

博士論文（要約）

論文題目 : Investigating the relative effects of
cognitive and non-cognitive approaches
on the development of Japanese
learners' knowledge of different degrees
of certainty

(日本人英語学習者の確信度表現習
得のための認知言語学的アプロ
ーチの研究)

氏名 : 瀧本 将弘

CHAPTER 1. Introduction

The chapter begins with the following statement of problem. Learning a language is one of the most complex of human accomplishments. Among the various approaches to language, cognitive linguistics emphasizes that language is best comprehended as a reflection of general cognitive processes, the social nature of humans as a species, and the unique ways through which humans experience and interact with the physical world. Lakoff and Johnson (1999) argued that embodied concepts can be extended from a source domain to a target domain. This process, called conceptual projection, is the basis of conceptual metaphor theory (CMT) (Lakoff & Johnson, 1999). Grady (1997) explained that the conceptual projection links objective and subjective experiences, and that humans use their understanding of the physical world as a framework in the source domain for representing more abstract concepts in the target domain. Lakoff and Johnson (2003) and Ohori (2002) suggested that understanding our experiences in terms of lexical metaphors in the target domain based on spatial concepts in the source domain leads to mapping the embodied concepts onto the non-embodied concepts and maintaining long-term memory related to first language (L1) or second language (L2) learning.

The present study is motivated by theoretical considerations in cognitive linguistics connected with the conceptual projection and the metaphorical idea of CERTAINTY DEGREE IS DISTANCE ALONG A PATH, applying them to develop Japanese learners' knowledge of the different degrees of certainty attached to CERTAIN, PROBABLE, and POSSIBLE ITEMS.

To date, no studies have examined the effects of applying the proximal-distal metaphor as a mnemonic device to teach the markers of CERTAIN, PROBABLE, and

POSSIBLE ITEMS. For this reason, there is no clear indication in the literature as to the effectiveness of utilizing spatial relations to teach the three markers in relation to the writer's confidence. Moreover, no studies have compared the effectiveness of self-directed and teacher-directed approaches on computers for learning the three markers about the degree of sureness. This guides the design and the formulation of the research questions of the present study, followed by defining the ten key terms used in the present study.

CHAPTER 2. Literature Review: Boosters and Hedges in L1 and L2

The chapter reviews previous studies that compares boosters and hedges in L1 academic articles and finds that hedges are more extensively used in academic articles and are most densely located in the discussion section. The frequent use of hedges in the discussion section may be due to the fact that the authors do not seek to accomplish closure by reaching consensus on a particular issue but instead may be more like a sign of the authors' willingness to continue discussion. The chapter also reviews previous studies of native and non-native English speakers' awareness of boosters and hedges that discovers that Chinese learners of English attend to the boosters but consistently ignore hedges in texts because hedges seem to be less visible to them. Furthermore, the chapter reports the discovery that Japanese learners of English are not able to identify and categorize the important roles of PROBABLE and POSSIBLE ITEMS and tend to misapprehend the meanings of the two. The chapter concludes that it is necessary to make the CERTAIN, PROBABLE and POSSIBLE ITEMS easier for Japanese learners of English to learn and suggests that a cognitive linguistic approach would be a useful means of allowing learners to comprehend the degree of certainty, clearly.

CHAPTER 3. Literature Review: Cognitive Linguistic Approach to L2 Learning

The chapter looks into the central assumptions of cognitive semantics and the two phenomena related to *Judgment/Comparison*, categorization and metaphor, are examined because they are closely related to the present study. The chapter then reviews studies of metaphor awareness-raising as a L2 pedagogical approach. Findings regarding the effectiveness of the explicit teacher-directed metaphor awareness-raising approach have been mixed, and the chapter concludes that it is necessary to adopt more rigorous experimental designs with controlled interventions and examine what sort of explicit metaphor awareness-raising approach is the most appropriate means of allowing learners to acquire target expressions easily and efficiently. Moreover, all previous studies utilized metaphors embedded in the target expressions or included in the concrete meanings of the target expressions, and the chapter considers it advisable to use metaphors that are not embedded in target expressions in order to understand the functions of the metaphor awareness-raising approach as a means of memory enhancement.

The chapter also provides an account of theoretical constructs of usage-based approaches, followed by a discussion of studies of usage-based approaches in L2 contexts. The chapter finds that usage-based activities with the teachers' guidance alone may not be optimal for L2 incidental learning, and that profound instructional intervention like the metaphor awareness-raising approach ideally needs to be provided. Furthermore, in order to bring about more effective instructional intervention, replacing the teacher-directed approach with the self-directed approach is another possible option.

The chapter ends with a review of previous studies related to self-directed learning on computers from a cognitive perspective, showing that self-directed learning on

computers have been demonstrated to be effective, particularly from a cognitive perspective. One conclusion is that it is worthwhile to look into the effects of the self-directed approach in the concept projection through which learners understand an abstract concept, namely the degree of certainty in terms of the spatial concept of distance.

CHAPTER 4. Methodology

This chapter begins with a brief description of the collection of native speakers' baseline data for the writing test (WT), comparison test (CO), and categorization test (CA) and then reports the results of a pilot study. The purpose of the pilot study was to examine whether the proximal-distal metaphor awareness-raising approach with three-dimension (3D) image content implemented through computers as a mnemonic device can facilitate L2 language learning on a small scale before conducting the present study. The pilot study also investigated the relative effectiveness of acceptability judgments and comparison judgment tasks, as well as the relative effectiveness of three testing instruments, WT, CO, and CA. Changes are made based on the results of the pilot study. Finally, a detailed methodological description of the present study is provided.

CHAPTER 5. Results

The results in this chapter indicate that the proximal-distal metaphor awareness-raising approach groups outperformed the non-cognitive approach and control groups in writing, comparison, and categorization tests, and that the self-directed approach as well as the teacher-directed approach enabled the participants to perform similarly. The results suggest that the proximal-distal metaphor awareness-raising approach using 3D image content can promote L2 language learning

and also reveal that regardless of self-directed approaches or teacher-directed approaches, the development of Japanese learners' knowledge of different degrees of certainty can be influenced by the proximal-distal metaphor awareness-raising approach.

CHAPTER 6. Discussion

The chapter discusses the main reasons why the cognitive approaches were so effective are: (a) The proximal-distal metaphor with 3D image content in the animation focused attention on the input the participants received; and (b) the concept projection through which the participants understood an abstract concept, namely the degree of certainty in terms of the spatial concept of distance, helped them to develop relatively stronger declarative knowledge, which led to the long-term retention in memory.

The present study also suggests that the usage-based activities alone, preceded by either self- or teacher-directed rote learning, were not enough for incidental learning, and that profound instructional intervention like the proximal-distal metaphor-awareness raising approach should be applied in addition to the usage-based activities to learn abstract concepts efficiently.

The chapter also discusses the main reasons responsible for the similar performance of the participants in the self- and teacher-directed approaches: (a) The information the participant received by way of the self- and teacher-directed approaches was almost the same; and (b) they adopted the same strategies when they derived answers, which may result from having received the same information through the self- or teacher-directed approaches.

CHAPTER 7. Conclusion

This chapter includes a recapitulation of the main findings, followed by pedagogical implication, limitations, and suggestions for future research. To extend the current findings, deeper insights can be gained from future studies that explore the effects of the proximal-distal metaphor awareness-raising approach on teaching not only other abstract concepts, but also pragmatics, a subfield of linguistics, by studying the ways in which a context closely connected to spatial concepts contributes to meaning. In addition, further analysis of the self-directed approach would be beneficial to develop learning methods that are suitable to the era of information technology.

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