

Sources of Errors in Second Language Learning and two Theories of Errors: Contrastive vs. Error Analysis

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〈Abstract〉

Contrastive analysis and error analysis are two major theories proposed to deal with errors committed by second language learners. Of the two theories, error analysis is the main concern of this paper. Nowadays contrastive analysis tends to be viewed as a subpart of error analysis, since error analysis has a broader theoretical basis than contrastive analysis. Error analysis takes into its account of sources of errors not only the differences in the language systems, but also learning strategies, communication strategies and other psychological factors.

제이 외국어 학습에서의 오류의 원인과 오류에 관한 두개의 이론 : 대조분석과 오류분석

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〈요 약〉

대조분석과 오류분석은 제이 외국어를 배우는 과정에서 발생하는 오류를 설명하는 두개의 이론이다. 이 두 이론은 서로 다른 이론적 바탕에서 오류를 다루고 있다. 본 논문은 대조분석보다는 오류분석에 중점을 두고 있다. 대조분석은 오류분석의 한 부분으로 취급되는 것이 최근의 경향이다. 오류분석은 오류의 원인을 언어체계의 상이점에서 뿐 아니라, 학습자들의 학습전략, 의사전달전략과 그리고 그밖의 다른 심리적인 요소를 취급함으로써 대조분석보다 넓은 이론적 바탕을 지니고 있다.

I. Introduction

The dream of every language teacher is to hear his student produce flawlessly grammatical and appropriate utterances of the particular foreign language he is teaching. Unfortunately, however, it is a part of his daily routine to correct the same errors time and again, and to teach the grammatical points covered in lesson 5 again when the when the class is on lesson 20. Since the correction of student errors constitutes

an important portion of language teaching, it may be a good idea to take a closer look at the nature of errors and their possible sources. For better understanding of the nature and sources of errors, contrastive analysis and error analysis hypotheses will be examined since they are they are the major theories proposed to deal with the problem of errors.

II. Contrastive Analysis

Early audio-lingual exponents writing on the acquisition of language by children were under

the strong influence of the operant conditioning theories of B.F. Skinner, according to which a child learns to produce "correct" sentences because he is positively reinforced when he says something right and negatively reinforced when he says something wrong.

Out of such climate of philosophy was born the contrastive analysis hypothesis. The gist of this hypothesis is that a set of habits acquired while learning mother tongue is carried over to second language learning.

The contrastive analysis hypothesis is usually stated in two versions: a strong version and a weak version. The representative statement of the strong version is expressed by R. Lado (1957) in the preface to *Linguistics Across Culture* as follows:

"The plan of the book rests on the assumption that we can *predict* and describe the patterns that will cause difficulty in learning, and those that will not cause difficulty, by comparing systematically the language and culture to be learned with the native language and culture of the students."

It is clear, however, that the strong version makes demands of linguistic theory that linguists are in no position to meet. Linguists do not have a comprehensive linguistic theory which may deal with phonology, syntax, and semantics to any adequate degree. It also requires that linguists have a theory of contrastive linguistics into which they can plug complete linguistic descriptions of the two languages being contrasted so as to produce the correct set of contrasts between the two languages.

Experienced language teachers, however, have known all along what kinds of mistake students make. Teachers do not need the predictions of student errors. They already know. What they need is how to combat these mistakes, not the predictions. These considerations lead to the conclusion that the strong version of contrastive analysis is not feasible.

The weak version, on the other hand, requires of the linguist only that he uses the best linguistic knowledge available to him in order to account for the observed difficulties, and, conversely, of those learning points which do not pose any difficulty at all. The weak version merely starts out with the actual, observed data and tries to *explain* these observed errors by making reference to the two systems of the languages concerned (Wardhaugh, 1974).

The linguistic theory used in this version is actually very eclectic and contains insights from various grammars such as structuralism, transformationalism, etc.. All in all, contrastive analysis was most successful in only one area: phonology. On the other grammatical levels such as syntax, it was not so much productive.

III. Error Analysis

Error analysis grew out of transformational linguistic theory, and the notion of language as a rule-governed system. This point needs to be elaborated in conjunction with child language acquisition.

To explain the fact that a few years of exposure to primary linguistic data are sufficient for the child to master the amazingly complex rules of grammar, Chomsky (1965) hypothesized that the child must have some innate mechanisms that guide him in his language learning. That is, children do not simply imitate adult speech; they structure input language and make rules of their own that are simpler than adult rules. In time, the mismatch between the children's developing forms and the developed forms of adult grammar diminishes and disappears, without the help of explicit instruction, positive reinforcement of correct structures or correction of incorrect structures (Dulay and Burt, 1974). R. Brown (1973) calls this phenomenon "creative construction process". Imitation and reinforcement theories do not fully explain the phenom-

enon of child language acquisition, though it should be remembered that some amount of imitation and reinforcement is intimately involved.

With the assumption of innate, biologically determined mechanisms, the next natural question to ask is to see whether the same mechanisms work in the second language acquisition by children. A series of research efforts by Dulay and Burt (1972, 1974, 1975) strongly indicate that the general process of second language acquisition by children is quite similar to that of first language acquisition.

Furthermore, the main findings of the study by S. Krashen et al (1976) also indicate that adult and child ESL learners obtain similar difficulty orderings in a spoken English Language Proficiency Test, and that this order is similar for learners with different first languages and also for learners exposed to different linguistic environments

Other recent investigations into errors made by second language learners also revealed that those "apparent" errors have a high degree of systematic patterns and regularities (Selinker, 1973, Dickerson, 1975, Nemser, 1971). To sum them up, at any one time the language learner behaves in a consistent manner and maintains that consistency over time. Because this patterned behavior could not happen by chance, something significant is implied about what the learner has in his head. The learner's systematic behavior must be the reflection of an internal system. This system is neither the native language system nor the target language system. Instead, the learner is demonstrating an internally unified system. Those errors are actually rule-governed according to his own system of rules. This observation is different from the usual interpretation of errors as rule violations of the target languages.

Taking such facts into consideration, S.P. Corder hypothesized that the language of such

a learner is a special sort of dialect, e.g., idiosyncratic dialect, or idiolect. Larry Selinker dubbed it interlanguage. Interlanguage is the learner's own system. It is always in flux, moving closer and closer to the model of target social dialect used by adult speakers. All these point to a radically different view of errors from that of audio-lingual exponents: that is, errors are not to be regarded as problems to overcome, but as an inevitable part of the language learning process and as important data as to the characterization of the learner's changing language system.

IV. Classification of Errors

Errors are classified in terms of language transfer, learning strategies, communication strategies. They are also classified according to gravity or seriousness of impairing comprehensibility. Extralinguistic factors such as anxiety, fatigue, etc should be considered, too.

1. Language Transfer

Language transfer may be defined as the use of elements from one language while using another and may be found at all the structural levels of language. Some research findings suggest that adults make a lot more interference errors than children (Dulay and Burt, 1972). Phonological errors constitute the greater part of this type of errors.

Grammatical hierarchy of difficulty was formulated by Stockwell, Bowen and Martin (1965) for English and Spanish. Teachers can use the hierarchy to assess the relative difficulty of second language items. They suggested eight possible degrees of difficulty based on interference, which is either positive, negative or null. The hierarchy presented here is slightly modified.

1. Level zero: There is a one-to-one correspondence between the items of two languages in

contrast. No difficulty is assumed.

2. Level one: Two or more items in mother tongue are collapsed into one in second language. It requires the learner to overlook the differences of the two items.
3. Level two: An item in the native language is absent in the target language. Naturally, the learner must avoid the item.
4. Level three: Items existing in native language are given new shape of distribution.
5. Level four: An item in target language has no corresponding one in native language.
6. Level five: One item in native language is split into several items in target language.

2. Learning Strategies

Language learning strategies are usually classify as follows: generalization, analogy, simplification and complexification. Jakobovits (1970) wrote:

“Generalization is the use of previously available strategies in new situation. . In second language learning some of these strategies will prove helpful in organizing the facts about the second language, but others, due to possible superficial similarities, will be misleading and inapplicable.”

Omissions of the ‘-s’ in the third person singular in the present tense may be accounted for by the heavy pressure of all the other endless forms. The endless form is generalized for all persons. This is an example of misuse or overuse of generalization. This is sometimes called overgeneralization. Overgeneralization is synonymous with simplification, the process of reducing events into few parts as much as possible. This process explains one characteristic of first and second language acquisition by both child and adult: that they keep the grammatical frills to minimum. That is, they omit grammatical morphemes such as Verb endings, noun inflections and so forth.

Analogy is defined as another learning strategy by which a learner perceives parallels

between new and previous items. It produces both wanted and unwanted forms. False analogy applies to the production of those unwanted forms. Sometimes errors of analogy are facilitated by problematic sequence of presentation of grammar. The following is an example of such cases.

1. You mend. _____ Do you mend?
2. You mended _____ Did you mended?
(Transform into Q)

An alternative sequence was suggested by George (1972):

1. You mend.
2. Do you mend?
3. Did you mend?
4. You mended

3. Communication Strategies

A learning strategy is a method of perceiving and storing a particular item for later recall. On the other hand, a communication strategy is a method of achieving communication by encoding and expressing meanings. The two types are different in their manifestations, but there is surely a strong relation between them, i.e., a transfer of native language item, false analogy, faulty rule learning, etc result in avoidance strategy, prefabricated patterns and etc, which are all communication strategies.

Avoidance is a strategy employed by learners to avoid difficult features of grammar. In the process, learners come up with ungrammatical and/or inappropriate phonological, morphological syntactic, lexical and topical items. In case of topic avoidance, learners simply drop the topic and pretend not to understand. Learners sometimes substitute a word easy to pronounce for the word containing difficult phonological item.

Learners sometimes use prefabricated patterns enabling them to express communication functions they are not capable of expressing in their linguistic system. These patterns are just a set of memorized stock phrases and structures.

They are the results of segmenting surface structures without knowing underlying structures.

Language switch is another communication strategy that can produce errors. Learners, being unable to find suitable second language expressions corresponding to those of native tongue, switch to their native language whether the listener understands their language or not.

4. Global and Local Errors

Global and local errors are those that are classified in terms of their seriousness of impairing the overall comprehensibility of sentences. In sentences with more than one clause, the appropriate overall organization is more important to comprehensibility than the correct formation of each clause within the larger sentence. Global errors are those that violate rules involving the overall structure of a sentence, the relations among clauses, or the major constituents in case of a simple sentence. For example, errors involving sentence connectives and subordinate conjunctions are considered global.

Local errors, on the other hand, are errors involving a particular constituent or clause. Local errors do not damage the comprehensibility of sentences to as great a degree as global ones (Burt and Kiparsky, 1973). To give an example:

*Please sending when you shall to get my visa. Correction of a local constituent gives

*Please *send* when you shall to get my visa. Comprehensibility of this sentence has not improved much compared with the following global correction of the word order.

*Please sending *my visa* when you shall to get.

5. Backsliding Errors and Fossilization

It is important to note that some structures or items of second language tend to remain as potential errors, reemerging in the performance

of second language learners even after seemingly eradicated. Many of these "apparent" errors reappear when the learner's attention is focused on intellectually demanding subject matters or when the learner is in a state of anxiety or other excitements, and strangely enough when he is in a state of extreme relaxation.

Selinker noticed that whatever the cause, the well observed phenomenon of these backsliding errors made by second language learners is not, as was generally believed, either random or towards the learners' native language, but towards interlanguage norms. To account for this fact, Selinker postulated the psychological reality of interlanguage and fossilization.

Fossilization is a mechanism which is assumed to exist in the latent psychological structure. It is roughly equivalent to the concept "latent language structure", which was postulated by E. Lenneberg (1967). The latent language structure is:

1. an already formulated arrangement in the brain.
2. the biological counterpart of universal grammar.
3. transformed by the infant into the realized structure of a particular grammar in accordance with certain maturational stages, which correspond to the natural sequences in language learning observed by Brown, Dulay and Burt, etc.

The latent psychological and linguistic structure is reactivated when adults learn second language. Fossilizable linguistic phenomena are linguistic items, rules and subsystems which speakers of a particular language will try to keep in their interlanguage relative to a particular target language, no matter what the age of the learner or amount of explanation and instruction he receives in the target language. These fossilizable linguistic materials constitute backsliding errors.

There are other types of errors such as mar-

kers of transitional competence and teacher-induced errors. Markers of transitional competence result from a natural and perhaps inevitable developmental sequence in second language process. There is not much material on teacher-induced errors (cf. Nancy Stenson, 1975). Those are the errors resulting from pedagogical procedures contained in the text or employed by the teacher.

V. Implications of Error Analysis

Error analysis has important implications to language teaching: the problem of how to correct errors and what to correct and the designing of syllabus, etc. Some of the important tips on "how to correct errors" are as follow:

1. If error analysis reveals the cause of an error as interference, then emphasize the difference between target language and native language.
2. If an error is the result of the inherently confusing nature of target language, then point out the rules that are completely or at least partially revealing.
3. If the error is recognized as nonstandard form, then explain the level and register or formality of the form.
4. If the error can be traced to sequencing of materials, then double back to the older materials.
5. If the error is a product of second language strategies, then the correct form will eventually appear.
6. If the error is a careless mistake, then ignore it. Performance errors are better left alone.
7. If the error is global, then correct it first.

Traditionally, a syllabus is built on materials graded from grammatically simple to complex. This is the logical or grammatical basis of a traditional syllabus. According to the results of recent error analysis, however, there is some evidence that there are natural sequences to

second language learning. This idea of "built-in-syllabus" can be used as the psychological basis of syllabus design, and pedagogical grammar (Nickel, 1973). Logical and psychological factors may be mutually complementary, since evidence from first and second language learning indicates that simplification is one of the learning strategies employed by the learner at first, and at later stages, complexification strategy is used by the learner (Schumann, 1974).

VI. Some dangers in Error Analysis

Error analysis seems a cure-all to all the problems of language learning. There are, however, certain grave shortcomings with error analysis. The first step in an error analysis is the extraction of errors from the corpus. In many cases of error analysis, the corpus is excluded from further consideration as the investigator focuses on the task of organizing the errors. This move can be devastating to the whole error analysis enterprise. The significance of errors is much more revealing when the errors are analyzed in the context of the corpus comprising correct and incorrect usages as well.

It is not always easy to identify errors. It is much harder to classify properly these identified errors. What structure is this error in? It is almost almost always the case that it is extremely hard to find *the* cause of an error. There are large numbers of errors that are ambiguous as to whether they are interlingual or developmental. The followings are typical errors of syntax produced by Chinese learners of English:

1. *There are so many Taiwan people live around the lake.
2. *There were lots of events happen in my country.

One analysis can lead to the conclusion that Chinese learners typically fail to insert the relative clause subject markers 'that', 'who'

and 'which'. These errors, however, can be viewed as attempts to establish a topic and follow it with a comment, a process that is syntactically and pragmatically acceptable in Chinese.

As shown earlier, avoidance is one communication strategy used by the learner. Quite possibly, some difficult constructions will not show up as actual errors. Then error analysis will have nothing to say about the relative difficulty of such avoided structures and items. Frequency of errors never coincides with their difficulty. This point should always be taken into consideration when engaged in an error analysis.

VII. Conclusion

Contrastive analysis, at least in its strong version, is too narrow in its theoretical outlook. It looks for the sources of errors only in the different patterns of two languages in contrast. Error analysis, on the other hand, takes many other factors into its consideration, i.e., language transfer, language learning strategies, communication strategies, organization of materials, and other extralinguistic elements such as lapse of memory, fatigue, anxiety, and etc. Error analysis focuses not only on language systems, but also on the learner himself.

Language learning is not only acquisition of a set of unconscious habits, it is a rule-governed behavior as well. The learner makes rules of his own, though simpler at first than adult rules. His linguistic behavior is consistent and systematic over all time. This consistency and systematic behavior is the reflection of an internally unified system.

Some important implications of error analysis suggest a new approach to syllabus design, pedagogical grammar, correction of errors and etc. A syllabus should have a psychological basis so as to confirm to the natural sequences

of second language learning. Pedagogical grammar can be written to reflect not only grammatical, but also psychological degrees of varying complexity. As for error corrections, performance errors can be better left alone, while global errors should be promptly pointed out and corrected.

In spite of its greater explanatory adequacy than that of contrastive analysis, error analysis has certain dangers researchers should be aware of. Some of these dangers, however, can be avoided if errors are evaluated within the whole context of appropriate utterances.

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