

Cambridge University Press

978-0-521-00386-5 - Cognition and Second Language Instruction

Edited by Peter Robinson

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CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo

Cambridge University Press

The Edinburgh Building, Cambridge CB2 8RU, UK

www.cambridge.org

Information on this title: www.cambridge.org/9780521003865

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First published 2001

3rd printing 2007

Printed in the United Kingdom at the University Press, Cambridge

A catalogue record for this publication is available from the British Library

ISBN 978-0-521-00386-5 paperback

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Series editors' preface

Second language acquisition is first and foremost a mental process – one that occurs in a behavioural and social context, to be sure, but fundamentally a matter of acquiring a new knowledge system. Cognition and cognitive factors, therefore, are central to any account of how and why SLA works, or so often fails, and equally central to the theory and practice of second language instruction, given that it is the SLA process that instruction is designed to facilitate.

Section 1 of Professor Peter Robinson's new book, *Cognition and Second Language Instruction*, offers the reader six detailed surveys of what is thought to be known about some of the cognitive resources, processes and constraints SLA researchers consider most crucial, including attention, memory, automatization, processing, and learnability. Six chapters in Section 2 describe current work in several areas where the models and empirical findings are being drawn upon (and new knowledge often simultaneously created) in the design, delivery and evaluation of second language instruction: task design, task classification and sequencing, the provision of focus on form, intentional and incidental vocabulary learning, syllabus and materials design, individual differences, and protocol analysis. Given the undeniable importance of cognitive factors, the authors in this section explore how best to adapt instruction to putative universals and empirically attested variability in learning processes.

A leading authority on SLA and language teaching, Professor Robinson has assembled an impressive line-up of recognized experts on the issues covered. While differing in theoretical allegiances, they share a respect for the importance of theory, accountability to empirical findings, and rational argument. These are qualities sought in all volumes in the *Cambridge Applied Linguistics Series*. *Cognition and Second Language Instruction* is a very welcome addition to the series, and should prove invaluable to SLA researchers, language teachers, and all those involved in the practice of language teaching.

Michael H. Long
Jack C. Richards

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Preface

What are the cognitive correlates and components of learning, and to what extent are these affected by instructional manipulations, and different learning conditions? Answers to these questions concerning the influence of cognitive learner variables on second language acquisition (SLA), and on the development of effective second language (SL) instruction, are a subject of major interest to both SLA researchers and those involved in SL pedagogy alike. Cognitive theory has influenced SLA theory and SL pedagogy in the past, for example through the work of such researchers as Carroll (1962, 1990), on the measures of cognitive ability predicting aptitude for language learning; Lado (1965) and Stevick (1976), on the role of memory in language learning; McLaughlin (1965, 1987), on information processing approaches to SLA theory; O'Malley and Chamot (1990), on learning strategies; and Krashen (1982), on the role of consciousness during instructed and naturalistic SLA.

More recently, both theoretical research into SLA and SL pedagogy have shown renewed interest in the role of cognitive variables. Articles on attention, memory, and automaticity, as well as on connectionism, learnability and language processing have increasingly appeared in the major SLA journals in the field, reflecting in part the rapid pace of development of the relatively new fields of cognitive science and cognitive psychology, and research findings arising within them. Such articles include those referred to throughout many of the papers in this collection by Schmidt (1990) and Tomlin and Villa (1994) on the role of attention and awareness during SLA; N. Ellis (1996a), and Robinson (1995b) on the role of memory processes; N. Ellis and Schmidt (1997) and Gasser (1990) on connectionist approaches to modeling SLA; DeKeyser (1997) on the development of automaticity and control of language use as a result of extended practice, and Gregg (1993) on linguistic theory, learnability and SLA theory development. Concurrently with this reawakening of theoretical interest in cognitive issues a number of SLA researchers have been

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developing techniques for laboratory research into SLA, and the effect of L2 instruction, which attempt to operationalize and control one or more of these variables and study their effects on learning under different conditions of exposure. These experimental studies began to appear regularly in the major journals throughout the 1990s. For example, two special issues of *Studies in Second Language Acquisition*, Volume 15 no. 2 (1993) and Volume 19 no. 2 (1997), have been dedicated to the issues of cognitive influences on instructed SLA, and laboratory studies of SLA respectively. Books drawing on cognitive theory, some with a pedagogic orientation, have also appeared recently, including for example the edited collections by N. Ellis (1994d), Schmidt (1995b) and Healy and Bourne (1998), and also full length books by de Graaff (1997b), Johnson (1996), Robinson (1996b), Skehan (1998a) and VanPatten (1996).

There is thus likely to be considerable interest in a collection which contains chapters summarizing the latest theoretical thinking about cognitive variables, and chapters relating these issues to SL instruction and research. This collection is in two sections. Section 1 (Theoretical Issues) deals with central cognitive resources and processes. This section includes (in this order) chapters by Schmidt on attention; Nick Ellis on memory; MacWhinney on connectionist models of representation and learning; Harrington on sentence processing; DeKeyser on automaticity and automatization; and Gregg on learnability and SLA theory. This section therefore moves from a focus on key cognitive resources drawn on in SLA, attention and memory, to broader issues of their implication in second language processing and learning. Section 2 (Cognition and Instruction) draws on the concepts and constructs introduced in Section 1 and attempts to relate them to issues in instructed SLA. This section includes chapters on the design of pedagogic tasks (Skehan & Foster); the cognitive processes triggered by focus on form (Doughty); the intentional and incidental learning of vocabulary (Hulstijn); cognitive complexity, task sequencing and syllabus design (Robinson); aptitude, individual differences and program design (Sawyer and Ranta); and the insights provided by protocol analysis into the cognitive processes underlying second language skill acquisition (Jourdenais). As with the first section this section also moves from a relatively narrow focus, i.e., on issues of L2 task design and methodology, to broader pedagogic issues such as syllabus and program design and skill learning.

The ordering of the sections and papers in this book therefore reflects the belief that many aspects of decision making during second

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language instruction should be motivated by theories of, and research into, the cognitive processes instructional treatments attempt to manipulate. The book as a whole, as well as the contributions of individual authors, is an attempt to demonstrate how this important connection can be made.