

THEORIES AND RESEARCH METHODS IN SECOND LANGUAGE LEARNING

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Abstract

The purpose of the present article is to present the current theories and issues in second language acquisition as well as the methods of research employed in this field. The article presents the main research questions of the discipline, a short history and the main theoretical approaches that have developed. Among the numerous theories developed in this field, I present the generative approach together with the principles-and-parameters framework, the functional – typographical framework and the information – processing approach. Much current research and theory have a strongly cognitive orientation, while varying from nativist to various kinds of functional, emergentist, and connectionist positions. The focus is on identifying the nature of the underlying L2 knowledge system, and on explaining developmental success and failure.

Key-words: second language acquisition, second language learning, cognitivism, emergentism, nativism.

1. Introduction

The study of Second Language Acquisition has been included within applied linguistics until recently. Its primary motivation has been viewed as contributing directly to the solution of the complex and socially important problems within foreign language teaching/instruction. However, there is a focus on theoretical questions independent of their practical significance as it is illustrated by most of the research in the field and Second Language Acquisition has become a separate linguistic area of study. In particular, an L2 theory should account for the successes attained (and failures demonstrated) by subjects involved in the pursuit of second language acquisition (Schwartz 1986).

Second Language Acquisition is defined as the acquisition of a language after the native language has already become established (Ritchie and Bhatia 1996). It is inevitably defined and studied via comparison to L1 acquisition.

Second Language Acquisition differs from First Language Acquisition in two main ways: the learner of L2 begins the process of learning when he/she has finished acquiring L1; the L2 learner has a language system in place as compared with the L1 learner. The studies in Second Language Acquisition (SLA) focus mainly on adults also because it has been proved that they rarely attain native like mastery of any L2 whereas children learning a second language generally do achieve such mastery. Therefore, the theoretical questions have centered on adults rather than children.

2. Main issues in Second Language Acquisition (SLA)

The main theoretical questions in the study of SLA are: (Ritchie and Bhatia 1996)

- 1) What cognitive structures and abilities underlie the L2 learner's use of his/her L2?
- 2) What properties of the linguistic input to the L2 learner are relevant to acquisition?
- 3) What is the nature of the L2 learner's capacity for attaining the cognitive structures and abilities underlying his/her use of L2?

This final question can be broken down into 2 subquestions:

- a) What is the nature of the L2 learner's overall capacity for language acquisition?
(also known as the logical problem of SLA)
- b) How is that capacity developed in real time to determine the course of the SLA?
(also known as the developmental problem)

Similarly to the logical problem of First Language Acquisition, in Second Language Acquisition scientists are trying to account for the difference between the limited input of language and the unlimited output. L2 users understand and produce utterances in the L2 that they have never encountered before. This has led to the belief that L2 users exhibit a system of grammatical competence along with other cognitive structures and abilities such as pragmatic competence, the ability to put grammatical competence into real-time comprehension and production of utterances, the ability to self-monitor etc.

With respect to the nature of the linguistic input, one needs to look at the possible effect of formal instruction on the process and result of SLA.

In the discussion of the role of the input, there is an important distinction to be made both in First Language Acquisition and in Second Language Acquisition, namely that of positive evidence and negative evidence. The simple occurrence of an utterance constitutes positive evidence, i.e. evidence that the utterance is grammatical. Correction of an utterance constitutes negative evidence, i.e. evidence that the corrected utterance is ungrammatical. For L1 acquisition it has been proved that only positive evidence is available to the individual. In SLA, learners may be exposed to both positive and negative evidence especially when they learn the language through instruction and not in a naturalistic environment.

The question of the nature of the L2 learner's capacity for attaining the cognitive structures and abilities underlying his/her use of L2 has been referred to as the logical and developmental problem of language acquisition and constitutes one of the explanatory goals of SLL theory. These conceptual questions are also at the core of First Language Acquisition.

The logical problem is to explain how one comes to have the complex linguistic knowledge, or competence, one does, given the limited input one receives in the course of acquisition. This is a problem because the input vastly underdetermines the finally achieved competence.

The developmental problem seeks to answer the question of how the acquisition proceeds, i.e. how the regularities that have been observed in real-time acquisition can be explained.

3. Historical background and theoretical approaches

Many significant developments have taken place in SLA over the last twenty years. Ritchie and Bahtia (1996) divided the recent history of the study of Second Language Acquisition into two periods: 'early' developments from the 1940s to the 1950s to later developments of the 1960s until the 1980s. It is in the latter period that the theoretical approaches developed.

Until the mid- 1960s, the behaviourist thinking in experimental psychology and American structural linguistics formed the basis of SLA research. The central task of the (descriptive) linguist at that time was to construct descriptions of natural languages where the description of a language was understood to consist of a set of inductive generalizations about the utterances in a corpus gathered from the natural speech of an adult native speaker of the language under investigation.

The SLA study proposed a comparable behaviouristic model for L2 learning. On the basis of the observation that a lot of the learner's behaviour in L2 resembled his or her L1, it proposed that the comparison of a description of the learner's L1 with a description of the L2 would allow accurate predictions of L1 influence in L2 behaviour and, hence provide important information for the design of language instruction.

Chomsky's (1955/1975, 1957, 1965) methodological decision to interpret a description of the form of a particular language as an empirical hypothesis about the Native Speaker's tacit knowledge of the language (grammatical competence) radically altered the relationship between research on the structure of particular languages on the one hand and the study of the language use on the other.

Similarly, his reinterpretation of the general procedures for justifying linguistic descriptions as an empirical claim about the L1 learner's tacit knowledge of the universal principles of grammatical structure (i.e. a theory of grammars or a grammatical theory) changed the relationship between research on the general principles of linguistic structure and the study of L1 acquisition. Chomsky's proposals shifted the goal of linguistic research beyond the formulation of inductive generalizations about the phenomena of language acquisition and use to the search for theoretical explanations of these phenomena.

Early work (early to middle 1960s) on the process of L1 acquisition stimulated by Chomsky's program influenced research on SLA in two major respects. Firstly, the empirical results of this work provided a basis for comparing the processes of L1 and L2 acquisition. Secondly, it introduced the notion that the linguistic behaviour of a language learner at a given stage of acquisition is not just a collection of adhoc differences from adult native behaviour in the same language but, rather, is determined in part by a system of rules and principles (a grammar).

A major shift in the generative research program occurred in the early 1980s with the introduction of the principles-and-parameters framework (Chomsky, 1981). Within this framework, Universal Grammar is conceived of as a system of principles of all adult native grammars in some form, but there is flexibility in how these principles apply to a particular adult native grammar. Flexibility with respect to a given principle takes the form of a parameter, which may take one or more values, each value determining a rich cluster of properties of the particular native grammar.

In the process of L1 acquisition, each parameter is set in value on the basis of some specific feature of the input to which the acquirer is exposed. Because the input required to fix a parameter in one of its values is limited and the consequences of setting the value of the parameter are extensive, the framework allows a solution in principle to the problem of the

speed with which L1 acquisition proceeds. The major impact on research in SLA has been to allow the formulation of the central issues in terms of this highly specific set of proposals. Within the generative framework, Universal Grammar (UG) with its principles and parameters accounts for language acquisition. Similarly, in Second Language Acquisition, UG should account for the L2 learner's capacity to acquire the L2 – the research focuses on whether there is still access to UG in SLA or not.

There is considerable discussion and debate as to the role of Universal Grammar in second language acquisition in the literature with positions moving from one extreme to the other. In the research dealing with UG availability in L2 learning, the working assumption has been that if learners can be shown to violate principles of UG, then UG cannot be available to L2 learners, whereas if they observe UG constraints, UG must be available. The main method of investigation is the comparison between the performance of L2 speakers with native speakers (NSs). Because native speakers are necessarily constrained by UG, the assumption is that if L2 learners perform similarly to NSs, they must be constrained by UG, whereas if they perform differently, they are not. Such comparison neglects the fact that UG permits a range of grammars and that the errors produced by L2 learners may be within UG. „Nontarget“ linguistic behaviour has at least two potential causes: lack of UG or availability of UG but with the learner coming up with a different system from the NS. (White 1989)

Another productive program of SLA research also appeared in the 1960s and the 1970s: the functional-typographical framework. This is based on typological studies of variation among languages in the tradition of Greenberg (1963/1966). Linguistic research within this tradition seeks universal empirical generalizations about the structure of adult native languages. Explanations of these generalizations are then sought in functional and formal features of the elements involved. If the presence of one property within a language implies the presence of another, but not conversely, the former is more exceptional or unusual than the latter and is termed the *more marked* of the two properties. One important consequence of the notion of markedness for SLA is that the process of acquisition tends to proceed from less marked to more marked structures.

In the late 1970s and early 1980s, scholars such as Bialystok and McLaughlin began to apply cognitive psychological concepts of computer-based information-processing models to the investigation of SLA. Under this approach, SLA is viewed as the development of a highly complex skill, similarly to other nonlinguistic skills, such as playing chess or mathematical problem solving. Researchers investigate those features of SLA that may be shared with forms of skill development in these domains and others.

Whereas the two previously presented frameworks are concerned with the acquisition and use of specific features of linguistic structure (including the sequencing of structures in acquisition), the information-processing approach is concerned with the process through which a given structure or complex of structures becomes established in the learner.

There are several other approaches to the study of SLA such as the variationist approach and the research on the neurological basis of language. An important contribution is Lenneberg's study of the neurological basis for language. He states that there is a critical period for language acquisition associated with the lateralization of language to the left hemisphere, which occurs at puberty. There are also social psychological studies which focus on the role of motivation and social attitudes in SLA.

Other more recent approaches include the constructivist and the connectionist ones. The constructivists views of language acquisition hold that simple learning mechanisms operating in and across human systems for perception, motor action, and cognition, while exposed to language data in a communicatively rich human social environment navigated by an organism eager to exploit the functionality of language, are sufficient to drive the emergence of complex language representations.

Connectionist approaches to language acquisition investigate the representations that can result when simple associative learning mechanisms are exposed to complex language evidence.

4. Research Methodology

In terms of testing methodology, firstly L2 learners must have achieved a level which is appropriate to the value(s) being tested. In other words, some kind of implicit or explicit syntax test should also be included in the experiment, in addition to any tests for parameter resetting.

The use of native speakers control groups is also highly desirable, in order to establish target language norms, to ensure that native speakers do indeed have the kind of intuitions about their mother tongue that linguists assume.

The most common methods of investigation involve either cross-sectional studies, i.e. speakers of different levels of competence in the L2 are tested for the same research question or longitudinal studies, i.e. the research follows the development of a certain speaker or speakers over a longer period of time, focusing on particular research questions.

Most of the experiment tasks involve grammaticality judgements. It is also necessary to control the sentence types being investigated so as to ensure that structures relevant to a parameter are tested for. In many cases, a sentence type that is grammatical in the L1 will be ungrammatical in the L2 and vice versa and the tests must allow one to assess whether or not the L2 learner knows the relevant properties of the L2.

Another method of research is the use of spontaneous data production. An important requirement for this type of research to be relevant is that it should present systematic production of the type of sentences investigated over a relevant period of time.

5. Conclusion

In conclusion, research on Second Language Acquisition has made considerable progress and has begun to occupy an important place in the development of our understanding of the human capacity for language. The theoretical approaches range from behaviourist to cognitivist with important contributions from the generative school. Moreover insights from SLA are invaluable for the practice of foreign language teaching and the attempt to answer some of its fundamental theoretical questions will undoubtedly yield practical results for teaching.

Bibliography

1. Doughty, C. J. and Long, M. H. (editors). *The Handbook of Second Language Acquisition*. Blackwell Publishing, 2003
2. Ritchie, W and Tej K Bahtia. *Handbook of Second Language Acquisition*. New York: Academic Press, 1996
3. White, Lydia. *Universal Grammar and Second Language Acquisition*. Amsterdam: John Benjamins Publishing Company, 1989
4. Thomas, Margaret. *Theories of second language acquisition: three sides, three angles, three perspectives*, in *Second Language Research*, 21,4, 2005, pp393 – 414