

An overview of applied linguistics

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What is applied linguistics?

'Applied linguistics' is using what we know about (a) language, (b) how it is learned and (c) how it is used, in order to achieve some purpose or solve some problem in the real world. Those purposes are many and varied, as is evident in a definition given by Wilkins (1999: 7):

In a broad sense, applied linguistics is concerned with increasing understanding of the role of language in human affairs and thereby with providing the knowledge necessary for those who are responsible for taking language-related decisions whether the need for these arises in the classroom, the workplace, the law court, or the laboratory.

The range of these purposes is partly illustrated by the call for papers for the American Association for Applied Linguistics (AAAL) 2010 conference, which lists 16 topic areas:

- analysis of discourse and interaction
- assessment and evaluation
- bilingual, immersion, heritage and language minority education
- language and ideology
- language and learner characteristics
- language and technology
- language cognition and brain research
- language, culture, socialization and pragmatics
- language maintenance and revitalization
- language planning and policy
- reading, writing and literacy
- second and foreign language pedagogy
- second language acquisition, language acquisition and attrition
- sociolinguistics
- text analysis (written discourse)
- translation and interpretation.

The call for papers to the 2011 AILA conference goes even further and lists 28 areas in applied linguistics. Out of these numerous areas, the dominant application has

always been the teaching and learning of second or foreign languages (L2). Around the world, a large percentage of people, and a majority in some areas, speak more than one language. For example, a survey published in 1987 found that 83 per cent of 20–24-year-olds in Europe had studied a second language (Cook, 1996: 134), although to varying levels of final proficiency. Also, in some countries, a second language is a necessary ‘common denominator’ (*lingua franca*) when the population speaks a variety of different L1s (first languages). English is the main second language being studied in the world today, and even two decades before this book was published, an estimated 235 million L2 learners were learning it (Crystal, 1995: 108). So it is perhaps not surprising that this book is written in that language, although the concepts presented here should be appropriate to non-English L2 teaching and learning as well. Figures concerning the numbers of people learning or using second languages can only be rough estimates, but they still give some idea of the impact that applied linguistics can have in the world.

Due to length constraints, this book must inevitably focus on limited facets of applied linguistics. Traditionally, the primary concern of applied linguistics has been second language acquisition theory, second language pedagogy and the interface between the two, and it is these areas which this volume will cover. However, it is also useful to consider briefly some of the areas of applied linguistics which will not be emphasized in this book, in order to further give some sense of the breadth of issues in the field. Carter and Nunan (2001: 2) list the following sub-disciplines in which applied linguists also take an interest: literacy, speech pathology, deaf education, interpreting and translating, communication practices, lexicography and first language acquisition. Of these, L1 acquisition research can be particularly informative concerning L2 contexts, and so will be referred to in several chapters throughout this book (see Chapter 7, *Second language acquisition*, and Chapter 8, *Psycholinguistics*, in particular, for more on L1 issues).

Besides mother tongue education, language planning and bilingualism/multilingualism, two other areas that Carter and Nunan (2001) did not list are authorship identification and forensic linguistics. These areas exemplify how applied linguistics knowledge may be utilized in practical ways in non-educational areas. Authorship identification uses a statistical analysis of various linguistic features in anonymous or disputed texts and compares the results with a similar analysis from texts whose authors are known. When a match is made, this gives a strong indication that the matching author wrote the text in question. The search for the anonymous author of the eighteenth-century political letters written under the pseudonym of Junius is an example of this. A linguistic analysis of the vocabulary in the letters (for example, whether *on* or *upon* was used) showed that it was very similar to the use of vocabulary in the writings of Sir Philip Francis, who was then identified as the probable author (Crystal, 1987: 68). Similar analyses are carried out in forensic linguistics, often to establish the probability of whether or not a defendant or witness actually produced a specific piece of discourse. Crystal (1987) relates a case where a convicted murderer was pardoned, partially because a linguistic analysis showed that the transcript of his oral statement (written by the police) was very different stylistically from his normal speech patterns. This discrepancy cast strong doubts on the accuracy of the incriminating evidence in the transcript.

In addition to all these areas and purposes, applied linguistics is interested in cases where language goes wrong. Researchers working on language-related disorders study the speech of aphasic, schizophrenic and autistic speakers, as well as hemispherectomy patients, in the belief that we can better understand how the brain functions when we

analyse what happens when the speaker's language system breaks down or does not function properly. Even slips of the tongue and ear committed by normal individuals can give us insights into how the human brain processes language (Fromkin, 1973, 1980).

The development of applied linguistics

Early history

Interest in languages and language teaching has a long history, and we can trace this back at least as far as the ancient Greeks, where both 'Plato and Aristotle contributed to the design of a curriculum beginning with good writing (grammar), then moving on to effective discourse (rhetoric) and culminating in the development of dialectic to promote a philosophical approach to life' (Howatt, 1999: 618). If we focus on English, major attempts at linguistic description began to occur in the second half of the eighteenth century. In 1755, Samuel Johnson published his *Dictionary of the English Language*, which quickly became the unquestioned authority on the meanings of English words. It also had the effect of standardizing English spelling, which until that time had been relatively variable (for example, the printer William Caxton complained in 1490 that *eggs* could be spelled as 'eggys' or 'egges' or even 'eyren' depending on the local pronunciation). About the same time, Robert Lowth published an influential grammar book, *Short Introduction to English Grammar* (1762), but whereas Johnson sought to describe English vocabulary by collecting thousands of examples of how English words were actually used, Lowth prescribed what 'correct' grammar should be. He had no specialized linguistic background to do this, and unfortunately based his English grammar on a classical Latin model, even though the two languages are organized in quite different ways. The result was that English, which is a Germanic language, was described by a linguistic system (parts of speech) which was borrowed from Latin, which had previously borrowed the system from Greek. The process of prescribing, rather than describing, has left us with English grammar rules which are much too rigid to describe actual language usage:

- no multiple negatives (I don't need no help from nobody!)
- no split infinitives (So we need to really think about all this from scratch.)
- no ending a sentence with a preposition (I don't know what it is made of.)

These rules made little sense even when Lowth wrote them, but through the ages both teachers and students have generally disliked ambiguity, and so Lowth's notions of grammar were quickly adopted once in print as the rules of 'correct English'. (See Chapter 2, *Grammar*, for more on prescriptive versus descriptive grammars.)

Applied linguistics during the twentieth century

An overview of the century

The real acceleration of change in linguistic description and pedagogy occurred in the twentieth century, during which a number of movements influenced the field only to be

replaced or modified by subsequent developments. At the beginning of the century, second languages were usually taught by the 'Grammar-translation method', which had been in use since the late eighteenth century, but was fully codified in the nineteenth century by Karl Plötz (1819–1881), (cited in Kelly, 1969: 53, 220). A lesson would typically have one or two new grammar rules, a list of vocabulary items and some practice examples to translate from L1 into L2 or vice versa. The approach was originally reformist in nature, attempting to make language learning easier through the use of example sentences instead of whole texts (Howatt, 1984: 136). However, the method grew into a very controlled system, with a heavy emphasis on accuracy and explicit grammar rules, many of which were quite obscure. The content focused on reading and writing literary materials, which highlighted the archaic vocabulary found in the classics.

As the method became increasingly pedantic, a new pedagogical direction was needed. One of the main problems with Grammar-translation was that it focused on the ability to 'analyse' language, and not the ability to 'use' it. In addition, the emphasis on reading and writing did little to promote an ability to communicate orally in the target language. By the beginning of the twentieth century, new use-based ideas had coalesced into what became known as the 'Direct method'. This emphasized exposure to oral language, with listening and speaking as the primary skills. Meaning was related directly to the target language, without the step of translation, while explicit grammar teaching was also downplayed. It imitated how a mother tongue is learnt naturally, with listening first, then speaking, and only later reading and writing. The focus was squarely on use of the second language, with stronger proponents banishing all use of the L1 in the classroom. The Direct method had its own problems, however. It required teachers to be highly proficient in the target language, which was not always possible. Also, it mimicked L1 learning, but did not take into account the differences between L1 and L2 acquisition. One key difference is that L1 learners have abundant exposure to the target language, which the Direct method could not hope to match.

In the UK, Michael West was interested in increasing learners' exposure to language through reading. His 'Reading method' attempted to make this possible by promoting reading skills through vocabulary management. To improve the readability of his textbooks, he 'substituted low-frequency "literary" words such as *isle*, *nought*, and *ere* with more frequent items such as *island*, *nothing*, and *before*' (Schmitt and 2000: 17). He also controlled the number of new words which could appear in any text. These steps had the effect of significantly reducing the lexical load for readers. This focus on vocabulary management was part of a greater approach called the 'Vocabulary Control Movement', which eventually resulted in a book called the *General Service List of English Words* (West, 1953), which listed the most useful 2000 words in English. (See Chapter 3, *Vocabulary*, for more on frequency, the percentage of words known in a text and readability.) The three methods, Grammar-translation, the Direct method and the Reading method, continued to hold sway until World War II.

During the war, the weaknesses of all of the above approaches became obvious, as the American military found itself short of people who were conversationally fluent in foreign languages. It needed a way of training soldiers in oral and aural skills quickly. American structural linguists stepped into the gap and developed a program which borrowed from the Direct method, especially its emphasis on listening and speaking. It drew its rationale from the dominant psychological theory of the time, Behaviourism, that essentially said that language learning was a result of habit formation. Thus the

method included activities which were believed to reinforce 'good' language habits, such as close attention to pronunciation, intensive oral drilling, a focus on sentence patterns and memorization. In short, students were expected to learn through drills rather than through an analysis of the target language. The students who went through this 'Army method' were mostly mature and highly motivated, and their success was dramatic. This success meant that the method naturally continued on after the war, and it came to be known as 'Audiolingualism'.

Chomsky's (1959) attack on the behaviourist underpinnings of structural linguistics in the late 1950s proved decisive, and its associated pedagogical approach – Audiolingualism – began to fall out of favour. Supplanting the behaviourist idea of habit-formation, language was now seen as governed by cognitive factors, in particular a set of abstract rules which were assumed to be innate. Chomsky (1959) suggested that children form hypotheses about their language that they tested out in practice. Some would naturally be incorrect, but Chomsky and his followers argued that children do not receive enough negative feedback from other people about these inappropriate language forms (negative evidence) to be able to discard them. Thus, some other mechanism must constrain the type of hypotheses generated. Chomsky (1959) posited that children are born with an understanding of the way languages work, which was referred to as 'Universal Grammar'. They would know the underlying *principles* of language (for example, languages usually have pronouns) and their *parameters* (some languages allow these pronouns to be dropped when in the subject position). Thus, children would need only enough exposure to a language to determine whether their L1 allowed the deletion of pronouns (+pro drop, for example, Japanese) or not (–pro drop, for example, English). This parameter-setting would require much less exposure than a habit-formation route, and so appeared a more convincing argument for how children learned language so quickly. The flurry of research inspired by Chomsky's ideas did much to stimulate the development of the field of second language acquisition and its psychological counterpart, psycholinguistics.

In the early 1970s, Hymes (1972) added the concept of 'communicative competence', which emphasized that language competence consists of more than just being able to 'form grammatically correct sentences but also to know when and where to use these sentences and to whom' (Richards, Platt and Weber, 1985: 49). This helped to swing the focus from language 'correctness' (accuracy) to how suitable any use of language was for a particular context (appropriacy). At the same time, Halliday's (1973) systemic-functional grammar was offering an alternative to Chomsky's approach, in which language was seen not as something exclusively internal to a learner, but rather as a means of functioning in society. Halliday (1973) identified three types of function:

- *ideational* (telling people facts or experiences)
- *interpersonal* (maintaining personal relationships with people)
- *textual* (expressing the connections and organization within a text, for example, clarifying, summarizing, signalling the beginning and end of an argument).

This approach to language highlighted its communicative and dynamic nature. These and other factors pushed the field towards a more 'communicative' type of pedagogy. In the mid-1970s, a Council of Europe project (van Ek, 1976) attempted to create a Europe-wide language teaching system which was based on a survey of L2 learners'

needs (*needs analysis*) and was 'based on semantic categories related to those needs, including the relevant concepts (*notions*) and uses of language (*functions*)' (Howatt, 1999: 624). The revised 1998 version (van Ek and Trim, 1998: 27) lists six broad categories of language function:

- imparting and seeking factual information
- expressing and finding out attitudes
- getting things done (suasion)
- socializing
- structuring discourse
- communication repair.

In addition, eight general categories of notions were listed, which are shown here with representative examples of their sub-classes:

- existential (existence, presence, availability)
- spatial (location, distance, motion, size)
- temporal (indications of time, duration, sequence)
- quantitative (number, quantity, degree)
- qualitative (shape, colour, age, physical condition)
- mental (reflection, expression of ideas)
- relational (ownership, logical relations, effect)
- deixis (anaphoric and non-anaphoric proforms, articles).

The materials from this project were influential (for example, *Threshold Level English*), and textbooks based on a notional-functional syllabus became widespread. In the early 1980s, a theory of acquisition promoted by Krashen (1982) focused attention on the role of input. Krashen's 'Monitor theory' posited that a second language was mainly unconsciously acquired through exposure to 'comprehensible input' rather than being learnt through explicit exercises, that it required a focus on meaning rather than form, and that a learner's emotional state can affect this acquisition ('affective filter'). The pedagogical implications of this theory were that classrooms should supply a rich source of language exposure that was meaning-based and understandable, always including some elements just beyond the current level of learners' ability (*i+1*).

The methodology which developed from these factors emphasized the use of language for meaningful communication – communicative language teaching (CLT) (Littlewood, 1981). The focus was on learners' message and fluency rather than their grammatical accuracy. It was often taught through problem-solving activities and tasks which required students to transact information, such as information gap exercises. In these, one student is given information the other does not have, with the two having to negotiate the exchange of that information. Taken further, students could be taught some non-language-related subject, such as history or politics, in the L2. The assumption was that the learners would acquire the L2 simply by using it to learn the subject matter content, without the L2 being the focus of explicit instruction. Taking the communicative approach to its logical extreme, students could be enrolled in 'immersion' programs where they attended primary or secondary schools which taught subject matter only in the L2.

Results from this kind of immersion program, such as those initiated in Canada but which now also exist elsewhere, showed that learners could indeed become quite fluent in an L2 through exposure without explicit instruction, and that they developed excellent receptive skills. However, they also showed that the learners continued to make certain persistent grammatical errors, even after many years of instruction. In other words, a communicative approach helped learners to become fluent, but was insufficient to ensure comparable levels of accuracy. It seems as if a certain amount of explicit instruction focusing on language form may be necessary as well. The current focus-on-form movement (for example, Doughty and Williams, 1998) is an attempt to inject well-considered explicit instruction back into language lessons without abandoning the positive features and results of the communicative approach.

Just as language pedagogy developed and advanced during this time, so did the field of language assessment. Until the 1980s, tests were evaluated according to three principal criteria:

- 'Validity' (did the test really measure what it was supposed to measure?)
- 'Reliability' (did the test perform consistently from one administration to the next?)
- 'Practicality' (was the test practical to give and mark in a particular setting?).

These criteria focused very much on the test itself, and took little notice of the effects it might have on the people ('stakeholders') involved with it. Messick (1989) changed this with a seminal paper which argued that tests could not be considered 'valid' or 'not valid' in a black and white manner by focusing only on test-internal factors; rather, one needed to argue for the validity of a test by considering a variety of factors: for what kind of examinee was the test suitable; what reasonable inferences could be derived from the scores?; how did the test method affect the scores?; what kind of positive or negative effect ('washback') might the test have on stakeholders?; and many others. Now, tests are seen in the context of a complete assessment environment, which includes stakeholders (for example, examinees, raters, administrators, government officials), test conditions (for example, can everyone hear the audio player clearly?), the intended use of the scores (for example, will they be used for relatively 'high-stakes' purposes (university admission) versus relatively 'low stakes' purposes (a classroom quiz?)) and characteristics of the test itself (Are the instructions clear? What kind of tasks does the test employ?). Within this framework, tests are generally seen as being suitable for particular purposes and particular sets of learners, rather than 'one size fits all'. Since every classroom and group of learners is somewhat different, there has been a move towards exploring the value of alternative types of assessment which can be individualized to suit particular situations. These include structured observation, progress grids, portfolios, learning journals, project work, peer-assessment and self-assessment. (See Chapter 17, *Assessment*, for more on these issues.)

Technology was advancing throughout the century, but the advent of powerful and affordable personal computers probably has had the greatest impact on applied linguistics. Of course, language laboratories had utilized technology since the mid- to late-1940s, but the relatively recent development of very capable personal computers made quite sophisticated language programs available to the individual user, whether learner, teacher or researcher. Pedagogically, this opened the door to 'computer-assisted language learning' (CALL), where learners could work on individual computers truly at

their own pace. Computer technology has also facilitated the incorporation of audio and video input into learning programs on a scale previously unimaginable. The best of the current programs are interactive, tailoring their input and tasks to individual learners' progress, although it must be said that much remains to be done in this area. With new learning programs arriving regularly, today CALL is one of the more dynamic areas in applied linguistics.

Computing technology also made it possible to analyse large databases of language, called 'corpora'. Evidence from corpora have provided numerous insights into the workings of language (Egbert and Hanson-Smith, 1999; *see also* Chapter 6, *Corpus linguistics*). Perhaps the most important revelation is the vast amount of lexical patterning which exists; in fact, it is so great that some scholars have suggested that it is more important than grammar in contributing to the organization of language (Sinclair, 1996). Corpora are now a key tool in lexicography, and have been consulted in the development of most current learner dictionaries. Evidence from corpora of spoken discourse has also highlighted the differences between spoken and written discourse (McCarthy and Carter, 1997), and the fact that language is largely phrasal in nature (Biber et al., 1999; Wray, 2002). Happily, corpora have now made truly descriptive grammars possible, with writers having numerous authentic examples of many grammatical structures at their fingertips (Carter and McCarthy, 2006). The best studies in this area can even distinguish varying language usage between different registers, for example written fiction versus academic prose (Biber et al., 1999). It is likely that evidence from corpus linguistics will continue to have a major influence on applied linguistic thinking well into the foreseeable future.

Incorporating social and cultural elements into applied linguistics

The mid-twentieth century domination of behaviourism as the overriding psychological paradigm (at least in English-speaking countries) meant that only stimuli (that is, teaching input) and reactions (student responses) which could be observed were considered worthy of discussion in the area of psychology. In linguistics, a similar dichotomy occurred when Saussure (1857–1913; *see de Saussure, 1966*) split language ('langue') from the actual use of language ('parole'). Chomsky's (1965) ideas had a similar effect as they distinguished what was happening inside the learner ('language competence') from what was observable outside the person ('language performance').

There were some voices speaking out against these divisions, such as Vygotsky (1896–1934; *see Vygotsky, 1987*), but political and academic factors kept their influence in check until the latter part of the twentieth century. In the late 1960s, Labov (1970) began exploring how social factors influence L1 language use and Tarone (1979) and others later did the same for L2 usage. The study of the interface of social factors and language use eventually developed into the field of 'sociolinguistics'. Similarly, it was acknowledged that the context in which language is used (for example, for what purpose, the relative power relationship between interlocutors) also affects the language of communication. The study of these factors blossomed in the area of 'pragmatics'. Together, these fields, along with the closely related area of 'discourse analysis', have shown that social and contextual influences cannot be divorced from individual learners when language learning and use are studied.

One view of cognition, called 'sociocultural theory', emphasizes individual–social integration by focusing on the necessary and dialectic relationship between the socio-cultural endowment (the 'inter'-personal interface between a person and his or her environment) and the biological endowment (the 'intra'-personal mechanisms and processes belonging to that person), out of which emerges the individual. Sociocultural theory suggests that in order to understand the human mind, one must look at these two endowments in an integrated manner, as considering either one individually will inevitably result in an incomplete, and thus inaccurate, representation. For it is only through social interaction with others that humans develop their language and cognition. Furthermore, most language use (spoken or written) is co-constructed with others and not simply the product of one individual acting alone in a vacuum.

Psycholinguistic perspectives in applied linguistics

One of the most noticeable recent trends has been the establishment of a more psychological perspective of language acquisition, processing and use. This perspective is being driven by a number of sub-fields (cognitive linguistics, neurolinguistics, cognitive science, cognitive neuroscience (see Dörnyei, 2009)), but we will use the umbrella cover term *psycholinguistics* here, as that is the title of the chapter in this volume which covers this general approach (see Chapter 8, *Psycholinguistics*). Psycholinguistic perspectives have now become a major influence in applied linguistics, in areas ranging from theory building to research methodology (Field, 2003; Gaskell, 2009; Harley, 2008).

Perhaps the most noticeable outcome is that the current leading theories of how second languages are acquired are all informed by psycholinguistic thinking and research. Although these theories differ somewhat, at heart most of them maintain that the mind extracts the recurring patterns from the language input a learner receives. These patterns exist with the smallest components of language all the way up to overall connected discourse. For example, some graphemes often cluster together in English (*spl* – *splatter*, *split*, *spleen*), while others rarely or never do (*zlf*). Also, affixes attach to stems in systematic ways (*re-* + *play* = *replay*). Similarly, words co-occur together in patterns called *collocations* (*black coffee*, *strong coffee*, *hot coffee*, but not* *powerful coffee*).¹ Patterns even exist at the level of discourse, as every reader would expect some type of Introduction–Body–Conclusion organization in an academic text. Current thinking is that the human mind is very good at extracting these patterns and using them to build up a picture of the systematicity of a language. In essence, the learner's linguistic knowledge is 'constructed' through general learning mechanisms, rather than being innately in place, as Chomsky posited more than half a century earlier. The process is implicit, but eventually the patterns may become salient enough that a learner is able to describe them explicitly. Various versions of this 'pattern extraction' can be seen in the connectionism (Elman, 2001), emergentism (Ellis and Larsen-Freeman, 2006), usage/exemplar-based (Ellis, 2008) and construction grammar (Tomasello, 2003) theories of language acquisition and use.

A related trend is use of psycholinguistic research methodologies to explore language processing in much more detail than was possible before. Previously, most language measurement required explicit knowledge of linguistic features because learners were required to write down or say their answers. Newer psycholinguistic techniques can

look into the inner workings of the brain while learners are using language in various ways. This allows exploration of linguistic knowledge even before learners become aware of it. This has now made research into the very initial pre-conscious stages of language learning possible. For example, Schmitt (2010) describes how this is beginning to revolutionize research into vocabulary acquisition. He relates how:

- Reaction-timing studies can inform about the development of automaticity of lexical access.
- Priming studies can show the acquisition of collocation pairings.
- Eye-movement studies can show how formulaic sequences are read by native and non-native speakers.
- Event-Related Potentials (ERP) can indicate the very earliest traces of lexical learning.
- Functional Magnetic Resonance Imaging (fMRI) can show the locations where various types of word (that is, words relating to parts of the body) are activated in the brain.

Language is immensely complex and numerous factors affect how it is learned. While past research has often considered how these factors work in combination to lead to the end product of learning, there is a growing awareness that the various factors also affect each other in dynamic and fluid ways. For example, language learners' willingness to communicate (WTC) is partially dependent on their levels of proficiency and on their linguistic self-confidence. However, while the two factors exert their effect on WTC, they themselves can also change (for example, successful communication can improve the learner's language proficiency and enhance their confidence) (Dörnyei, 2009). In addition, it is easy to see how the two factors can affect each other. Greater proficiency should lead to greater confidence. Conversely, greater confidence may lead to the learners putting themselves in situations where they use and practise their language more, which in turn may lead to improved proficiency. Complex interactions like these are difficult to describe and understand and, in an effort to do so, some researchers are working to adapt methods from other fields which have to model complex and difficult-to-predict phenomena (for example, weather). The methods come under several names: Dynamic(al) systems theory, Complexity theory and Chaos theory. Although it is still in its early days, given the dynamic nature of language acquisition and use, it is likely that this type of approach will prove increasingly influential in the future. For overviews, see Larsen-Freeman and Cameron (2008) and de Bot, Lowie and Verspoor (2007).

Themes to watch for in this book

This book includes a broad selection of major areas in applied linguistics. But this diversity does not mean that each area can be isolated and dealt with on its own. On the contrary, true understanding of any individual area can only be gained by understanding others which are related. For example, to truly understand the information in Chapter 3, *Vocabulary*, one must take on board the insights given in Chapter 6, *Corpus linguistics*. In fact, if we look deeply enough, nearly all of the areas are related to each other in some way. This being the case, there are several themes that run through the

various chapters. These underlying currents are important because they add coherence to the overall discussion and represent an entry point to understanding and critiquing the ideas in this book.

The interrelationship of the areas of applied linguistics

There is a story from India about the five blind men of Hindustan who went out to learn about an elephant. They all felt different parts of the elephant's body and came to very different conclusions about what an elephant is like. The man who felt the trunk thought an elephant was like a snake, the one who felt a leg thought elephants were like a tree, the one who felt the ear thought elephants were like a fan, and so on. Similarly, language is a big, complex subject and we are nowhere near to being able to comprehend it in its entirety. The best any person can do at the moment is to study a limited number of elements of language, language use and language learning, and try to understand those elements in detail. Although we strive to connect this understanding with insights from other areas in the applied linguistics field, we can only be partially successful. Thus we end up with scholars becoming specialists in areas of applied linguistics, but with no single person able to master the whole field. (That is why this is an edited volume and not a book written by a single author.) This is inevitable and happens in every field, but it does mean that applied linguistics is compartmentalized to some extent. We must be aware of this and realize that this compartmentalization is an expedient which enables us to get around our cognitive limitations as human beings; it is not the way language works in the real world. Language, language learning and language use are a seamless whole and all of the various elements interact with each other in complex ways. Each chapter in this book looks at one area of specialization, but when reading them, it is useful to remember that they make up only one part of the larger 'complete elephant'.

The move from discrete to more holistic and integrative perspectives

Despite the above-mentioned caveat about compartmentalization, we are getting better at being able to grasp larger and larger bits of the language elephant. Up until the middle of the last century, language was viewed in very discrete terms: it was made up of grammar, phonology and vocabulary, each of which could be separately identified and described. (In fact, phonetics was the first area within linguistics to become well-developed (late nineteenth century) and the Reform Movement in language teaching, led by phoneticians, was very influential in encouraging a focus on the spoken language.) The last 40 years have seen a move towards viewing language in much more integrative and holistic terms. We now know that language use is not just a product of a number of individual language 'knowledge bits' which reside completely within 'interlocutors' (language users); it is also profoundly affected by a number of other factors, such as the social context (who you are communicating with and for what purpose), the degree of involvement and interaction, the mode of communication (written versus spoken) and time constraints. Taking these and other factors into account gives us a much richer and more accurate account of the way language is actually used and leads to a better description of the knowledge and skills which make up language proficiency. In fact Celce-Murcia and Olshtain (2000) have proposed a

discourse-based framework for language teaching designed to deal with all these factors simultaneously. In the rest of this book, therefore, a trend worth watching is how the various areas of applied linguistics now embrace integrative perspectives which acknowledge the complex interplay of numerous factors.

Lexico-grammar and formulaic language

The areas of vocabulary and grammar provide a good example of this new integrative approach. Traditionally, vocabulary was viewed as individual words which could be taught and used in isolation. With grammar being highlighted in most theories and pedagogical methodologies, vocabulary items were seen merely as 'slot fillers' necessary to fill out syntactic structures. This conception saw vocabulary and grammar as two discrete entities which could be taught and learnt separately. This view is starting to change and one of the most interesting developments in applied linguistics today is the realization that vocabulary and grammar are not necessarily separate things, but may be viewed as two elements of a single language system referred to as 'lexico-grammar' (Halliday, 1978). This term acknowledges that much of the systematicity in language comes from lexical choices and the grammatical behaviour of those choices. For example, you can use the word *plain* in many ways and in many grammatical constructions, but once you choose the collocation *made it plain* you are more or less constrained to using the following structure:

SOMEONE/SOMETHING made it plain that *SOMETHING AS YET UNREALIZED*
(often with authority) *WAS INTENDED OR DESIRED*

(Schmitt and 2000: 189)

This structure should not be viewed in terms of being first generated with grammar, and then the words simply slotted into the blanks. Rather, this structure is likely to reside in memory as a bit of formulaic language which is already formed, that is, it is a 'formulaic sequence'. Since it is preformed and 'ready to go', it should take less cognitive energy to produce than sequences which have to be created from scratch (Pawley and Syder, 1983; Conklin and Schmitt and 2008). Evidence from corpora show that much of language is made up of such 'multi-word units', many of which are likely to be preformulated in the mind (see Moon, 1997; Wray, 2002). Because we now believe that a great deal of language is stored in peoples' minds as these 'chunks', it makes little sense to attempt to analyse those chunks as if they were generated online according to grammar rules. This insight is forcing a reappraisal of both how we consider language itself and how it is processed.

Bringing the language learner into the discussion

Previously, much of the discussion about language learning focused on the best techniques and materials for teaching. In other words, it had a focus on the teacher. There seemed to be an unexpressed view that the learner was somehow a 'container' into which language knowledge could be poured. This view fitted well with teacher-fronted classes and behaviourist theories which suggested learning was merely the result of practice and conditioning. However, in the early 1970s, it was realized that learners are

active participants in the learning process and should be allowed to take substantial responsibility for their own learning. This led to interest in the various ways in which individual learners were different from one another and how that might affect their learning. It first led to the development of the area of 'learner strategies'. If learners were, in fact, active participants then it followed that what these learners did would make a difference in the quality and speed of their learning. Studies were carried out to find out what behaviours differentiated 'good' from 'poor' learners (Naiman et al., 1978). From these studies, lists of learning strategies which good learners used were developed and it was suggested that all learners could benefit from training in these strategies. Of course, nothing in applied linguistics is so straightforward, and it was eventually discovered that the correspondence between strategy training and use, and higher language achievement, was less direct than previously assumed. It is clear that effective strategy use can facilitate language learning (Oxford, 1990), but it is still unclear how to best train learners to use strategies, or indeed how effective strategy training is in general.

More recently, there has been a great deal of emphasis on how the individual characteristics of each learner affects their learning (that is, individual differences). Clearly, a range of differences either constrain or facilitate the rate at which second languages are learned, including age (Birdsong, 2006), aptitude (Dörnyei, 2005), learning style preferences (Cohen and Weaver, 2006), strategy use (Griffiths, 2008) and motivation (Dörnyei, 2005). The area of individual differences will be discussed in detail in Chapter 10, *Focus on the language learner: Styles, strategies and motivation*.

New perspectives on teaching the four skills

The teaching of the four language skills (*see* Chapter 13, *Listening*, Chapter 14, *Speaking and pronunciation*, Chapter 15, *Reading* and Chapter 16, *Writing*) has long been an important concern in second language pedagogy. Language use inevitably involves one or more of the four skills, thus this text devotes a chapter to each language skill. Although it is useful to give attention to the unique sub-skills and strategies associated with each skill, it is also important to consider the overlaps in mode (oral versus written) and process (receptive versus productive):

	Oral	Written
Receptive	LISTENING	READING
Productive	SPEAKING	WRITING

Furthermore, each skill may usefully be described in terms of the top-down and bottom-up processing required. Listeners and readers work to decode and construct meanings and messages, whereas speakers and writers use language resources to encode and express meanings and messages. These meanings and messages occur at the level of text or discourse; thus, discourse analysis is highly relevant to understanding the four skills. Top-down processing utilizes shared knowledge, pragmatic knowledge and contextual information to achieve an appropriate interpretation or realization of textual meanings and messages. Bottom-up processing depends on language resources – lexico-grammar and phonology (pronunciation) or orthography – as aids to the accurate decoding or interpretation, or encoding or realization, of meaningful text.

Typically, more than one language skill is involved in any communicative activity (for example, we take turns at listening and speaking in conversation, we write notes while listening to a lecture, we read a passage carefully in order to write a summary, etc.). If teachers focus on one skill for purposes of pedagogy and practice, that is, to improve learners' use of that skill, the ultimate goal should always be to move from such practice toward the types of integrated skill use that the learners are likely to need when using the target language for communication.

The lack of 'black and white' answers

Because language is created and processed both between interlocutors and within the human mind, much of what is of interest in applied linguistics is hidden from direct view and study. Despite the advances in psycholinguistic methodologies, we cannot yet look into the human brain and directly observe language, which means that most research has to rely on indirect evidence observable through language processing and use. The results of such indirect evidence need to be interpreted, and usually more than one interpretation is possible. This makes it difficult to say much with complete certainty about language learning and use. You will notice that throughout the book there are a number of theories and hypotheses and that different scholars hold different positions on key issues. Until 'neurolinguistics' develops to a point which allows us to directly track language in a physiological manner (Brown and Hagoort, 1999; Paradis, 2004; Schumann et al., 2004), a degree of controversy and multiplicity of views seems inevitable. It thus remains the responsibility of researchers, teachers and you the reader to evaluate the various proposed positions and decide which makes the most sense. Readers looking for easy, tidy and absolute answers may be disappointed, but should remain open to new directions in the future.

Conclusion

From the discussion in this overview, it should be obvious that our field's views on language, language learning and language use are not static, but are constantly evolving. At the point in time when you read this book, they will still be changing. Thus, you should consider the ideas in this book (and any book) critically and remain open to future directions in the field.

Notes

- 1 University of Nottingham.
- 2 University of California, Los Angeles.
- 3 An asterisk indicates a form that is ungrammatical or inappropriate.

Further reading

- Howatt, A.P.R. (2004) *A History of English Language Teaching* (second edition). Oxford: Oxford University Press.
- McLelland, N. (2017). *Teaching and Learning Foreign Languages: A History of Language Education, Assessment and Policy in Britain*. Basingstoke: Routledge.

[Two books which give a historical background to the key applied linguistics area of second language teaching and learning (the first focusing on English as a second language).]

Burns, A. and Richards, J.C. (eds.) (2012) *The Cambridge Guide to Pedagogy and Practice in Second Language Teaching*. Cambridge: Cambridge University Press.

Chapelle, C.A. (ed.) (2012) *The Encyclopedia of Applied Linguistics*. Oxford: Wiley-Blackwell.

Cummins, J. and Davison, C. (eds.) (second edition forthcoming). *International Handbook of English Language Teaching, Parts 1 and 2*. New York: Springer.

Davies, A. and Elder, C. (eds.) (2006) *The Handbook of Applied Linguistics*. Oxford: Blackwell.

Hinkel, E. (ed.). (2005; 2011; 2016) *Handbook of Research in Second Language Teaching and Learning (Volumes I, II and III)*. Mahwah, NJ: Lawrence Erlbaum.

Kaplan, R.B. (ed.) (2010) *The Oxford Handbook of Applied Linguistics* (second edition). Oxford: Oxford University Press.

[There is now a range of encyclopedias/handbooks that cover the areas of applied linguistics and English language teaching, and the above eight volumes are a representative sample. They tend to be longer books that cover a more comprehensive range of subjects than the present text, although each area is often covered in less depth. They are primarily meant as reference volumes where teachers and researchers can look up a range of topics and obtain a brief overview of those subjects.]

Celce-Murcia, M., Brinton, D.M. and Snow, M.A. (eds.) (2014) *Teaching English as a Second or Foreign Language* (fourth edition). Boston, MA: National Geographic Learning.

[A comprehensive introductory volume intended for preservice teachers focusing on teaching language skills and pedagogical issues.]

Crystal, D. (2010) *The Cambridge Encyclopedia of Language* (third edition). Cambridge: Cambridge University Press.

[A lively table-top reference book which gives interesting snippets on a wide variety of language issues, the vast majority of them focusing on the L1 (but including an L2 section).]

Larsen-Freeman, D. and Anderson, M. (2011) *Techniques and Principles in Language Teaching* (third edition). New York: Oxford University Press.

[A very accessible book which describes, and gives examples, of the various major teaching methodologies used in the twentieth century.]