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Cognitive-Code Learning

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Synonyms

8 Code-cognition approach; Cognitive-code approach;
9 Cognitive-code learning theory

Definition

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11 Cognitive-code learning refers to a theory of second lan-
12 guage teaching and learning rooted in cognitivist psychol-
13 ogy and structural applied linguistics developed in the
14 1960s. The theory emphasizes the central role of cognition
15 in the conscious and explicit learning of the rules of
16 a language as a code. The cognitive-code approach to
17 learning a second language sees it as a study of language
18 as a complex system with the goal of gaining conscious
19 control of the grammatical, lexical (vocabulary), and audi-
20 tory patterns.

Theoretical Background

21
22 Cognitive-code learning theory was proposed and widely
23 debated in the 1960s. Based on the foundations of linguis-
24 tic theories and the findings of psycholinguistic research,
25 cognitive psychologists and applied linguists, such as John
26 B. Carroll and Kenneth Chastain, advocated the cognitive-
27 code approach to the study of a second language as an
28 alternative to the audio-lingual method prevalent at the
29 time. Cognitive-code learning theory (Chastain 1971)
30 proposes that learning a second language requires explicit
31 instruction and a study of the language as a complex and
32 rule-governed system (Carroll 1964). This approach took
33 the view of a conscious study of the language structure as
34 central and placed a great deal less emphasis on the devel-
35 opment of a second language as a combination of skills. In
36 the current perspective on second language learning,
37 cognitive-code theory is largely seen as an updated variety
38 of the traditional grammar-translation method, with an

attendant goal of overcoming the shortfalls of the audio- 39
lingual approach. At its core, cognitive-code learning rep- 40
resents a theoretical, rather than a pedagogical approach. 41
In part due to the fact that this theoretical proposal met 42
with debate and skepticism, its tangible outcomes in the 43
form of curricula, methods, or teaching techniques did 44
not materialize. 45

Providing learners opportunities for a great deal of 46
meaningful practice in a second language constitutes the 47
central precept of the cognitive-code approach. The main 48
emphasis on meaningful practice underscored the need 49
for the learner first to understand the language rules and 50
then apply them in the context of practical language use. 51
Thus, the explicit study of language rules, such as in 52
grammar and vocabulary, was not only expected, but 53
strongly encouraged. In the context of structural linguis- 54
tics and behavioral psychology, cognitive-code learning 55
envisions practice to be meaningful when learners clearly 56
understand and are able to apply language rules in prac- 57
tice. The essential difference between the audio-lingual 58
approach and the cognitive-code approach is that in the 59
former, structural learning without an explanation and 60
pattern drills are seen as leading to modifications in the 61
learners' language behavior, while in the latter, students 62
need to understand the linguistic rules before these can be 63
implemented in practice. According to Carroll (1966, 64
p. 102), "the theory attaches more importance to the 65
learner's understanding of the structure of the foreign 66
language than to the facility in using that structure, since 67
it is believed that provided the student has a proper degree 68
of cognitive control over the structures of the language, 69
facility will develop automatically with use of the language 70
in meaningful situations." 71

Important Scientific Research and Open Questions

72
73
74 To a great extent, cognitive-code learning theory
75 was based on contemporary developments in transforma-
76 tional grammar and the generative theory of language that
77 saw its heyday in the 1950s and 1960s. In this light, the
78 cognitive-code approach did not have much appeal to
79 language teachers whose training rarely entailed
80 a detailed familiarity with grammar rules and abstract



81 concepts of syntax. By the mid-1970s, the cognitive-code
82 approach had all but disappeared among other competing
83 theories of second language learning, and more specifi-
84 cally, due to the prominent rise of communicative lan-
85 guage teaching. The influence of cognitive-code learning
86 on the subsequent methodological developments in sec-
87 ond language teaching was felt in the evolution of error
88 analysis and the need for contextualized grammar instruc-
89 tion. More specifically, in language pedagogy, the cogni-
90 tive-code proposal has lead to a realization that linguistic
91 structural rules, as, say, in grammar teaching, are not
92 syntactic abstractions but are an integral component of
93 language production and use in writing or interaction. It is
94 important to note, however, that by the mid to late 1970s,
95 the impact of cognitive and general linguistic theories on
96 teaching was greatly diminished and supplanted by

sociocultural and interactional views of language learning 97
and teaching. 98

Cross-References 99

- ▶ Cognitive Learning 100
- ▶ Cognitive Skill Acquisition 101
- ▶ Grammar Learning 102
- ▶ Second Language Learning 103

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