A Cognitive Approach to Language Learning

语言学习认知法

Peter Skehan

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牛津应用语言学丛书

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出　版　前　言

　　这是一部从认知角度论述第二语言学习和测试的专著。本书系统阐述了关于第二语言学习的最新方法——认知法,反映了关于第二语言习得研究的最新成果。本书出版于 1998 年,作者 P·斯基汉是伦敦泰晤士谷大学英语教育学院的教授。H·G·威多森教授担任本套丛书的应用语言学顾问。

　　本书着重探讨认知心理学与第二语言学习研究的关系,介绍与语言习得有关的心理语言学和认知过程方面的知识,探讨语言习得的共性与学习者之间的个体差异,并将有关的理论应用于任务型语言教学和语言测试。

　　作者撰写本书的主要目的在于纠正第二语言学习和教学法方面某些观点的片面性。作者认为,由于历史的原因,对第二语言学习的研究主要有以下缺陷:一是未考虑心理语言学的影响,二是忽视了学习者之间的个体差异,三是教学理论与实践的脱节。作者指出,造成这些缺陷的主要原因在于迄今为止所进行的研究都过分向语言学和社会语言学倾斜,却没有有效地吸收当代认知心理学的研究成果。

　　作者从认知过程的角度阐述了关于第二语言学习的观点,特别对学术界和教育界深感兴趣的两个问题进行了探讨:一是以普遍性认知过程为重点的第二语言学习的研究,二是第二语言学习者之间的个体差异。作者从学习者的认知能力和认知过程入手,吸取当代心理语言学研究的新成果,既考虑教学的共性问题,又考虑学习者的个性特点,务求理论和实践相结合,增强语言学习的效果。本书开拓了关于第二语言学习研究的视野。作者以新的视角——心理语言学和认知过程为着眼点,指明了解答第二语言教学中诸多问题的途径,而这些问题按传统的方法从语言学和社会语言学的角度来研究是无法解答的。近年来,人们已开始接受从认知过程的角度来进行第二语言学习的研

究。这本专著的问世,将有助于加速这种研究的过程,使第二语言学习的研究走向深入。

本书有助于我国从事外语教学和研究的人员、高校外语专业的学生及研究生了解国外关于第二语言教学的最新研究成果,推动我国外语教学研究的进展。

本社编辑部

Acknowledgements

Preface

This book represents a personal view of second language acquisition from a processing perspective. It attempts to relate two of my interests: second language acquisition, with its emphasis on universal processes, and the study of individual differences, with its clear concern for how people are different when they learn second languages. I attempt to relate them through the underlying approach which is used—to investigate second language learning through the cognitive abilities of the learner and the processing problems that the learner has to confront.

As a result, there are many areas which are neglected. Sociolinguistic influences barely get a mention. Nor is there explicit concern with the nature of the language system *per se*. Even within the scope of individual differences there are many areas of omission—affective influences being the major one of these. It is not that I consider any of these areas unimportant. It is, rather, that I restrict myself to trying to unify issues on second language learning within a cognitive perspective, pushing this explanatory approach as far as it will go, in the hope that it will be illuminating. There is also an implicit claim that much research in second language acquisition and the study of language learning has emphasized relatively unrewarding areas. So in this book there is little concern with universal grammar, or with interaction-based accounts. In each case I consider that these areas, although interesting and each the starting point for an impressive research tradition, are not effective in accounting for much variance in second language learning.

This book was written to sketch out an alternative account which redresses some of these imbalances. It seems to me that there has been a shift towards the acceptance of a processing perspective within the field of second language learning, and that if such a perspective gathers pace, it will have a beneficial influence on the way research concerns and pedagogic practice come together more closely. I would like to try to encourage such a development.

Contents

Introduction

Issues and themes: universalist and differential accounts of second language learning and performance

The fields of second language acquisition and language pedagogy have seen large numbers of publications in recent years, and so the appearance of another book requires some justification. Of course, there is always the argument that developments occur through research and publication and that these need consolidation periodically in book form to make them more accessible, to bring them together, and to organize the claims that are made. But this argument is effectively neutralized by the relatively recent publication of, for example, Larsen-Freeman and Long's (1991) *An Introduction to Second Language Acquisition Research*, and especially Ellis's (1994) *The Study of Second Language Acquisition*, which, at more than 800 pages, represents a milestone for the profession, providing comprehensive coverage of the entire field.

The present book does not attempt to provide complete or even-handed coverage of second language acquisition (SLA) and pedagogy. Rather it tries to argue more narrowly for particular viewpoints which I feel have been under-represented in recent years. In that respect, it tries to redress what I see as misplaced emphases, thus bringing back into prominence certain influences upon second language learning which, often for historical reasons, have been neglected. Stating three underlying problems helps to clarify these claims:

1 Psycholinguistics, the study of the psychological processes underlying language learning and use, has been insufficiently influential on our profession as a foundation discipline, losing out in importance to linguistics and sociolinguistics.
2 There is an unfortunate division between universalist accounts, which focus on common structures and processes in all second language learning, and differential accounts, which focus on differences between learners.
3 Theory and pedagogy have an uneasy relationship with one another: frequently pedagogic applications derived from theoretical approaches have only a perfunctory quality, rather than being properly rooted in theory.

The influence of psycholinguistics

The relative lack of influence of psycholinguistics, the first theme of this book, is becoming more apparent as continued progress is made in this 'feeder' discipline. It is, of course, understandable that the language teaching profession should be sceptical of the discipline which bequeathed it audiolingualism, pattern practice, and the like. Such scepticism has undoubtedly been a factor in the way in which it is linguistics which has been seen as the parent discipline for language teaching. Structural linguistics, especially in North America, has had an immense influence, either through figures such as Bloomfield and Fries, with audiolingual applications, or through Chomsky, and generative grammar, with its assumptions about Language Acquisition Devices (LADs) and the engagement of naturalistic learning processes. In either case, the nature of the linguistic material which is the target for learning has shaped our understanding of how learning itself takes place. Sociolinguistics has also grown in influence in the last twenty-five years through the work of such people as Hymes, Labov, and Tarone, who have demonstrated more clearly the importance of the social contexts in which languages are learned, and the way they influence the meanings which are expressed.

I am not arguing that linguistics and sociolinguistics are not relevant for second language learning and use, but rather that their attractions have rather diverted attention from the role of psycholinguistics. Of course, there are many who would argue that psycholinguistic analyses have been all too important (Bourne 1986). Such critics could draw our attention to the enormous increase in importance of second language acquisition as an independent discipline, with the implicit claim that if SLA is not psycholinguistics, then what else could be! But I want to argue that indeed SLA has itself been overly influenced by linguistics and sociolinguistics, and has not, until recently, drawn effectively on contemporary cognitive psychology. There has been a widespread assumption that language is special, and that if a language acquisition module exists in humans, our views of second language acquisition too will be constrained by this basic endowment. As a result, an interpretation of psycholinguistics which emphasizes information processing and cognitive abilities, two of the major objectives of contemporary cognitive psychology, has been of secondary importance to linguistically-motivated universals and sociolinguistic generalizations.

I argue that two general assumptions for language learning as a cognitive activity justify an increased scope for the operation of psycholinguistic factors. First, there is the old chestnut of whether there is a critical period for language learning. The contrasting positions on this question each have long antecedents. It will be argued in this book (principally in Chapter 9) that the balance of evidence now is in favour of the existence of such a temporary predisposition for language learning amongst humans. Before the end of the

critical period, language acquisition is indeed qualitatively different from other learning, but that after the period is over, language learning is constrained by similar structures and processes to other learning. If, as a result, we have to regard second language learning as cognitive in orientation, then we need to take more seriously what psychologists tell us generally about how humans learn.

The second underlying assumption is less biological and more social and psychological. It is that *meaning* takes priority for older learners, and that the *form* of language has secondary importance. This claim relates to both comprehension and production. Regarding comprehension, the resources to extract meaning that humans possess increase in effectiveness as we get older. We become more adept at using strategies of communication, at exploiting schematic knowledge so that we say less but mean more, because we can exploit the collaborative construction of meaning that becomes increasingly possible. We also deliberately engage in more elliptical communication to avoid accusations of pedantry and to ensure that conversations proceed purposefully. Corder (1974) gives the example of an exchange between an airline passenger (on an early morning flight), and a steward, holding a coffee jug and clearly about to return to the front of the cabin:

Passenger: '*I say!*'
Steward: '*Empty.*'

The exchange lacks for nothing, given that the context, including the passenger's obvious fear of caffeine deprival, renders the need for complete sentences irrelevant.

As a result, we can often bypass a pivotal role for form in conversations since meaning can be extracted without exhaustive analyses of the structural aspects of language—we only need to understand enough for the communicative encounter we are in to proceed. Even if there were no critical period, these factors would give a LAD a more difficult task to accomplish in the case of the older learner of a second language. In many communicative interactions, the LAD would not be needed to extract meaning, and so the quality of the new material which would be input to the acquisition processes would be impoverished.

Moving to production as language users, we develop effective means of coping with one of the greatest problems of all: how to keep speaking at normal rates in real time. We do this in a number of ways (as we will see in succeeding chapters), but one of the most important (in itself as well as for language learning) is that, as native speakers, we draw upon lexical modes of communication. In other words, rather than construct each utterance 'mint fresh' (as Bolinger has characterized it), and so require considerable computational power, we economize by stitching together language chunks which free processing resources during communication so that planning for the form and content of future utterances can proceed more smoothly.

This claim, simply put, is far-reaching in its consequences. It recasts our views of what language is, and it changes definitively the relationship between competence and performance. It also implies the existence of a dual-coding approach to language performance and to language learning. The dual coding requires us to account for the use of a rule-based system in economical and parsimonious performance and a memory-based system which provides fast access. An account is also needed of the coexistence of these two systems.

When we turn to learning and change, the analysis becomes even more intriguing. The argument so far has been that meaning is primary, and that a range of factors (for example, elliptical, strategic communication; lexically-based performance) takes attention away from form. But if that is the case, how can learning proceed? Such learning requires, in some way, the development of an underlying and evolving interlanguage system which becomes progressively more complex and closer to the target language system in question. But to trigger such a process, methods of contriving a focus on form are needed which capture learners' attention, so that they may incorporate newly-noticed forms into their developing language systems. Discussions of consciousness, and above all, noticing (Schmidt 1990), are relevant here, and profitably shift the discussion to the factors which make noticing more likely to occur.

Task-based instruction and language testing

Following from such general discussion of psycholinguistic influences on performance and learning, two major practical applications are offered: towards task-based instruction and towards language testing. Much foreign language instruction is based on form-focused language presentation, followed by controlled practice. Only then is some degree of free production used. A task-based approach, in contrast, gives learners tasks to transact in the expectation that doing such tasks, for example comparing one another's family trees, will drive forward language development. Given that language is learned for communication, and that meaning is primary, the attraction of a task-based approach to instruction is that it enables each of these to operate fairly directly. But of course the disadvantage is that engaging meaning and enabling communication might de-emphasize form even further than might be the case otherwise. So the challenge of task-based instruction is to contrive sufficient focus on form to enable interlanguage development to proceed without compromising the naturalness of the communication that tasks can generate. Three issues are fundamental to such pedagogic aspirations:

- how tasks are selected to maximize the chances of a focus on form;
- how tasks are implemented, through pre- and post-task activities, as well as task adaptation;
- how performance on tasks can best be conceptualized and evaluated.

The discussion of the selection and implementation of tasks will explore how a form–content balance can be struck, and how learners can be induced to take risks in their language performance and push for change, when this is appropriate, as well as focus on conservatism, consolidation, control, and accuracy, at other times. This discussion links with the ways in which task-based performance is evaluated, since a three-way distinction will be made between fluency (often achieved through memorized and integrated language elements); accuracy (when learners try to use an interlanguage system of a particular level to produce correct, but possibly limited, language); and complexity (a willingness to take risks, to try out new forms even though they may not be completely correct). We will see that these three aspects of performance are somewhat independent of one another and that the influences upon each of them are rather different—a claim which has important implications for how task-based instruction can best be organized.

The second practical implication of an information-processing perspective is for testing. If it is accepted that language performance is based on a dual-coding system and that coping with real-time performance means developing effective modes of coexistence between form- and lexis-based systems, the manner in which testing is carried out has to change. It is no longer feasible to use tests to sample performance to gain an indirect insight into underlying competence and the structure of abilities. Instead, it is important to have systematic ways of approaching performance itself, and how processing factors influence it. This leads to the need to use a task-based approach to testing also, coupled with more effective ways of capturing different aspects of test performance. Once again, the distinction between fluency, accuracy, and complexity is relevant, and suggests that we need to draw upon cognitive psychology to shape how we make test-based generalizations about real-world performances.

Learner similarities and differences

So far we have been concerned with the usefulness of psycholinguistic approaches to general issues in language learning and processing. Now we can return to the second major theme which underlies the book: the contrast between a focus on learner similarities and a focus on learner differences. The most natural way to do this is through the discussion of foreign language aptitude, the construct which accounts for the variation in language-learning ability. A starting point for this discussion is the claim that aptitude has a componential structure, and that it is more appropriate to think of aptitude profiles, conveying the idea that rather than think of individual learners as more or less talented, one should think of them having strengths and weaknesses. Profiles can also be the basis for a reconceptualization of aptitude in information-processing terms. The fundamental claim of this argument is that one can make more sense of aptitude if one distinguishes between the

three information-processing stages of input, central processing, and output. The three stages of information processing then provide a foundation for the different components of aptitude, since the three-component structure which is proposed can be linked to the three stages. The first, phonemic coding ability, can be linked to input processing. The second, language analytic ability, is more relevant to central processing, while the third, memory, goes beyond initial learning of new material, and also concerns retrieval of material and fluency in output. In tabular form, this can be represented as follows:

Processing Stage	Aptitude Component
input	phonemic coding ability
central processing	language analytic ability
output	memory

Looking at aptitude in this way is interesting in itself. But beyond that, other fruitful issues can be explored. The analysis enables a more interesting account to be given of the language–cognition relationship. It also allows us to explore the nature of exceptional learners, and to relate such learners to what might be termed the 'normally very talented' learners. It also allows a more productive discussion of the critical period evidence. And finally it allows us to re-examine the concept of learning style and to relate this to an information-processing viewpoint. As a result, some of the controversies within the literature on cognitive style are given a new perspective, and it will be argued that there is still considerable potential for research in this area.

These new analyses of the nature of learner difference lead, in turn, to a new set of pedagogic applications. The applications outlined earlier (task-based instruction and testing) made the assumption that everyone is the same and that no adaptation in teaching is necessary to take account of differences between learners. But the analysis of aptitude and cognitive style suggests that a profile approach to characterizing learners is more productive. The profiles of different sorts of learner are relatively small in number, with the result that one can envisage useful adaptations of instructional approaches which fall far short of the nightmare of a different set of materials for every different learner.

Two general sets of application are discussed. First, a contrast is made between analytic and memory-based learners, and it is argued that one can think of implementing materials, such as those for task-based instruction, to exploit learners' strengths, and to help learners to compensate for their weaknesses. This sort of application moderates the general conclusions that would follow from universalist perspectives alone. The second set of applications is more concerned with newer approaches to second language instruction which highlight the learner as an independent agent in the language-learning process. I argue that such approaches (process syllabuses, project work, for example) make a number of implicit assumptions about learners which are not often met. That is, there is often a gulf between what the learner is capable of doing and what the freedom of the new approach

assumes can be done. Thus, there is a strong role for finding ways to equip the learner to assume the independence that is thought to be desirable. Research into learner differences, in both aptitude and style as well as in the area of learner strategies, can provide considerable guidance as to how pedagogic intervention can be carried out more effectively, and so Chapter 11 of the book explores how individuality can be conceptualized within approaches which encourage learner independence.

An outline of the book

The organization of the book follows from the above discussion. The first half of the book has four chapters on fundamental concepts in psycholinguistics, followed by Chapters 4–7, applications to instruction and testing based on these concepts. In the second half of the book, Chapters 8–11 cover basic issues in the study of learner differences followed, once again, by applications. The final chapter then attempts to bring these different threads together, the general and the variationist, the theoretical and the practical, to provide a more unified picture of second language learning. Looking at the outline in more detail, Chapter 1 examines the role of comprehension and production strategies in language learning. It explores early comprehension-based accounts, as well as the role of comprehension strategies. It moves on to look at the attacks that were mounted on comprehension-based accounts of language development, and the role proposed for the Comprehensible Output Hypothesis (Swain 1985). A discussion of communication strategies leads to the claim that the output hypothesis, too, is limited in its explanatory power, and that more complex approaches are necessary to do justice to the relationship between form and meaning in second language learning.

From this first chapter emerges the theme that language users are adept at coping with the pressures of real-time communication. Chapter 2 discusses one way in which this is done in greater depth—by drawing upon memorized language. This area has been much more active in recent years and the chapter reviews some of the major themes found in the literature. It suggests that earlier claims, by Bolinger, for example, that memory-based language is more important than universalist accounts propose have been corroborated through contemporary corpus-based linguistics. The chapter then explores the consequences for psycholinguistics and processing of the existence of dual-mode systems, one relying on structure and rule, and the other on chunk-based language and idiom. The former holds the key to continued interlanguage development, while the latter is more serviceable for real-time expression of meanings. The chapter ends by considering the way a tension between the two systems has importance for second language use and development.

Chapter 3 sketches out a psycholinguistic model of second language performance. It relates the stages of information processing (input, central processing, and output) to progressively more complex models of memory in

second language performance and learning. Following researchers such as Schmidt (1990) and Gass (1988), the chapter argues for the central importance of noticing as a trigger for interlanguage change. Then the chapter examines evidence on the coexistence of rule- and exemplar-based representational systems before looking at an instance-based account of fluency. The chapter concludes with an extensive review of relevant empirical work in the area of second language performance.

In Chapter 4 some models of second language learning are discussed. The intention here is not to be comprehensive, but to look at what relevant models have to say to account for processing perspectives in second language research. Universal Grammar and the Multidimensional Model are covered relatively briefly, and then Bialystok's (1990) analysis-control model is discussed in a little more detail. In the final part of the chapter I present a more developed version of a dual-mode model and how it could be expected to contribute to our understanding of both second language performance and second language development.

Chapter 5 presents a rationale for the use of task-based instruction as the most effective means currently available to deal with the tensions that have been discussed in earlier chapters between:

- form and meaning
- rule and memory
- fluency, accuracy, and complexity.

I review the extensive research which is now available in this area, in an attempt to establish generalizations which allow us to understand how task choices affect performance and how different methods of implementing tasks also have impact. The chapter concludes with a summary of the most dependable findings which have emerged from task-based research.

This summary provides the entry point to Chapter 6, which is concerned with pedagogic application. This chapter discusses goals in task-based instruction and the ways in which we need principles which guide how tasks are chosen and are used. Five such principles are proposed, and then a pedagogic model is presented which tries to guide teachers in working with tasks in such a way that the benefits of this approach are realized, while its dangers are minimized. In effect, the chapter provides (yet another) justification for *balance* in foreign language teaching, and an avoidance of excessive prioritization on any one of the goals of fluency, accuracy, and complexity for extended periods.

Chapter 7 is also concerned with the application of an information-processing perspective, but this time to the field of language testing. Its basic thesis is that most current approaches to testing (such as Bachman 1990) use the starting point of a search for the structure of language abilities. I argue in this chapter that an abilities-based approach is too limited. Testing needs to develop an account of processing, showing how, based on the existence of a