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HANDBOOKS



The Routledge Handbook of Second Language Research in Classroom Learning

Edited by Ronald P. Leow

The Routledge Handbook of Second Language Research in Classroom Learning

The Routledge Handbook of Second Language Research in Classroom Learning is a comprehensive psycholinguistic approach to the issue of instructed language learning that is uniquely theoretical, methodological, empirical, pedagogical, and curricular. Bringing together empirical studies with theoretical underpinnings, this handbook focuses on conceptual replications/extensions of, and new research on, classroom learning or Instructed SLA (ISLA). In chapters from leading experts, the *Handbook* reports on the tenets of several models that have postulated the roles of cognitive processes in the L2 learning process. It also covers two major methodological data-elicitation procedures to be employed in addressing learner cognitive processes (think-aloud protocols and eye-tracking). With a dedicated interest in the role of this research in pedagogical ramifications, this handbook strives for deeper understanding of how L2 learners process L2 data in instructional settings.

Ronald P. Leow is Professor of Applied Linguistics and Director of Spanish Language Instruction in the Department of Spanish and Portuguese at Georgetown University, USA.

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Classroom Learning Of Processing and Processes

Ronald P. Leow

How Do L2 Learners Learn the L2?

Both educators and researchers alike are usually confounded by the differential performances of second/foreign language (L2) learners who are exposed to the same L2 information in the instructed setting. One potential explanation may lie in *how* L2 learners process the L2 information or how deeply L2 data are cognitively processed, usually subsumed under the notion of depth of processing (DoP). Depth of processing is defined as:

the relative amount of cognitive effort, level of analysis, and elaboration of intake, together with the usage of prior knowledge, hypothesis testing, and rule formation employed in decoding and encoding some grammatical or lexical item in the input.

Leow, 2015, p. 204

DoP has also been operationalized in the literature (Leow, 2015, pp. 227–228) based on type of linguistic item (Table 1.1 for grammatical and Table 1.2 for lexical) and assumed amount of cognitive effort expended during the stages of input, intake, and knowledge processing.

Recent definitions of the strand of classroom-based research, currently subsumed under instructed second language acquisition (ISLA), have centralized the main thrust of this strand on the cognitive processes L2 learners employ while exposed to or interacting with the L2. ISLA has been defined as

a theoretically and empirically based field of academic inquiry that aims to understand how the systematic manipulation of the mechanisms of learning and/or the conditions under which they occur enable or facilitate the development and acquisition of a language other than one's own.

Loewen, 2015, p. 2

Probing *how* L2 learners process L2 data and manipulating such processes in learning conditions are clearly theoretical, empirical, and pedagogical issues that fall neatly into the recent definitions of ISLA.

Table 1.1 Operationalization of depth of processing (DoP): Lexical items

<i>Level 1</i>	<i>Level 2</i>	<i>Level 3</i>	
	Low depth of processing	Medium depth of processing	High depth of processing
Description	Shows no potential for emerging form-meaning connection	Provides some evidence of processing target item	Provides evidence of making accurate form-meaning connection
Descriptors	<p>Reads target quickly</p> <p>Translates the phrase to English but leaves the target in Spanish</p> <p>Says s/he isn't sure what it is</p> <p>Says s/he will click something</p> <p>Repeats the target item</p> <p>Carefully pronounces target word</p> <p>Does not spend much time processing target item</p> <p>Low level of cognitive effort to get meaning of target item</p>	<p>Spends a bit more time processing target item</p> <p>Makes a comment that indicates some processing of target item</p> <p>Some level of cognitive effort to get meaning of target item</p>	<p>Spends time processing target item</p> <p>Provides an accurate translation of target item or finds a different way to say almost the same thing</p> <p>High level of cognitive effort to get meaning of target item</p>

Source: Leow, 2015, pp. 227–228

Table 1.2 Operationalization of depth of processing (DoP): Grammatical items

<i>Level of awareness</i>	Low depth of processing <i>Noticing</i>	Medium depth of processing <i>Reporting</i>	High depth of processing + <i>Understanding (based on accuracy of underlying rule or form-meaning connection)</i>
Description	Shows no potential for processing target form grammatically	Comments on target item in relation to grammatical features	Arrives at an inaccurate, partially accurate, or fully accurate target underlying grammatical rule
Descriptors	<p>Reads target quickly</p> <p>Translates the phrase to English but leaves the target in Spanish</p> <p>Carefully pronounces target item</p> <p>Repeats target item</p> <p>Says s/he isn't sure what it is</p> <p>Does not spend much time processing target item</p> <p>Low level of cognitive effort to process target item grammatically</p>	<p>Spends a bit more time processing target item</p> <p>Makes comments that indicate some processing of target item</p> <p>Some level of cognitive effort to process target item grammatically</p>	<p>Makes hypotheses regarding target item</p> <p>Provides an inaccurate, accurate and/or partially accurate rule</p> <p>Corrects previous translation</p> <p>Spends much time processing target item</p> <p>High level of cognitive effort to process target item grammatically</p>

Source: Leow, 2015, p. 228