The Routledge Handbook of Second Language Acquisition

Edited by Susan M. Gass and Alison Mackey

The Routledge Handbook o
Second Languag
Acquisition

'The editors, Susan M. Gass and Alison Mackey, have done a sterling job with this Handbook. Th
biggest names and rising stars in the fields of second language teaching and language learning hav
contributed to this "magnum opus".'

Jean-Marc Dewaele, *Birkbeck, University of London, U*

The Routledge Handbook of Second Language Acquisition brings together fifty leading internation
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reader to the topic, outline the core issues, then explore the pedagogical application of research in th
area and possible future development.

The Routledge Handbook of Second Language Acquisition is an essential resource for all tho
studying and researching second language acquisition.

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Abbreviation

ACTFL	American Council on the Teaching of Foreign Languages
ADHD	attention-deficit hyperactivity disorder
AE	American English
AMTB	Attitude/Motivation Test Battery
AoA	age of arrival
ASL	American Sign Language
AV	auditory-visual
CA	Contrastive Analysis
CALL	computer-assisted language learning
CANAL-F	Cognitive Ability for Novelty in Acquisition of Language—Foreign
CATSS	Computer Adaptive Test of Size and Strength
CCSARP	Cross-Cultural Speech Act Realization Project
CHL	Chinese as a heritage language
CLS	complementary learning systems
CMC	computer-mediated communication
CPH	Critical Period Hypothesis
CS	conditioned stimulus
CV	consonant-vowel
ΔP	Delta P
DCTs	discourse completion tasks
DLAB	Defense Language Aptitude Battery
EAP	English for Academic Purposes
EFL	English as a Foreign Language
ESL	English as a second language
ELAN	early left anterior negativity
ERPs	event-related potentials
ESF	European Science Foundation
ESP	English for Specific Purposes

EWM	executive working memory
FDH	fundamental difference hypothesis
FLES	foreign language in the elementary school
fMRI	functional magnetic resonance imaging
FonF	Focus on Form
FonFs	Focus on Forms
FSI/ILR	Foreign Service Institute/Interagency Language Round Table
GJTs	Grammaticality Judgment Tests
GM	grammatical metaphor
HLA	Heritage Language Acquisition
HLLs	heritage language learners
IDI	Intercultural Development Inventory
ILs	interlanguages
IMRD	Introduction-Method-Results-Discussion
L1	first language
L2	second language
LANs	left-to-bilateral anterior negativities
LANs	local area networks
LCP	Language Contact Profile
LeaP	Learning Prosody in a Foreign Language
LFG	Lexical-functional Grammar
LMT	Lexical Mapping Theory
LOR	length of residence
MCS	memory for contingent speech
MEG	magnetoencephalography
MLAT	Modern Language Aptitude Test
MM	Multidimensional Model
MTM	multiple-trace memory
NHLRC	National Heritage Language Resource Center
NLP	natural language processing
NS	native speaker
NS-NNS	native speaker-non-native speaker
OM	Ontogeny Model
OPI	Oral Proficiency Interview
OT	optimality theory
PDH	Proceduralization Deficit Hypothesis
PET	Positron Emission Tomography
PLAB	Pimsleur's Language Aptitude Battery
PLD	primary linguistic data
P&P	principles and parameters

PSTM	phonological short-term memory
PT	Processability Theory
PWM	phonological working memory
RST	reading span task
SA	study abroad
SES	socio-economic status
SFL	systemic-functional linguistics
SILC	Strategic Inventory for Learning Culture
SILL	Strategic Inventory for Language Learning
SLA	second language acquisition
SLM	Speech Learning Model
SOPI	Simulated Oral Proficiency Interview
TBLT	Task-based Language Teaching
TMS	transcranial magnetic stimulation
TOEFL	Test of English as a Second Language
TOEIC	Test of English for International Communication
UCM	Unified Competition Model
UG	Universal Grammar
US	unconditioned stimulus
VACs	verb-argument constructions
VOT	voice onset time
ZISA	Zweitspracherwerb Italienischer und Spanischer Arbeiter
ZPD	Zone of Proximal Development

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Introductio

Susan M. Gass and Alison Macke

Learning a second or foreign language is commonplace in today's world. In fact, recent estimat (Grosjean, 2010) suggest that more than half of the world's population knows more than one languag Some of this dual language knowledge comes from family or societal sources, that is, growing up in dual-language family or a bi- or multilingual society; in other instances, second language knowled comes from an instructional setting. In some instances, learning begins post-puberty; in oth instances, it begins in childhood. Despite these varied facts, we are still a long way fro understanding how second languages are learned, why many individuals have difficulty in reachin high levels of proficiency in a second language, or even what the best pedagogical approach might b This *Handbook of Second Language Acquisition* provides comprehensive coverage of the field second language acquisition (SLA) with an effort to incorporate a wide range of different approach to understanding how languages are learned.

As an ever-growing body of research on SLA has indicated, numerous factors are involved in L learning (de Bot *et al*., 2005; Gass and Selinker, 2008; Ortega, 2009; Mitchell and Myles, 1998). P another way, the field of SLA is multi-faceted and interdisciplinary, a fact which also reflects th complexity of L2 development. The many factors involved in L2 learning (e.g., linguisti psychological, sociological) are generally best viewed in combination. In other words, the high complex phenomenon of second language learning can only be understood when all parts of t picture can be seen at the same time. A single approach (e.g., focusing only on linguistic aspects learning, or focusing only on social aspects of learning) is too simplistic and is unlikely to move toward our goal of understanding the entire phenomenon and, in particular, why and when languag learning is successful, and why and when it is not.

This *Handbook* is designed to provide a state-of-the-art survey of L2 research exploring theoreti issues of particular significance in L2 learning and teaching. The *Handbook* is intended for SL researchers, applied linguists, graduate students, upper-level undergraduate students, practitioner and other professionals related to or interested in SLA. Accordingly, the topics discussed in th *Handbook* were selected in consideration of the needs of the intended audience. More importantly, t selections were also made based on the degree of significance and prominence to which each topic h contributed to L2 research. Some topics have already received book-length treatises (e.g., approach related to sociocultural theories); other topics (e.g., issues related to heritage learners, study abroad, education level) have not typically been included in an overall discussion of language learning prior this *Handbook*.

Even though the primary scope of the *Handbook* is second language learning, authors were al asked to provide a section on how their approaches to learning a second language might be applied an instructional context. We designed the *Handbook* this way because of our conviction that whi these two disciplines (language teaching and language learning) are separate and each has its ow

research history and trajectories, there is, nonetheless, common ground and a need for strong cros
fertilization. Theories about learning are often tested in the classroom and understanding of classroo
language and behavior can often feed into our theoretical notions. Below is a synopsis of tl
instructions provided to authors of the chapters in this volume concerning the structure of the
chapters. To represent each area, we intentionally selected leading scholars and they, in turn, ofte
selected rising stars as co-authors.

(1) Historical discussion
This section places the chapter in historical perspective and provides the reader with a sense of whe
the topic fits within the field as a whole, and how (when appropriate) it relates to other disciplines.

(2) Core issues in the area
This section presents and explains the major tenets of the topic and provides the reader with
commentary on the most up-to-date findings.

(3) Data and common elicitation measures
In this section, authors describe what types of data are used, how these data are typically gathered ar
how they are analyzed.

(4) Applications/instructional relevance
As discussed above, in the hope of bridging the divide between theory and practice, in this section, tl
authors discuss the impact that their approach has for instruction.

(5) Future directions
In the final section, authors point to the future of their approach and speculate where they see this are
of research going both in the short and the longer term.

Quite clearly, this outline better suits some approaches better than others, but all authors were guide
by this general outline. The book is divided into seven parts: (1) Language in context, (2) Linguist
perspectives—form and meaning, (3) Psycholinguistic and neurolinguistics perspectives, (4) Sk
learning, (5) Individual differences, (6) The setting for learning and (7) Assessing learner knowledge

The first section discusses how language use in context affects second language (L2) learnin
dealing with three issues that have led to debates among researchers: the interactionist approac
(including feedback), variationist perspectives, sociocultural theory, and complexity theory. This fir
section illustrates the dynamics involved in learning and emphasizes the need to understand the ro
that the context plays in learning. A particular focus is on how the context impacts learning and ho
learners take advantage of the opportunities that the context provides to further their learning.

In the second section, linguistic theories in SLA are presented, along with evidence for and/
against relevant theories from research to date. In this section, there is an emphasis on language for
(phonology and syntax), meaning and meaning-making (semantics, vocabulary, pragmatics),
opposed to language use, as was the case in some of the chapters in the first section.

The third section takes the reader to the area of language processing. All of the chapters in th
section consider psycholinguistic and neurolinguistic accounts of L2 learning processes. Each of the
chapters draws heavily on the field of psycholinguistics, cognitive psychology, or neurolinguistic
We do not intend the reader to infer that other chapters do not draw on these fields (e.g., speec
perception); the organization was simply a heuristic for determining the main focus of chapters.

In the fourth section, we include chapters about L2 learning across the four traditional languag
skill areas: reading, writing, speech production, and speech perception, drawing attention to releva

research that elucidates how L2 learners can develop those skills and how they can benefit from particular (instructional) techniques designed to help improve the four skills. This section concludes with a comparison of spoken and written language production.

The fifth section reflects the fact that in SLA it has long been recognized that individuals vary in terms of how they learn, as well as their ultimate abilities in a second language. What is less clear is how to account for these differences. This section presents research on some of the proposed causes. The chapters in this section address a wide range of issues that may impact learning, some of which are commonly accepted (e.g., aptitude and motivation) and others which will provoke the reader to think about individual differences in a slightly different way (e.g., education level, home language background [language of one's heritage]).

In the sixth section, the focus is on the ways in which different settings affect L2 learning: study abroad, second language vs. foreign language environments, and language learning through technology. Each of these areas is important not only for our understanding of how languages are learned, but is also crucial to teachers, curriculum developers, and policy setters as they find footing in their decisions about numerous instances related to how to have a cutting-edge language program.

Last but not the least, in its final section, the *Handbook* brings to our attention the validity and reliability of various measures designed to assess L2 knowledge. We opened this introduction with an estimate of how much of the world's population is bilingual. There is no definitive answer for a variety of reasons, one of which is our inability to know how to make precise measurements. However, it is crucial to have a firm foundation in assessment, not only to measure pedagogical successes, also to measure SLA which is even more germane to the issues discussed in this book. In other words, in order to conduct sound SLA research, it is essential that we know how to measure knowledge and have a keen understanding of what it means to know a second language. The final chapter moves us in this direction.

In sum, this collection surveys the field of SLA with an eye on the history, the current practice, the applications, and the future, with an attempt to consider as many relevant factors as possible as we move toward an understanding of how, when, and where second languages are learned.

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