The Role of L1 Transfer on L2 and Pedagogical Implications

LE ROLE DU TRANSFERT DE LA L1 DANS L'ACQUISITION DE LA L2 ET LES IMPLICATIONS PEDAGOGIQUES

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Abstract: The role of L1 transfer on the acquisition of L2 has always been the subject of controversary in the field of L2 learning and bilingual education. This article intends to examine controversial views about the transfer of L1 on the acquisition of L2 from the theories of Contrastive Analysis (CA), Contrastive Rhetoric (CR) and Creative Construction (CC) and Constructive Underlying Proficiency (CUP), hopefully offering an extensive analysis of the L1 transfer.
Keywords: Contrastive Analysis; Contrastive Rhetoric; Creative Construction; Constructive Underlying Proficiency

Résumé: Le rôle du transfert de la L1 dans l'acquisition de la L2 a toujours fait l'objet de controverses dans le domaine de l'apprentissage d'une deuxième langue et de l'enseignement bilingue. Cet article vise à examiner les vues controversées au sujet du transfert de la L1 dans l'acquisition de L2 à partir des théories de l'analyse contrastive (CA), de la rhétorique contrastive (CR), de la construction créative (CC) et de la compétence constructive sous-jacente (CUP), en espérant offrir une vaste analyse sur le transfert de la L1.
Mots-clés: analyse contrastive; rhétorique contrastive; construction creative; compétence constructive sous-jacente

1. INTRODUCTION

In the field of L2 learning and bilingual education, cross-linguistic influence is a theme widely discussed in the literature. However, after several decades of study, linguistic researchers have not reached consensus on whether transfer of L1 knowledge has constructive or destructive influences in the acquisition of second language. Different existing theories have controversial opinions about the role of L1 influences on L2 learning. In the following, the author intends to discuss the role of L1 on the acquisition of the L2 through the perspectives of Contrastive Analysis (CA), Contrastive Rhetoric (CR) and Creative Construction (CC) and Constructive Underlying Proficiency (CUP), thus providing an objective understanding of the L1 transfer and providing new pedagogical implications.

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2. ROLE OF L1 TRANFER ON L2

Different theories take different stances on the role of L1 transfer on the acquisition of L2. CA and CR hold that L1 interferes with L2 acquisition when L1 and L2 show differences. The CUP hypothesis maintains that L1 facilitates L2 learning. The CC claims that L1 has no effects on L2 acquisition.

2.1 Negative L1 influences on L2

The negative view of L1 influences on L2 is mainly represented two theories: CA and CR. Theoretically, theories in favor of L1 interference such as CA hold that L1 has more negative than positive effects in L2 learning (James 1980, Lado 1957). CA Hypothesis has both a psychological and linguistic aspect. The psychological aspect is based on behaviorist learning theory, and linguistic aspect, on structualist linguistics. Behavioristic theory of learning emphasizes interfering elements of learning, claiming that interference means difficulty in learning. Structualist linguistics lays a strong emphasis on differences between languages. James (1980) emphasizes two important points in CA hypothesis. Firstly, in L2 learning, transfer from the native language to target language occurs definitely and is often negative. Secondly, learning difficulties could be predicted by linguistic differences between two languages. The degree of difficulty is believed to depend primarily on the extent to which L2 patterns are similar to or different from L1 patterns. When two languages are identical, learning can take place easily through positive difficulties arise and error resulting from negative transfer are likely to occur. To sum up, the CA hypothesis attributes learning difficulty to differences/distances between the target language, which can be summarized as the "differences/distance=difficulty" hypothesis.

In short, negative L1 transfer to L2 is considered as the influence resulting from the differences between the target language and the native language. Such a view of language transfer may be too simplistic and restrictive. Both empirical studies and teaching experiences have shown that L1 and L2 differences do not necessarily imply learner difficulties. The influence of L1 on L2 is not primarily negative, but it is more complicated than depicted by CA.

CR offers the cross-cultural view on negative L1 transfer, which focuses on the structural similarities and differences in writing between the two languages. Grabe & Kaplan (1989) claim that the differences in the cultural conventions and knowledge of the native language and the second language negatively influence how an L2 writer organizes the written discourse in the second language. Furthermore, CR holds that writers composing in different languages produce distinct rhetorical patterns due to their respective L1 cultural mode of thinking. There are two major foci of research for the contrastive rhetoric. The first research area of contrastive rhetoric is text linguistics, focusing on textual features between two languages. The main concern of the CR is to help L2 learners overcome L1 interference in their L2 writing

2.2 Positive L1 influences on L2

The positive view of L1 influences on L2 is represented by the theory of Common Underlying Proficiency (CUP). Cummins (1983) proposes a "dual-iceberg" analogy to describe the transfer of bilingual learners' first language to the second language. In Commin's model, L1 and L2 proficiencies overlap with the common sector, which is below the "surface". In the separate sectors we find the surface features of the respective linguistic structures of L1 and L2. As the double iceberg indicates, superficially, L1 and L2 are separated proficiencies, but in essence, they overlap and share certain abstract universal principles and constraints common to all natural languages. L2 learners express their language proficiency in two different modes, i.e. the native language and the second language, but skills, knowledge and concepts developed in L1 can be easily transferable to L2. The CUP model claims that there is an underlying cognitive/academic proficiency that is common across languages, which follows the transfer of literacy-related skills across languages. Cummins et al (1983) claims that there are three literacy-related components across languages in the CUP. The first most obvious element of CUP is

perhaps conceptual knowledge. By the same token, subject matter knowledge, higher-order thinking skills, reading strategies, writing composition skills and so on, developed through the medium of L1 transfer or become available to L2 given sufficient exposure and motivation. The second major element to exist in the CUP is common experience. Francis (2000) puts forwards the third element that exists in the CUP involves actual linguistic knowledge. These transfers may include comprehension competencies, discourse competencies, formal schemata, and organizational skills.

Carson (1990) specificies the possible components of common underlying ability with three principal components: a) the cognitive processes in L1 and L2; b) the shared structures in L1 and L2; c) the mechanism that allows the processes and structures to transfer across languages. He has further developed the CUP by proposing the threshold level as a necessary condition for positive L1 transfer to take place in the following summary:

a) There exists a common underlying proficiency with a threshold level of language proficiency that allows skills to transfer.

b) There exists an underlying proficiency with a threshold level of language proficiency and cognitive restructuring that allows skills to transfer.

c) There exists separate language systems witha cognitive separation of language skills. Transfer occurs at the point where two previously separated but structually similar language routines come together.

To sum up, there must be a mechanism by which we can discover similarities between languages, or synthesize, restructure our experience to allow for new interpretations on L2 input, and a mechanism that allows strategies and information to be shared across languages for the sake of cognitive efficiency. Such a transfer mechanism is subject to the threshold constraints.

2.3 No L1 influences on L2

The non-transfer view of L1 on L2 is represented by the theory of Creative Construction (CC). Faerch & Kasper (1987) claim that L2 and L1 learning progress in a similar way as a result of the innate mental mechanisms that L2 learners universally employed, and hence that L2 learning is largely unaffected by L1 transfer. Dulay & Burt (1972) believe that the acquisition of L2, facilitated by UG principles, is a process in which L1 plays no role; the learner continuously formulates hypotheses about the TL system and matches them against available input. Ellis (1994) states that learners of different NLs follow a common path of development. In essence, this hypothesis has made two theoretical claims related to L1 transfer: 1) the hypothesis of L1 nontransfer, and 2) the L2 = L1 hypothesis. The first claim seeks to underestimate the role of L1 and emphasize the contribution of universal processes of language learning and the similarity between L2 and L1 acquisition. According to the hypothesis, L1 interference is of little importance in L2 learning. The L2 = L1 hypothesis concerns whether the fundamental principles that underlie L1 and L2 are the same, and whether the language acquisition device which mentalists claims is responsible for L1 acquisition is available to L2 learners. This hypothesis states that L2 acquisition in either identical or very similar to L1 acquisition. The similarity may be evident at the level of product (i.e.the mechanisms reposible for acquisition).

CC seeks to minimize the role of L1 and emphasize the contribution of universal processes of language acquisition. These arguments come from three lines of research: error analysis, morpheme studies and longitudinal studies of syntactic structures. The predominance of developmental errors over interference errors found in the error analysis, the high level of similarities in acquisition orders observed in the morpheme studies, and the natural sequence in transitional structures found in longitudinal studies across learners of different L1s has made CC proponents believe that L1 transfer plays only a minimal role in the SLA.

3. INCONSISTENT EMPIRICAL FINDINGS

Empirical findings from the studies on L1 influences on L2 learning are genarally in contrast between

the existence and absence of L1 effects on L2 learning. Some studies found that L1 transfer did occur in L2 learning, although such a transfer was either negative or positive. Others showed that L1 had no effects on L2 learning at all. The next sections reviewed these two types of empirical findings in contrast.

3.1 The negative L1-L2 transfer

Many studies have yielded findings of negative transfer at various levels of language such as phonological, syntactic, and discourse levels.

At the phonological level, for example, Rintell (1984) found that negative transfer was evident among Chinese learners of English in producing certain sounds. In one study, he found that Chinese speakers have special difficulty in identifying the emotional states of speakers of English because the former judged the internatinal language of English according to their tone language of Chinese. This transfer of Phonological knowledge resulted in errors. Negative L1 transfer is also pervasive at the syntactical level. Li (2002) found that negative transfer existed in the learning of L2 syntax. He examined the transfer effect of L1 in the acqusition of English reflexives with reference to Chinese learners of English. This study investigated how Chinese learners of English utilized knowledge of the binding properties of Chinese reflexive "self", "himself/herself" as a basis for the acquisition of English ones. The findings of the study suggested that though Chinese learners could resort to L1 knowledge to form hypotheses about the binding properties of English reflexives, negative L1 transfer was identified in the whole acquisition process of English reflexives. In discourse structure, it was found that L2 learners ofen transfer their L1 discourse patterns or conventions to L2 writing.

3.2 The positive L1-L2 transfer

Contrary to the findings of negative L1 influences on L2 learning, studies have found positive L1 transfer in different aspects, which include the transfer of reading and writing skills, strategies and concepts. These studies show that positive transfer usually takes place at the deep and cognitive levels.

The first aspect of positive L1 transfer is found in the studies in the transfer of literacy skills of reading. Upton (2001) studied the L1 use in L2 reading process of 20 native speakers of Chinese and Japanese ESL learners at three different proficiency levels in the USA, using think-aloud protocol and retrospective interview. The study explored the question of where L2 readers use their L1 cognitive resources and how this cognitive use of the L1 helps them comprehend an L2 text. It yielded several important findings. First, reading in L2 was not a monolingual event. L2 readers had access to their L1 as they read and many used it as a strategy to help comprehend an L2 text. L2 readers with different levels of L2 proficiency made use of L1 and L2 to different extents in their attempts to make sense of a text they were reading. Secondly, the lower group used L1 more when confronted with unknown L2 vocalbulary while the higher group did not. Thirdly, the low-ability readers had a greater tenderncy to work out an L2 text and sentence meaning using their first language, while the high-ability subjects tended to use the L2 as the language of thought. Fourthly, the low achievers tended to check even the sentences they did understand directly in the L2 by translating to and confirming their understanding in the L1, a strategy not unusually employed by the higher achievers in the study. The study suggested that the role of the L1 in L2 reading was not simply that of translation and went far beyond that. L1 had a role in almost every aspect of L2 reading process: the structure, content, meaning and strategy.

The second aspect of positive L1 transfer lies in the strategy transfer. Some studies have produced supporting evidence. Hall (1990) examined revision strategies in controlled L1 and L2 writing tasks. Four advanced ESL writers with different L1 background wrote two argumentative essays in their native languages and two in English. Revisions were then analyzed for specific discourse and linguistic features. The results of this study revealed some striking similarities between L1 and L2 revisions with regard both to the linguistic and discourse features for the changes and to the stages at which the changes were initiated. Hall suggested that the advanced ESL writer was capable of utilizing a single system of revision across languages, and this system was intially shaped in their first language and subsequently transferred to the second language.

In a different study, Liu (2002) discussed the transfer of L1 learning strategies in the process of L2 learning. The writer esplored this problem through experiments, i.e. by comparing the good and poor English learners in their use of word-guessing strategies in L1 and L2 reading. His experiments found two types of transfer in Chinese EFL learners. First, a general transfer was found in which good and bad learners had similar adaptability in their strategy use to various task demands, and use of the same types of strategies in both L1 and L2 reading tasks. These strategies included inferential abilities, problem-solving abilities and so on. Second, a different pattern was found in both good and poor learners. The good learners tackled different and easy tasks by employing different strategy patterns while the poor learners did so with resort to their fixed patterns.

The third aspect of positive transfer is the concept transfer. In the study, Scott (1997) investigated the role of L1-based concepts in L2 lexical reference. Here, first language influence emerged both as formal and semantic effects. He examined the semantic-conceptual aspects of first language influence on word choice in a second language. The hypotheses were based on the cognitive linguistic theory of Experientialism, and they addressed the three types of evidence necessary to evaluate first language influence: within-group similarities, between-group differences, and congruencies in learners' use of the first and second languages. The hypotheses were tested through a comparison of the inferential word choices of Finnish-speaking and Swedish-speaking learners of English at different levels of age and proficiency. Experimental participants (n=210) were tested in English, and comparable control participants (n=110) were tested in their native languages. An additional group of native English speaking participants (n=66) was also tested. Participants performed three tasks: (a) a writter retell of a silent film, (b) listing of nouns and verbs appropriate to specific objects and events, and (c) a receptive judgement task to determine whether pre-selected nouns and verbs can refer to the aforementioned objects and events. The results indicated that learners showed strong word-choice consistencies based on first language background, and that they also showed moderate semantic agreement between their first and second language lexical choices. From the perspective of referential lexical development, the learner groups differed significantly from native speakers in their English word choices, and showed little progression on toward target-like behavior in accordance with either age or L2 proficiency. The results indicated that first language influence was pervasive in second-language lexical use, although several factors combined to determine how conspicuous it would be.

To sum up, as Upton (2001) pointed out, L1 was certainly turned on and actively used by L2 learners in L2 learning. L2 learners used their L1 to help them wrestle with word- and sentence-level problems, confirm comprehension, predict text structure and content, as well as monitor text characteristics and reading behavior. The L1 quite naturally served as a tool to help students develop their second language in every respect

3.3 Findings denying L1-L2 transfer

In contrast to the studies in support of the L1-L2 transfer, other studies have identified neither negative nor positive L1 effects on L2 learning. In many cases, learners' L2 seemed not to be influenced in any way by their native language. The findings demonstrated that L1 did not transfer to L2 in aspects such as literacy skills of reading or writing, syntax, and discourse patterns as the proponents of L1 transfer had claimed. In one study on L2 learners' transfer errors, Dulay and Burt (1972) found that the L2 learners' errors could be classified into three types: (i) developmental, (ii) interference, and (iii) unique. The proportion of transfer errors in the interlanguage development was very small. They found that only 3% were interference errors, the rest being either developmental (85%) or unique (12%). L1 transfer did not play any significant role in L2 learners' interlanguage development as had been expected in the CA or CUP studies.

In one informative research, Carson et al (1990) reported their empirical survey of the first language and second language reading and writing abilities of adult ESL learners to determine the relationships across languages (L1 and L2) and across skills (reading and writing) in the acquisition of L2 literacy skills. Francis (2000) argued that in the study of bilingual transfer, it was necessary to specify more precisely which aspects of language competence and language use were interdependent and which aspects were separate. In other words, we still have no clear idea how and why L1 and L2 proficiencies

transfer and interdepend. In the studies on discourse features or structures, findings denying L1 transfer were identified. In a study on Chinese EFL learners' L2 writing patterns, Cao (2001) reported empirical findings on how Chinese EFL learners compose their comparison-contrast essays. She examined 55 tertiary English majors with two writing tasks and one queationnaire, It was found that Chinese students did not transfer their L1 rhetoric patterns ti their L2 writing. They used a point-by-point pattern similar to that of the native speakers of English in organizing comparison-and-contrast essays.

To sum up, there is no logically necessary connection between literacy in one language and successful acquisition of another language. The relationship between L1 literacy and improved L2 performace is not causative or at least no all aspects of the L1 will necessarily aid the development of the L2

4. PEDAGOGICAL IMPLICATIONS

As Wang (2004) points out, the role of L1 on L2 is dynamic and multifaceted. Therefore, with a multidimensional perspective in mind, teachers could employ more retrospective measures in the pedagogical situations. Various research techniques can be combined to explore learners' cognitive operations. It is suggested that equal attention should be given to the students'idea development and language improvement. This study enlightens the use of L1 in the classroom. Many modern teaching methods treat L2 in isolation from L1. The current study , however, challenges the complete rejection of L1 in the L2 classroom. By revealing the decline of L1 use as a gradual process, it suggests that decisions on whether to use or forbid L1in L2 learning and teaching should be made with considerations about the learners' L2 levels. Teachers should be more tolerant with low-level L2 learners' reliance on their L1 if their L2 fails them for an effective thinking. As for high-level learners, they should be encouraged to think in L2 as much as possible if the ultimate goal for L2 learning and teaching is to achieve a native-like L2 proficiency. What's more, L2 learners should be selective when using L1 and L2 educaotors generate a guideline ad to the advantages and disadvantages of L1 use. In sum, the multifaceted role of L1 transfer on L2 implies the objective existence and usage of L1 in the acquisition of L2, which exploited to its advantages will greatly facilitate the pedagogical processes.

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