throughout the preschool and school years, there is an expansion of children's ability to produce

speech sounds, vocabulary, grammatical structures, sentences and discourse of increasing length and complexity. Simultaneously, their competence in literacies moves from looking at pictures, turning pages in books and scribbling to reading and writing sophisticated texts. Completion of schooling and moving into the workforce, raising a family, engaging in leisure activities and travelling throughout the world provide the impetus for adults' continued vocabulary expansion and increasing sophistication in speech, language and literacy skills. These occur within the first language(s) and can also include the acquisition of skills in speech, language and literacy of additional languages. The important interaction between speech, language and literacy is discussed in Chapter 13 and Table 13.1 from that chapter summarises the key developmental stages of speech, language, reading and writing.

Speech, language and literacy: a world view

There are 7106 known living languages in the world (Lewis, Simons & Fennig, 2014a). While some of these languages exist in both spoken and written forms, many only exist in spoken forms and some only in manual forms (e.g. Australian Sign Language, known as Auslan). The five most commonly spoken **first** languages (L1) are:

- 1 Chinese: 33 countries, 1197 million speakers
- 2 Spanish: 31 countries, 414 million speakers
- 3 English: 99 countries, 335 million speakers
- 4 Hindi: 4 countries, 260 million speakers
- 5 Arabic: 60 countries, 237 million speakers (Lewis, Simons & Fennig, 2014b).

It is important to note that Modern Chinese is divided into 13 language/dialect groups including Mandarin/Putonghua, Wu, Xiang, Gan, Min, Hakka and Yue (including Cantonese). Similarly, Arabic is divided into 18 language/dialect groups including Algerian, Egyptian, Moroccan, Sudanese and Tunisian (Lewis et al., 2014b). The next most commonly spoken languages are, in order, Portuguese, Bengali, Russian, Japanese, Javanese, Lahnda (including Punjabi), German, Korean, French, Telugu, Marathi, Turkish, Tamil, Vietnamese, Urdu, Italian, Malay and Persian.

Although there are over 7000 languages in the world, only a few languages (0.1%) are considered to be **international** languages that are used in trade, knowledge exchange and policy (Lewis, Simons & Fennig, 2014c). For example, the official languages of the United Nations are Arabic, Chinese, English, French, Russian and Spanish (United Nations, 2014). Some languages are used in spoken and written forms at a **national** or **provincial** level in government and education (e.g. Turkish in Turkey). A large group of languages are considered to be **vigorous** (35.9%),

meaning that they are used in face-to-face communication across all generations but are not used in literature (e.g. Anindilyakwa, spoken on Groote Island in the Northern Territory of Australia) (Lewis et al., 2014c). Another group of languages are considered to be **developing** (29.9%), meaning that they are predominantly used in oral/manual form but there is also some literature written in the language (e.g. New Zealand Sign Language and Tiwi, spoken on Bathurst and Melville islands in the Northern Territory of Australia) (Lewis et al., 2014c).

Almost 20 per cent of the world's languages have been described as **endangered** and fall into the categories of threatened, shifting, moribund, nearly extinct and dormant (e.g. Wiradyuri/Wiradjuri, spoken across inland New South Wales, Australia) (Lewis et al., 2014c). UNESCO has published the Atlas of the World's Languages in Danger (Moseley, 2010); the online edition is available here: www.unesco.org/culture/languages-atlas/en/atlasmap.html. There are 108 Australian languages included in the Atlas as being in danger (e.g. Pitjantjatjara is listed as **vulnerable**, whereas Dharug and Wiradyuri are listed as **critically endangered**). Only one New Zealand language is included in the Atlas: te reo Māori is considered to be **vulnerable** (Moseley, 2010). There are numerous international efforts to save dying languages, including many revitalisation programs for Indigenous languages of Australia. For example, in response to the fact that all Aboriginal languages spoken within New South Wales are considered to be critically endangered, the New South Wales Government has been trialling Aboriginal Language and Culture Nests among five Aboriginal language groups: Gamilaraay; Gumbaynggirr; Bundjalung; Paarkintji/Barkindji; and Wiradyuri (NSW Government, 2013; Williams, 2013). We encourage you to explore some of the languages currently or traditionally used in your local area and to consider what you can do to support efforts to maintain indigenous culture and language.

Multilingualism

For the purpose of this chapter, multilingualism is defined as 'the ability to comprehend and/or produce two or more languages in oral, manual, or written form with at least a basic level of functional proficiency or use, regardless of the age at which the languages were learned' (International Expert Panel on Multilingual Children's Speech, 2012, p. 1). It has been estimated that over half of the world speaks more than one language and most of the world's children acquire two or more languages (Tucker, 1998). The documented cognitive and social benefits of multilingualism include increased skills in abstract and symbolic representation, attention, working memory, metalinguistic awareness and executive functioning (Adesope, Lavin, Thompson & Ungerleider, 2010; Bialystok, 2011; Gathercole et al., 2010; Nguyen & Astington, 2014).

World Englishes

English is a global language (Crystal, 1997). It has been suggested that English is the most commonly used second language (L2) in the world and soon there will be more second language (L2) speakers of English than L1 speakers (Graddol, 1997; NationsOnline, 2014). One reason for the predominance of English is its widespread use in international communication across the internet, diplomacy, business, aviation, sport, science and technology (Graddol, 1997). The differing varieties of spoken and written English are known as ‘world Englishes’ (Kachru, 1985). The linguist David Crystal describes world Englishes in the following interview: www.youtube.com/watch?v=2_q9b9YqGRY

Kachru (1985, 1992) defined English varieties using concentric circles, based on whether spoken English is considered to be a native, second or foreign language:

- The **inner circle** includes native language (ENL) varieties where English is the first language of the majority of the population (e.g. Australia, New Zealand, UK and USA).
- The **outer circle** includes second language (ESL) varieties within multilingual countries where English is the language of politics, media, law and higher education (e.g. Fiji, India, Papua New Guinea, Singapore).
- The **expanding circle** includes foreign language (EFL) varieties where English does not have an official function, but is used in university education, business and technology (e.g. Israel, Egypt, China, Brazil).

Schneider (2003) expanded Kachru’s model by describing five phases of English dialect development. These phases can be applied to any of the three circles described by Kachru (1992):

- **foundation:** English is introduced as a result of colonial expansion and missionary activities; for example, the introduction of English to Tonga, Fiji and Hawaii by Christian missionaries in the 1800s.
- **exonormative stabilisation:** English is stabilised as a regularly spoken language due to (mostly) British dominance.
- **nativisation:** English undergoes a vibrant cultural and linguistic transformation as it is owned by both the settlers and the indigenous people. There is a weakening of ties to the mother country.
- **endormative stabilisation:** English is accepted positively as the local language.
- **differentiation:** English dialects are created based on ethnic, regional or social groups; for example, Australian Aboriginal English and Māori English.

These five phases of English dialect development outlined by Schneider (2003) can be applied to the development of Australian English. English was introduced to Australia in 1788 when the First Fleet arrived in Sydney (foundation). It was regularly spoken throughout the 1800s and the early 1900s, when the influence of English as spoken in the countries of the settlers (e.g. England, Scotland and Ireland) was apparent (Taylor, 2001); however, a unique vocabulary and pronunciation had developed by the 1830s (Fritz, 2007) (exonormative stabilisation). In 1911, Walter Churchill (an American linguist) described Australian English as ‘the most brutal maltreatment that has ever been inflicted on the mother-tongue of the great English nations’ (Churchill, 1911, p. 14), providing support for the idea that Australian English had undergone a cultural and linguistic transformation (nativisation). The First World War and the rise of national identity through the Australian and New Zealand Army Corps (ANZACs) brought weakening of ties to the mother country and national pride, where Australian English was accepted positively as the local language (endormative stabilisation). Finally, Australian English dialects have been created based on ethnic (Australian Aboriginal English, ethnocultural Australian English) and social groups (broad–general–cultivated Australian English accents). For example, post–Second World War immigration of people from Greece, Italy and other nations resulted in the creation and recognition of ethnocultural Australian English dialects (differentiation).

Australia’s linguistic landscape

Australia’s national language is English (Australian Government, 2012) and, as outlined above, Australian English is a regional dialect of English that is just over two hundred years old. Australian English has distinctive vocabulary, grammar and pronunciation. For example, Australia’s unique vocabulary can be seen in the sentence: ‘I bought *petrol* at the *service station*, *biscuits* at the *supermarket*, *nappies* at the *chemist* and a *jumper* at the *shops*’. This sentence is equivalent to the American English sentence: ‘I bought *gas* at the *gas station*, *cookies* at the *grocery store*, *diapers* at the *drugstore*, and a *sweater* at the *mall*’. Uniquely Australian words have been borrowed or adapted from Aboriginal languages. The words *boomerang* and *koala* are from the Dharug language of Sydney (NSW). Words for local birds have also been borrowed from Aboriginal languages; for example, the word for *kookaburra* ‘gugubarra’ is from the Wiradyuri language of south-western New South Wales and *budgerigar* ‘gidjirrigaa’ is from the Gamilaraay Yuwaalaraay language of north-western New South Wales (Australian Government, 2010). Australian English speakers are known for using abbreviations and diminutives; that is, shortened words such as *barbie* for ‘barbecue’, *footy* for ‘football’ and *arvo* for ‘afternoon’, and for use of slang (*bonza*, *fair dinkum*). Australian English speakers

(particularly younger speakers) tend to use a high rising tune (HRT) (intonation) at the end of sentences (Fletcher & Harrington, 2001; McGregor & Palethorpe, 2008).

Australian English can be divided into at least three categories: Standard Australian English, Australian Aboriginal English and ethnocultural Australian English dialects (spoken by immigrants) (Cox & Palethorpe, 2010). The Australian Voices Project (Cox & Palethorpe, 2010, <http://clas.mq.edu.au/australian-voices>) provides a summary of the diversity of Australian accents, including historical and recent sound files. Standard Australian English can further be divided into three subcategories: broad, general and cultivated. You can listen to the differences on the Australian accent website: <http://clas.mq.edu.au/australian-voices/australian-accent>. General Australian English is the most commonly spoken Australian accent today. Cultivated Australian English is closer to General British English, whereas Broad Australian English is associated with ‘republicanism, mateship, larrikinism, and egalitarianism’ (Cox & Palethorpe, 2010). For instance, the film character *Crocodile Dundee* uses Broad Australian English. These three Australian English accents can be differentiated according to the pronunciation of the six vowels that are used in the words *beat*, *boot*, *say*, *so*, *high*, *how* (Cox & Palethorpe, 2001, 2010). See Chapter 3 for more information about the production of Australian English vowels.

Australian Aboriginal English is primarily spoken by Indigenous Australians; however, Indigenous Australians speak English along a continuum from Standard Australian English to Australian Aboriginal English (Butcher, 2008). Australian Aboriginal English is characterised by differences in pronunciation, grammar and syntax in comparison to Standard Australian English, as well as the use of English words with Aboriginal meanings (e.g. *deadly* meaning ‘very good’). Features of Australian Aboriginal English include /h/ dropping (e.g. *hat* pronounced as *at*), free variation between the ‘th’ sounds and /f, v/ (e.g. *think* pronounced as *fink*) and a loss of distinction between voiced and voiceless stops so that /p/ and /b/ sound similar (e.g. *pat* and *bat* may both sound like *pat*) (Butcher, 2008; Kaldor & Malcolm, 1991; Williams, 2000). A longer list of features of Australian Aboriginal English speech is found in the appendix of Toohill, McLeod and McCormack (2012).

Indigenous Australian languages

Aboriginal and Torres Strait Islander peoples comprise approximately 3 per cent of the Australian population, with the largest numbers living in New South Wales and Queensland (Australian Bureau of Statistics, ABS, 2014). There have been 250 Indigenous languages described in Australia (AIATSIS, 2005) and approximately 12 per cent of Indigenous people still speak an Indigenous language at home (ABS, 2006). The first National Indigenous Languages Survey (NILS)

reported that 145 languages were spoken and 20 Indigenous languages could be considered strong (spoken across generations) (AIATSIS, 2005; Obata & Lee, 2010). Only a few years later, the second National Indigenous Languages Survey (NILS2) indicated that only 120 Indigenous languages were still spoken and 13 Indigenous languages could be considered strong (Marmion, Obata & Troy, 2014). Language revitalisation projects are important among Indigenous Australians to ensure the continuity of Australia's first peoples, their languages and the land (e.g. Williams, 2013).

The Longitudinal Study of Indigenous Children has enabled documentation of language use by Indigenous children who live in 11 sites across Australia. One study of 692 3–5-year-old Indigenous children showed that they spoke between one and eight languages including English (91.2%), Indigenous languages (24.4%), creoles (11.5%), foreign languages (2.0%) and sign languages (0.6%). Children who lived in regions of moderate to extreme isolation were more likely to speak an Indigenous language. The most common Indigenous languages spoken were Djambarrpuyngu, Arrernte, Anindilyakwa, Galpu, Kalaw Kawaw Ya/Kalaw Lagaw Ya, Luritja, Meriam Mir and Warlpiri (McLeod, Verdon & Bennetts Kneebone, 2014). Two years later, 570 of the children were studied when they were 5–7 years old. Of these children, 99.6 per cent spoke English, 26.8 per cent spoke Indigenous languages, 13.7 per cent spoke creoles, 5.1 per cent spoke foreign languages and 0.4 per cent used sign languages. Since English is the language of instruction in Australian schools, it is likely that this is the reason for the increase in the use of English (McLeod et al., 2014). Throughout the study, these children's language environments were rich and many family members and friends told oral stories, read books and listened to the children read (in English and Indigenous languages) (McLeod et al., 2014). Maintenance of speaking Indigenous languages was associated with the children's primary carers' use of an Indigenous language and the level of remoteness (Verdon & McLeod, 2015). Children who spoke an Indigenous language were more likely to live in moderate to extreme isolation. There were 30.5 per cent of parents of Indigenous children who wanted to pass on 'speaking the language' and 46.1 per cent of parents wanted an Indigenous language available as a second language at school (McLeod et al., 2014).

Multilingual Australia

While the majority of Australians speak English, 23.2 per cent speak a language other than English at home (ABS, 2012). The most common languages other than English are Mandarin (1.6%), Italian (1.4%), Arabic (1.3%), Greek (1.2%) and Cantonese (1.2%). Multilingualism is increasing in Australia, with each recent census documenting more multilingual speakers (e.g. 21.6% in 2006 and 23.2% in 2011). Additionally, the most commonly spoken languages other than English

change with each Australian census (e.g. it was Italian in 2006 and Mandarin in 2011). The majority of people who do not speak English live in Victoria (especially Melbourne), New South Wales (especially Sydney) and the Northern Territory, with the fewest speakers of languages other than English in Tasmania (Department of Immigration and Citizenship, 2008) (see Figure 1.2).



Figure 1.2 Proportion of Australians who speak a language other than English at home documented for each state. a) Proportion of Australian people (> 5 years) who speak a language other than English at home in Australia by state (source of data: 2006 census); b) Proportion of Australian children aged 4–5 years who speak a language other than English at home in Australia by state (source of data: Longitudinal Study of Australian Children, McLeod, 2011).

Australia's children are also multilingual. In a nationally representative study of 5107 4–5-year-olds from the Longitudinal Study of Australian Children, 15.9 per cent spoke a language other than English, with the most common other languages being Arabic, Italian, Greek, Spanish and Vietnamese (Verdon, McLeod & Winsler, 2014). There was a different profile of the main languages other than English spoken by the children for each state/territory (McLeod, 2011) (see Table 1.2). The most common languages spoken by children in each state were Arabic (NSW and Victoria), Samoan (Queensland), Bengali (Australian Capital Territory), Greek (South Australia and Northern Territory), Vietnamese (Western Australia) and Cantonese (Tasmania) (McLeod, 2011). Factors that supported multilingual Australian children's language maintenance from birth to the age of 5 years were parental language use; presence of a grandparent in the home; type of early childhood care; first- and second-generation immigrant status; and support of languages other than English in the learning environment. Maintenance of the home language was not associated with the gender of the child or the presence of an older sibling in the home (Verdon et al., 2014).

Table 1.2 The most commonly spoken languages other than English (> 0.5% usage) used by Australian children aged 4–5 years documented for each state (source of data: Longitudinal Study of Australian Children; McLeod, 2011).

STATE/TERRITORY	MOST COMMON LANGUAGES SPOKEN (EXCLUDING ENGLISH)
Australian Capital Territory	Bengali, Cantonese, Croatian, French, German, Hindi, Italian, Macedonian, Russian, Tamil, Urdu, Other
New South Wales	Arabic, Cantonese, Mandarin, Greek, Vietnamese, Hindi, Bengali, Italian, Samoan, Spanish, Tamil
Northern Territory	Greek, Other
Queensland	Samoan, Vietnamese, Italian
South Australia	Greek, African languages, Portuguese, Vietnamese, Other, Spanish
Tasmania	Cantonese
Victoria	Arabic, Cantonese, Vietnamese, Italian, Mandarin, Greek, Hindi, Turkish, Assyrian, Somali
Western Australia	Vietnamese, Arabic, Cantonese, Italian, Spanish, Somali

New Zealand's linguistic landscape

In New Zealand, there are three official languages: English, te reo Māori and New Zealand Sign Language. English is the most common language spoken in New Zealand; indeed 96.1 per cent of New Zealanders use English as at least one of their languages (Statistics New Zealand, 2014). New Zealand English is a regional dialect of English with its own distinctive vocabulary, grammar and pronunciation. New Zealand English is characterised by abbreviations and diminutives; for example, *Dunners* for 'Dunedin' and *scarfie* for 'student' (Bardsley, 2013). New Zealand English includes borrowed words from te reo Māori, such as *whare* 'house', *kia ora* 'greeting', *kiwi* 'flightless bird', *taonga* 'treasure' and *huiette* 'small-scale meeting'.

Distinctive New Zealand English vowels can be heard in the words *farm*, *kit*, *trap* and *bed*. Australians and New Zealanders often use the 'i' vowel in the phrase *fish and chips* as a point of differentiation between the accents:

[fɪʃ ən ʧɪps] Standard Australian English

[fəʃ ən ʧəps] New Zealand English

(You will learn about transcription of vowels in Chapter 3.)

Speakers of New Zealand English may also pronounce the /l/ at the end of words as a vowel (e.g. *bill* = ‘biu’). See Chapter 3 for more information about the production of New Zealand English vowels. New Zealand English speakers (particularly younger speakers) tend to use a high rising tune (HRT) (intonation) at the end of sentences (Fletcher & Harrington, 2001; Gordon, 2013).

Two additional varieties of New Zealand English have been recognised: Māori English and Southland English. Māori New Zealand English is predominantly spoken by people of Māori descent. Southland New Zealand English is spoken in Southland and parts of Otago and features trilled /r/, a sound that is reminiscent of the speech of the Scottish settlers (Gordon, 2013).

te reo Māori

te reo Māori (literally ‘the language Māori’) is the language spoken by Māori and some Pasifika people of New Zealand. It became an official language of New Zealand in 1987. Most government agencies have both English and Māori names (e.g. the National Library of New Zealand is also named Te Puna Mātauranga o Aotearoa). In 2013, 598,605 people identified themselves as Māori and 668,724 were of Māori descent (Statistics New Zealand, 2013). Although there are te reo Māori speakers of all ages, almost a quarter (24.6%) of people who can hold a conversation in te reo Māori are children and only 10.1 per cent are 65 years or older (Statistics New Zealand, 2014). It has been reported that most adult speakers of te reo Māori learnt this as a second language, affecting intergenerational language transmission to children (Bright, Barnes & Hutchings, 2013). While governmental initiatives have been undertaken to support Māori-language learning within the educational system, there has been a call to recognise the ‘importance of bilingual/immersion programmes if te reo Māori is to survive as a living language’ (Waitangi Tribunal, 2012, p. xix).

Multilingual New Zealand

The most common languages other than English spoken in New Zealand are te reo Māori (3.7%), Samoan (2.2%), Hindi (1.7%), Northern Chinese including Mandarin (1.3%) and French (1.2%) (Statistics New Zealand, 2014). Over the past three censuses, the percentage of people who speak more than one language has risen: 15.8 per cent (2001), 17.5 per cent (2005), 18.6 per cent (2013) (Statistics New Zealand, 2014). Auckland is the city containing the majority of New Zealanders who do not speak English at home.

The role and importance of speech, language and literacy in society

The importance of speech, language and literacy for all people is enshrined in international and national conventions and policies. For example, Article 2 of the *United Nations Convention on the Rights of Persons with Disabilities* (2006) defines communication and language as follows:

For the purposes of the present Convention: ‘Communication’ includes languages, display of text, Braille, tactile communication, large print, accessible multimedia as well as written, audio, plain-language, human-reader and augmentative and alternative modes, means and formats of communication, including accessible information and communication technology; ‘Language’ includes spoken and signed languages and other forms of non spoken languages (United Nations, 2006, p. 4).

Article 21 of the *United Nations Convention on the Rights of Persons with Disabilities* states:

States Parties shall take all appropriate measures to ensure that persons with disabilities can exercise the right to freedom of expression and opinion, including the freedom to seek, receive and impart information and ideas on an equal basis with others and through all forms of communication of their choice, as defined in Article 2 of the present Convention (United Nations, 2006, p. 14).

Article 13 of the *United Nations Declaration on the Rights of Indigenous Peoples* (2008) states:

Indigenous peoples have the right to revitalize, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies, writing systems and literatures (United Nations, 2008, p. 7).

Article 13 of the *United Nations Convention on the Rights of the Child* (1989) states:

The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child’s choice (UNICEF, 1989).

The importance of language is also acknowledged in the following te reo Māori proverb:

Ko te reo te tuakiri	Language is my identity.
Ko te reo tku ahurei	Language is my uniqueness.
Ko te reo te ora	Language is life.

The importance of speech, language and literacy is not only relevant at national and international levels. Speech, language and literacy are important at a personal level as well.

In the *Great Australian Communication Story* e-book, individuals of all ages across Australia created stories and images providing insight into what communication means for them. Examples of some of the contributions are shown in Figure 1.3. You can look through the entire collection at: www.speechpathologyaustralia.org.au/library/GACS_eBook.pdf. Some of the stories and images represent individuals' understanding of the different modes of communication. For instance,

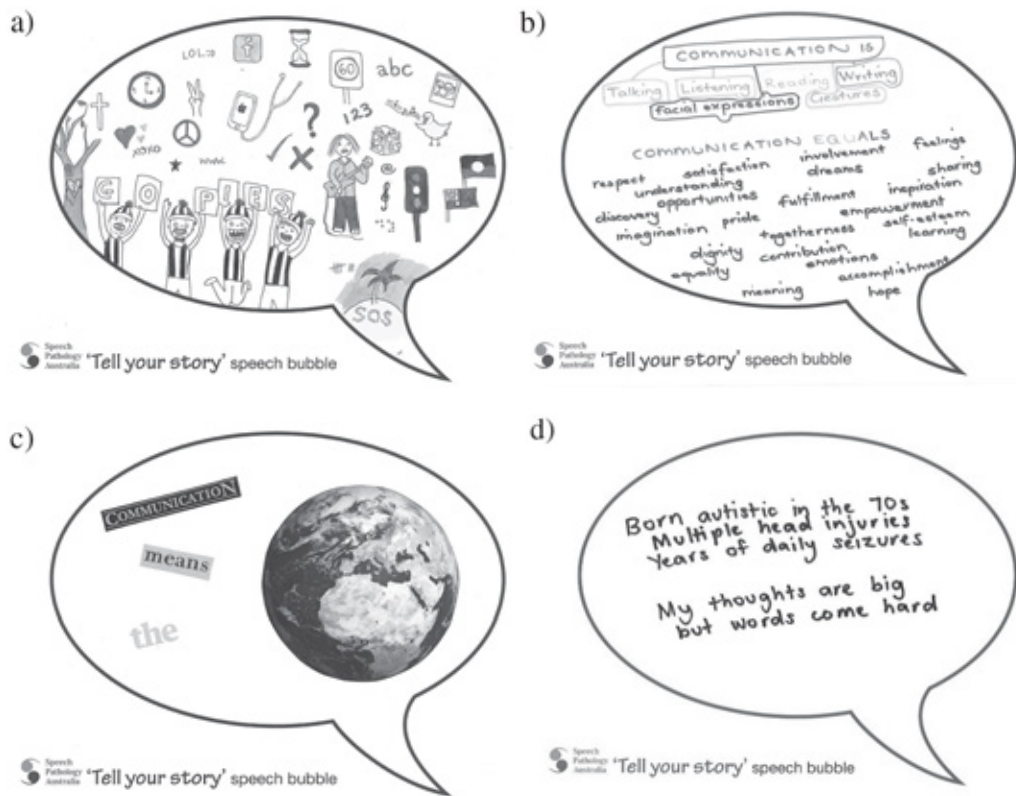


Figure 1.3 Images from the *Great Australian Communication Story* e-book (reprinted with permission from Speech Pathology Australia).

in Figure 1.4a we can see that communication takes many forms: pictures, symbols, words, letters, songs and so on. Some images represent the role of communication and its importance in contributing to self-worth and a sense of identity. For instance, in Figure 1.4b we can see that communication enables us to share information, to express feelings, to be involved in activities, and to learn. That is, communication is an essential component of our functioning as human beings (Figure 1.4c). Finally, some of the stories and images shared by individuals represent the difficulties that they have experienced with communication and the impact that this has had on their lives. For instance, in Figure 1.4d we can see that being unable to communicate thoughts and ideas can be frustrating and difficult.

Difficulties with speech, language and literacy

Difficulties with communication range from mild (e.g. an interdental lisp) to severe difficulty (e.g. limited vocabulary or word-finding difficulties, illiteracy, unintelligible speech). Difficulties may be associated with an impairment of structures required for communication (e.g. cleft lip/palate, vocal nodules), may be a secondary symptom of a congenital condition (e.g. hearing loss, Down syndrome) or may be acquired through a neurological event (e.g. stroke, traumatic brain injury) or progressive condition (e.g. dementia, Parkinson's disease). However, often there is no known cause (Campbell et al., 2003; Shriberg, Austin, Lewis, McSweeney & Wilson, 1997).

There is a large body of research that has explored the prevalence and impact of communication difficulties in childhood and across the lifespan. In recent years, large-scale, longitudinal studies have contributed new insights to the field. The outcomes of this research reinforce our understanding of the talents of young children in learning language and, in many cases, learning multiple languages simultaneously. Researchers have shown that learning more than one language does not increase the risk of having a communication disorder (Hambly, Wren, McLeod & Roulstone, 2013; McLeod, Harrison, Whiteford & Walker, 2014). However, research also reveals the far-reaching and long-term implications of communication difficulties for children who have difficulty in acquiring communication skills.

Oral communication difficulties are highly prevalent in childhood (Law, Boyle, Harris, Harkness & Nye, 2000), with approximately 1 in 5 of 4983 Australian preschool children identified by parents with concerns about how they talked and made speech sounds; the area of most concern (12.0%) was their children's ability to be understood by others (McLeod & Harrison, 2009). Of 1494 children at 4 years of age from the Early Language in Victoria Study (ELVS), 3.4 per cent were identified as having a speech sound disorder after testing (Eadie et al., 2015). Reilly et al. (2010) predicted 20.6 per cent prevalence of language difficulties in 1596 children at 4 years of age in the same study. For some children, these difficulties continue after

they enter school. In 2007, teachers of 14,500 primary and secondary students in Australia identified communication disorders as the second most common learning need, affecting 13.0 per cent of the children they taught (McLeod & McKinnon, 2007). Communication disorder was more prevalent than intellectual impairment, hearing and vision difficulties, and behavioural problems combined.

For school-aged children with communication difficulties, there may be associated difficulties with social interactions and academic progress. Recently in a national study of 4329 Australian children at 8–9 years of age, children with a history of communication difficulties in preschool reported more bullying, poorer peer relationships and less enjoyment of school than their peers (McCormack et al., 2011). In addition, their parents and teachers reported slower progression in reading, writing and overall school achievement than peers. Given that the development of speech and language skills is ‘intimately related to all aspects of educational and social development’ (Law, Boyle, Harris, Harkness & Nye, 1998, p. 2), communication difficulties may affect a child’s education and social development, which may impact on their employment (Ruben, 2000) or vocational choices in adulthood (Felsenfeld, Broen & McGue, 1994).

A systematic review of 57 papers investigating the links between speech impairment (speech sound disorder) and life activities showed that speech impairment in childhood may be associated with later difficulties learning to read/reading, learning to write/writing, focusing attention and thinking, calculating, communication, mobility, self-care, relating to persons in authority, informal relationships with friends/peers, parent–child relationships, sibling relationships, school education, and acquiring, keeping and terminating jobs (McCormack et al., 2009). Another systematic review published in 1998 found that children who do not receive speech intervention, or who begin speech intervention in the school years, can continue to have difficulties for at least 28 years (Law et al., 1998).

When a person has difficulties with speech, language or literacy, the importance of these skills becomes even more apparent. View these online videos where different people talk about speech, language and literacy:

- Megan Washington (singer) talks about stuttering:
<http://tedxsydney.com/site/item.cfm?item=BC98D0D6CE414B57A783A22FB30BD5DB>
- Tim Sharp (cartoonist) and his mother, Judy, talk about autism and the humour created when figurative speech is taken literally:
<http://tedxsydney.com/site/item.cfm?item=E50D509ACBBF263699F83CBC27CADE3F>
- Francesca Martinez (comedian) and Jonathan Ross (interviewer) discuss their ‘speech impediments’:
www.youtube.com/watch?v=EmDkL6iwhnk

- Temple Grandin talks about autism:
www.ted.com/talks/temple_grandin_the_world_needs_all_kinds_of_minds
- Jill Bolte Taylor talks about having a stroke (from 6:22 minutes into the video):
www.ted.com/talks/jill_bolte_taylor_s_powerful_stroke_of_insight
You can also read accounts of the impact of having speech and language difficulties:
- Christopher Green (paediatrician and author of *Toddler Taming*) writes about learning to speak again after having a stroke (Green & Waks, 2008).
- Parents, children and adults describe the impact of speech and language difficulties for the Australian Government Senate inquiry into the prevalence of different types of speech, language and communication disorders and speech pathology services in Australia in 2014. Their submissions can be found here:
www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Speech_Pathology/Submissions
and the final report can be found here: www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Speech_Pathology/Report

Empirical research and personal anecdotes demonstrate the need for **awareness** of typical communication milestones for different cultural and linguistic groups, early **identification** of communication difficulties, and ongoing **support and management** to address the speech and language needs of children experiencing difficulty with the development and/or use of communication skills. For individuals with communication difficulties, it is important that professionals who may interact with them (such as educators and speech pathologists) have a good understanding of strategies for supporting them. This information is also important foundational knowledge for linguists as they study the role of languages and society.

The professions of education, speech pathology and linguistics

The work of educators, speech pathologists and linguists focuses on speech, language and literacy every day.

Education

Educators are responsible for educating individuals from the early years prior to school entry, through primary and secondary school and into vocational and university settings. When teaching these children and young people, educators are guided by curriculum requirements outlined by state and national governments.

These requirements describe the skills and knowledge that children and young people need to demonstrate in order to show that they have successfully completed that level of education.

In Australia, the Early Years Learning Framework (EYLF; DEEWR, 2009) guides curriculum design in early childhood settings. The EYLF identifies five learning outcomes for children during their early childhood education, including the expectation that they will learn to be ‘effective communicators’. Similarly in New Zealand, *Te Whāriki* guides curriculum design in early childhood and identifies ‘communication’ as one of five strands of essential learning and development (Ministry of Education, 1996). The Australian Curriculum and the New Zealand Curriculum guide the design of learning activities and assessment tasks in primary and secondary school, and cover oral and written language skills within the English learning area. Further information about the Australian Curriculum is available at: www.australiancurriculum.edu.au/english/Curriculum/F-10 and further information about the New Zealand Curriculum is available at: <http://nzcurriculum.tki.org.nz>.

When children experience difficulties with their learning, they may be eligible to receive additional support and resources to assist them to reach their full potential. In Australia, policies exist to identify the types of learning difficulties that may be supported and the degree of difficulty required for eligibility to access this support. Children with speech, language and communication needs are not visible in Australian legislation and policy (McLeod, Press & Phelan, 2010). For children with communication difficulties, educators are often the family’s first source of information about services to access for assistance to address their needs (McAllister, McCormack, McLeod & Harrison, 2011). Educators of 14,533 primary and secondary school students in an Australian school district reported that students with a communication disorder typically required a high level of support at school, and students with a communication disorder plus a behavioural/emotional disorder plus an intellectual disability were identified as requiring the highest level of support (McLeod & McKinnon, 2010). So educators need a solid understanding of communication development and difficulties, as well as knowledge of the ways that other professionals such as speech pathologists may be able to assist.

Speech pathology

Speech pathologists (in Australia) and speech and language therapists (in New Zealand) work with individuals across the lifespan to assess and manage communication and swallowing difficulties. In their work, speech pathologists are guided by many professional documents, including the Competency-Based Occupational Standards (CBOS) for entry-level speech pathologists (SPA, 2011), which outlines the skills and knowledge required for practice. According to CBOS,

the scope of practice covered by speech pathologists includes speech, language, voice, fluency, multimodal communication and swallowing.

Speech pathologists are also guided by international frameworks of practice, such as the International Classification of Functioning, Disability and Health (ICF; World Health Organization, 2001), which highlights the importance of holistic care and promotion of well-being, and evidence-based practice (EBP) frameworks (Dollaghan, 2007), which highlight the importance of considering client needs and preferences alongside clinical expertise and empirical evidence in determining appropriate assessment and management approaches. Speech pathologists also engage in client- or family-centred practice, which highlights the importance of individuals and families contributing to decisions about their care.

Speech pathologists work in a range of settings, including early childhood intervention services, schools, community health clinics, hospitals, disability organisations, aged care facilities and the justice system. As such, they often work with teams of other professionals, which may include educators, doctors, nurses and other allied health professionals. When working with educators, speech pathologists are responsible for formally assessing children identified with concerns, and developing and implementing strategies for supporting those children to communicate more effectively in the preschool or classroom environment. Better outcomes can be achieved when speech pathologists work with educators to ensure goals are consistent and strategies are functional and manageable. So speech pathologists and educators both require strong understanding of communication development and difficulties, and strategies for supporting improved communication experiences.

Linguistics

Linguists study natural languages; that is, languages that are used by human beings to communicate with one another. There are many different fields of research in linguistics, including **historical linguistics**, the study of the history of specific languages as well as general characteristics of language change; **sociolinguistics**, the study of the ways that language is affected by and influences society; **developmental linguistics**, the study of language acquisition; and **neurolinguistics**, the study of the brain structures and neural processes that enable language understanding and use. In studying languages, linguists often undertake research that requires them to become immersed in the community or cultural group whose language they are studying. Linguists have an important role to play in contributing to the knowledge base relating to communication development and use, and their work is often a source of information for other professional groups, such as educators and speech pathologists.

How the rest of this book works

Introduction to Speech, Language and Literacy has been written for educators, speech pathologists and linguists. The book contains 13 chapters. The first two chapters are introductory, setting the scene for what is to come. This chapter has introduced you to the concepts of speech, language and literacy, the linguistic landscapes of Australia and New Zealand, and (below) the people in the case studies who are featured throughout the whole of the book. The next chapter describes the sociocultural **environments** of speech, language and literacy (Chapter 2). The following sections of the book take each element of speech, language and literacy and describes them in detail. Speech is divided into two elements: **phonetics** (Chapter 3) and **phonology** (Chapter 4). Language is divided into four elements: **semantics** (Chapter 5), **morphology** (Chapter 6), **syntax** (Chapter 7) and **discourse and pragmatics** (Chapter 8). Literacy is divided into two elements: **reading** (Chapter 9) and **writing** (Chapter 10). The foundations of speech, language and literacy are outlined in chapters addressing **cognition** (Chapter 11) and **neurobiology** (Chapter 12). The final chapter outlines the **interaction** between speech, language and literacy (Chapter 13); the authors recognise the acquisition of speech, language and literacy as a developmental skill with a biological basis, but also recognise the critical role of social interaction in learning.

The chapters (particularly chapters 3–10) follow a similar structure. They all begin with a series of **objectives** and a **definition** of the topic, so you know what you will cover within the chapter. Immediately following this, the chapters provide **case studies**, so that you can think about real-world applications of the chapter content. Authors draw on the relevant video case studies, as well as supplying their own cases. Next, **theoretical models** and important concepts are outlined. **Acquisition and milestones** cover the processes of learning the relevant element of speech, language and literacy. Most of the chapters cover key milestones of acquisition and loss across the lifespan, and include information about acquisition by multilingual and indigenous speakers. **Use and analysis** introduce methods (e.g. tools and measures) for evaluating and analysing the aspect of speech, language and literacy. This is followed by examples (often from the case studies) of how to apply these methods. **Factors influencing acquisition and use** outline risk and protective factors affecting development and maintenance of speech, language and literacy skills. **Difficulties** with speech, language and literacy are organised according to structural impairments (e.g. hearing loss, craniofacial anomalies, cerebral palsy, intellectual impairment), functional/social difficulties (e.g. autism spectrum disorder, social communication disorder) and acquired conditions (e.g. aphasia, dyspraxia, Parkinson's disease, traumatic brain injury, Alzheimer's disease). **Strategies for supporting acquisition and use** are provided for people

of different ages and skill levels. Examples are included for people experiencing typical acquisition, as well as those who are having difficulty.

There are four pedagogical features at the end of each chapter. A **summary** is provided outlining key messages and applications for educators, speech pathologists and linguists. The **look and learn activities** enable application and consolidation of knowledge while viewing the *Introduction to Speech, Language and Literacy* videos. **Critical reflections** are provided in the form of five to ten questions that challenge readers to recall and apply what they have learnt. These critical reflections can be used to facilitate discussions in tutorial groups and workshops, and have been designed for constructive alignment with the objectives of the chapter. Finally, the authors have provided **further reading** (and other resources): three to five readings and resources are recommended to complement each chapter.

To summarise, here is the chapter structure of this book:

- objectives
- definition
- case studies
- theoretical models
- acquisition and milestones
- use and analysis
- factors influencing acquisition and use
- difficulties
- strategies for supporting acquisition and use
- summary (including key messages for educators, speech pathologists and linguists)
- look and learn: video activities
- critical reflections
- further reading
- references.

Video case studies: children and adults who are profiled throughout this book

Children, adolescents and adults communicate differently. These differences are partly due to their stage of development, communication experiences and understanding of communication rules, but also to the purposes for which they communicate with others. Within this book, chapter authors have described

communication development and provided examples (e.g. cases, transcripts) of speech, language and literacy that best illustrate the key concepts and milestones. They have also used a core set of video case studies to discuss and highlight these concepts and milestones. The video case studies are of Australian individuals across the lifespan, undertaking tasks that are familiar or common to their life stage. There are ten videos (see Table 1.3; the full transcripts appear in the Appendix). In the following sections, we introduce the individuals in the videos.

Table 1.3 The ten video case studies used throughout this book.

VIDEO NUMBER	LABEL	CONTENTS	VIDEO LENGTH
1	1 Preschool talking	Dympna (aged 2) and Pascal (aged 4) playing a game	3:14
2	2 Preschool reading	Dympna (aged 2) and Pascal (aged 4) looking through a book	3:35
3	3 School talking	Sadie and Ailish (aged 5) talking about a picture	2:07
4	4 School drawing	Sadie and Ailish (aged 5) drawing a picture	2:33
5	5 School reading	Alexa (aged 6) and Amir (aged 7) reading a story with their teacher	3:32
6	6 School writing	Isla (aged 7) writing a story	3:33
7	7 School reading and writing	Isla (aged 7) reading her story	1:30
8	8 University talking	Ashley and Alex (university students) conversing	1:50
9	9 Adult talking	Patricia (retired) recalling her work as a teacher	2:58
10	10 Adult talking	Patricia (retired) talking	2:44

Dympna (2 years)

Dympna is an engaging and communicative child, the second youngest of four children. Her mother is Australian and her father is British. She was born in Australia and is monolingual. At birth she experienced a condition known as laryngomalacia, where the cartilage of the larynx collapses inwards causing some airway obstruction. However, this did not affect her achievement of communication milestones. In the

videos, Dympna is talking and playing with her older brother, Pascal, and a family friend, Jane (who is also the co-editor of this book).

Pascal (4 years)

Pascal is a friendly child, the second eldest of four children. He was born in Australia and is monolingual. He has a history of recurrent middle-ear infections, which have caused mild conductive hearing loss in his right ear. You will notice that he is wearing an external hearing aid (attached to a headband) to improve his ability to perceive sound in that ear. He started talking later than typically expected and experienced difficulty in learning some speech sounds. At the time of filming, Pascal had been attending speech pathology sessions for approximately six months, targeting his production of sounds including /k/ and /g/. In the videos, Pascal is talking and playing with his younger sister, Dympna.

Sadie and Ailish (5 years)

Sadie and Ailish are friends who at the time of filming had commenced their first year of primary school, at different schools. Sadie is a social and outgoing child, the middle child in a family of three. Ailish is a cooperative and conscientious child, the eldest in a family of four (Pascal and Dympna are two of her siblings). Both are monolingual and achieved all communication milestones at appropriate ages. In the videos, Sadie and Ailish are drawing, playing and reading books with a family friend, Jane.

Isla (7 years)

Isla is an insightful and imaginative child, the eldest of three children. She was born in Australia and is monolingual. Isla achieved all communication milestones at appropriate ages. At the time of filming, she had just commenced her second year of formal schooling and was enjoying the opportunity to develop her written communication skills. In the videos, Isla is writing a story and reading it to an unfamiliar adult, who is a trained primary school teacher.

Alexa (6 years)

Alexa was born in Australia and is monolingual. She is in Year 1 at school and enjoys reading. Her reading is at level 18 based on the Reading Recovery measure of text complexity which is an appropriate level for her age. In the video Alexa is reading a book with her classmate, Amir and teacher, Robyn. Alexa does not get many opportunities to talk during the video.

Amir (7 years)

Amir speaks English and Arabic at home. He is reading at level 19 based on the Reading Recovery measure of text complexity. Level 19 is appropriate for his age. In the video Amir is reading a book with his classmate, Alexa and teacher, Robyn. Amir has a lot to say about the book and its characters, relating it to his home activities.

Ashley and Alex (18 years)

Ashley and Alex are university students and friends. At the time of filming, they had just commenced their first year of tertiary study at a regional university. In the videos, they are talking about their experiences of university and their life experiences prior to commencing this study.

Patricia (65 years)

Patricia is an outgoing and communicative adult. She is a retired primary school teacher and small business owner. She is also the mother of four adult children, two of whom are teachers and one who is a speech pathologist. She was born in Australia and is monolingual. She is the eldest of four and all of her siblings are also trained teachers. Patricia was raised in a metropolitan region, but has lived in a small rural town for many years. In the videos, Patricia is talking to one of her children about the ways that she taught language and literacy skills when she worked as a teacher over thirty years ago.

Summary

Within this chapter, we have defined the key elements of communication that are explored in greater detail in subsequent chapters of this book: speech, language and literacy. We have discussed the world's linguistic landscape, including the most commonly used languages and the global rise in multiculturalism. We have examined the uniqueness of Australian and New Zealand speech and language, including the use of indigenous languages in both countries, and considered some of the factors that contribute to language maintenance and loss. We have also considered the impact of communication difficulties and the roles of educators, speech pathologists and linguists in understanding communication development and use, and identifying and supporting those with communication difficulties. Finally, we have introduced the people whose communication skills are discussed throughout this book in the video case study sections of each chapter. They provide a real-world view of the range of ways that we communicate and the range of purposes for which we communicate, as well as an appreciation of the wonderful diversity in communication styles that exists across different ages, genders, backgrounds and peoples of the world.

Māori proverb

Ui mai koe ki ahau he aha te mea nui o te ao.

Māku e kī atu: he tangata, he tangata, he tangata!

Ask me what is the greatest thing in the world.

I will reply: It is people, it is people, it is people!

Look and learn: video activities



Activity 1: Observe

Look for examples of Australian vocabulary and phrases in all of the videos. What is the equivalent word/phrase in another dialect or language? For example, in video 2 Dymrna and Pascal use the word *boot* when describing the back of their car. This is known as the *trunk* in the USA.

Activity 2: Apply

Create a table with headings listing the different components of speech (phonetics, phonology), language (semantics, morphology, syntax, discourse and pragmatics) and literacy (reading and writing). List two or three examples of each component from any of the videos.



Activity 3: Extend

Consider the information within the ‘Difficulties with speech, language and literacy’ section of the chapter. Watch the video of Ashley and Alex (video 8) and imagine if one of them had a stutter. How do you think the communication and interaction between them would change?

Critical reflections

- 1 When you are next at the supermarket or in any environment with individuals of different ages, listen to the speech and language produced by people at different life stages. How do the infants communicate with their parents? What do you notice about their speech sounds, their vocabulary and their grammar? How does this differ from the communication of older children, adolescents, adults and older adults?
- 2 Do you speak another language or know someone who does? How does that language differ from English in phonology, morphology, syntax and semantics? How is it similar? If you don't speak another language, perhaps find someone who has learnt English as a second language. Ask them about the differences that they noticed when learning English and the challenges of learning another language.
- 3 Why is communication important to you? How would you have designed a speech bubble for the *Great Australian Communication Story* e-book?
- 4 Consider the communication difficulties experienced by Jonathon Ross and Jill Bolte Taylor (pp. 22, 23). Review the neuropsychological model presented in Figure 1.1 to determine where the breakdown in communication skills for each may have occurred. Think about times when you have not been able to communicate with others (e.g. language differences, inability to decipher text). What stages in the model were affected?
- 5 Educators, speech pathologists and linguists all work in fields that have a strong focus on communication. Find out more about these different occupations. You may like to explore resources on the internet (below) or interview someone in one of these occupations. Consider how you might collaborate with such people in your future work.

Further reading about speech, language and literacy

International Communication Project (2014): www.communication2014.com

Resources about Australia's speech, language and literacy

AusTalk: <https://austalk.edu.au>. An archive of 1000 Australian voices.

Australian National Database of Spoken Language (ANDOSL): <http://andosl.rise.anu.edu.au/andosl>

Australian voices: <http://clas.mq.edu.au/australian-voices>

Longitudinal studies of Australians

Australian Longitudinal Study of Ageing (ALSA): www.flinders.edu.au/sabs/fcas/alsa

Footprints in Time: The Longitudinal Study of Indigenous Children (LSIC): www.dss.gov.au/about-the-department/publications-articles/research-publications/longitudinal-data-initiatives/footprints-in-time-the-longitudinal-study-of-indigenous-children-lsic

Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC): www.growingupinaustralia.gov.au

Life at series: www.abc.net.au/tv/life. A television series documenting the growth and development of 11 Australian children from birth.

Longitudinal Surveys of Australian Youth (LSAY): www.lsay.edu.au

Resources about New Zealand's speech, language and literacy

Origins of New Zealand English (ONZE) Project: www.nzilbb.canterbury.ac.nz/onze.shtml. This documents the origins, features and changes of New Zealand English.

Longitudinal studies of New Zealanders

Dunedin Multidisciplinary Health & Development Study: <http://dunedinstudy.otago.ac.nz>

Professional associations for educators

American Educational Research Association (AERA): www.aera.net

Journal: *American Educational Research Journal*: www.aera.net/Publications/Journals/AmericanEducationalResearchJournal/tabid/12607/Default.aspx

Journal: *Educational Researcher*: www.aera.net/Publications/Journals/EducationalResearcher/tabid/12609/Default.aspx

Journal: *Review of Educational Research*: www.aera.net/Publications/Journals/ReviewofEducationalResearch/tabid/12611/Default.aspx

Australian Association for Research in Education (AARE)

Journal: *Australian Educational Researcher*: <http://link.springer.com/journal/13384>

British Educational Research Association (BERA): www.bera.ac.uk

Journal: *British Educational Research Journal*: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1469-3518](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1469-3518)

Journal: *Review of Education*: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)2049-6613](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)2049-6613)

Journal: *British Journal of Educational Technology*: [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1467-8535](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1467-8535)

Early Childhood Australia (ECA)

Journal: *Australasian Journal of Early Childhood (AJEC)*: www.earlychildhoodaustralia.org.au/our-publications/australasian-journal-early-childhood

New Zealand Teachers Council: www.teacherscouncil.govt.nz

Professional associations for speech pathologists

American Speech-Language-Hearing Association (ASHA): www.asha.org

Journal: *Journal of Speech, Language, and Hearing Research (JSLHR)*: <http://jslhr.pubs.asha.org/journal.aspx>

Journal: *American Journal of Speech-Language Pathology (AJSLP)*: <http://ajslp.pubs.asha.org/journal.aspx>

Journal: *Language, Speech, and Hearing Services in Schools (LSHSS)*: <http://lshss.pubs.asha.org/journal.aspx>

International Association of Logopedics and Phoniatrics (IALP): www.ialp.info

Journal: *Folia Phoniatica et Logopaedica (FPL)*: www.karger.com/Journal/Home/224177

New Zealand Speech-language Therapists' Association (NZSTA):

www.speechtherapy.org.nz

Journal: *Speech, Language and Hearing*: www.maneyonline.com/loi/slh

Royal College of Speech and Language Therapists (RCSLT): www.rcslt.org

Journal: *International Journal of Language and Communication Disorders (IJLCD)*: [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1460-6984](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1460-6984)

Speech Pathology Australia (SPA): www.speechpathologyaustralia.org.au

Journal: *International Journal of Speech-Language Pathology (IJSLP)*: <http://informahealthcare.com/ijslp>

Journal: *Journal of Clinical Practice in Speech-Language Pathology*
(JCPSLP): www.speechpathologyaustralia.org.au/publications/jcpslp

Professional associations for linguists

Australian Linguistic Society (ALS): www.als.asn.au

Journal: *Australian Journal of Linguistics* (AJL): www.tandfonline.com/toc/cajl20/current

British Association for Applied Linguistics (BAAL): www.baal.org.uk

British Association of Clinical Linguistics (BACL): www.bacl.info

International Clinical Phonetics and Linguistics Association (ICPLA): www.icpla.org

Journal: *Clinical Linguistics & Phonetics* (CLP): <http://informahealthcare.com/clp>

Linguistic Society of America: www.linguisticsociety.org

Journal: *Language*: www.linguisticsociety.org/lisa-publications/language

Linguistic Society of New Zealand: www.nzlingsoc.org

Journal: *Te Reo*: www.nzlingsoc.org/tere/te-reo

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