

Contrastive Analysis, Transfer Analysis, Error Analysis, And Interlanguage: Four Concepts One Goal

Endang Fauziati

efauziati@yahoo.com efauziati@gmail.com

Muhammadiyah University of Surakarta

ABSTRACT

Contrastive Analysis, Transfer Analysis, Error Analysis, and Interlanguage are methods used for second language learning investigation. They constitute evolutionary phases in the attempt to understand and explain the nature of the target language learners' performance. Each theory has its own view, especially in the attitude toward learners' errors and the explanatory hypotheses regarding the sources of errors. They also appear to have one goal, that is, an attempt to facilitate the process of target language learning or teaching by studying learners' errors. They are complement to one another; they constitute four phases with one goal.

Contrastive analysis aims to provide teachers and/or textbook writers with information that can be utilized in the preparation of instructional materials, the planning of courses, and the development of classroom techniques. Contrastive studies are carried out in order to describe the differences between learners' native language and the target language. They believe that it is on these differences that the learning difficulties lie, consequently errors exist. Transfer analysis is a new label given to contrastive analysis. Other sister terms are *language transfer* and *crosslinguistic influence*. This is an analytical tool which constitutes a sub discipline within error analysis. Its basic assumption is that certain errors in learner performance are the result of native language transfer. Error Analysis disproves the predictions of theory lying behind the comparison of native language and target language. It is an experimental technique for validating the theory of transfer. Its goal is to find out something about the psycholinguistic process of language learning. It enables us to draw a certain conclusions about the strategies used by the learner in his learning process. Interlanguage is a popular term to refer to learners' versions of the target language. It usually contains elements of both the learners' native language and target language. Interlanguage is resulted from the learner's attempts to produce the target language construction. In other words, it is the product of the second language learning process.

Key Words: learner errors, contrastive analysis, transfer analysis, error analysis, interlanguage

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1. INTRODUCTION

The term second language acquisition research is a study that is designed to investigate questions about learners' use of their second language (L2) and the process that underlie L2 acquisition and use. It has been carried out within a number of different theoretical frameworks and made use of a number of research methods. Among the methods, there are four (Contrastive Analysis, Transfer Analysis, Error Analysis, and Interlanguage) that seem to share the same concern, that is, learners' target language performance, especially learner errors.

These four approaches constitute evolutionary phases of the theories that try to understand and explain the nature of learners' L2 performance. Each theory has its view, a little bit different from each other. The most obvious differences lie on their particular concern and the attitude toward learners' performance, especially the learners' errors. However, they appear to have one goal, that is, the attempt to facilitate the process of L2 learning or teaching by studying learners' errors. These four areas of research are complement to each other so that they constitute three phases with one goal.

The present paper specifically discusses the conceptual framework of the four mentioned research tools in L2 acquisition research and how they correlate to each other. The presentation is divided into five main parts, namely: contrastive analysis, error analysis, interlanguage, and pedagogical implication.

2. Contrastive Analysis

Contrastive Analysis (CA) was first proposed by Charles C. Fries as an integral component of the methodology of foreign language teaching. He strongly declared that, "The most effective materials are those that are based upon a scientific description of the language to learn, carefully compared with a parallel description of the native language of the learner" (1945: 9). Fries can be said to have issued the charter for modern CA. The challenge was then taken up by Robert Lado with his work *Linguistics Across Cultures* (1957). This book then became a classic field manual for practical contrastive studies. By early 1970s, however, CA was already open to attack both on its empirical validity as well as its theoretical foundations. Anyhow, CA today keeps appearing implicitly or explicitly incorporated with other approaches such as Error Analysis and Interlanguage (Selinker, 1977; 1997; Corder, 1977).

According to Sridhar, (1980: 93-94) the rationale for conducting contrastive studies comes mainly from three sources: (1) Practical experience of foreign language teachers, (2) and Studies of language contact in bilingual situations, and (3) Theory of learning. First, every experienced foreign language teacher knows that a substantial number of persistent mistakes made by his students can be traced to their mother tongue. The learner is, no doubt, carrying over patterns of the mother tongue into his target language performance. More over such a 'carryover' seems to result in the

largest number of deviant sentences in areas where the structures of the native language and the target language differ the most. Second, studies of language contact in bilingual situation may have noticed the phenomenon of language interference. It is a phenomenon that is clearly defined by Weinrich (1952: 1) as "those instances of deviation from the norms of either language that occur in the speech of bilinguals as a result of their familiarity with more than one language". Finally, the particular learning theory or Selinker (1977; 1997) prefers to use the term learning strategy, which becomes the rationale for undertaking contrastive study is the theory of transfer. This simply refers to "the automatic, uncontrolled, and subconscious use of the past-learned behaviors in the attempt to produce new responses. In this sense, there are two types of transfer: negative and positive.

3. Contrastive Analysis Hypothesis (CAH)

The contrastive analysis hypothesis can be stated in two versions: a strong version and a weak version. With regard to the strong version, one of the strongest claims on the strong version of CAH is made by Lado (1957: IV) who states that "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 the culture to be learned with the native language and culture of the students." Then, he further says that, "... in the comparison between native and foreign language lies the key to ease or difficulty in foreign language learning ... those elements that are similar to the native language will be simple for him and those elements that are different will be difficult" (1957: 1-2).

The above statements present the common idea; it is possible to compare and contrast the system of one language with the system of a second language in order to predict difficulties, to construct teaching materials, and to help learners learn that language. It is in accordance with Lee (1968: 186) who says that CA is based on the following assumptions: (1) That the prime cause, or even the sole cause of difficulty and error in foreign-language learning is interference coming from the learners' native language; (2) That the difficulties are chiefly, or wholly, due to the differences between the two languages; (3) That the greater these differences are, the more acute the learning difficulties will be; (3) That the results of a comparison between the two languages are needed to predict the difficulties and errors which will occur in learning the foreign language; (4) That what there is to teach can best be found by comparing the two language and then subtracting what is common to them, so that what the student has to learn equals the sum of the differences established by the contrastive analysis.

With regard to the weak version was proposed by Wardhaugh (1970). The weak version does not imply the a priori prediction (strong version) of certain degree of difficulty. However, it recognizes the significance of interference across languages, the fact that such interference does exist and can explain difficulties. It also recognizes that linguistic difficulties can be explained a posteriori--after the fact. As the learner is learning the language and errors appear; the teacher can utilize his knowledge of the target and native languages to understand sources of errors.

The weak version of CA suggests that by conducting a contrastive study linguist or language practitioner can use the knowledge available in order to explain the difficulties in second language learning. This version starts with the evidence provided by linguistic interference and uses such evidence to explain the similarities and differences between the systems of the student's native language and the target language. The starting point in the contrast is provided by actual evidence from phenomena such as faulty translation, learning difficulties, residual foreign accents, and so on. The reference drawn from the contrastive analysis of the two systems is used to explain the observed interference phenomena. The weak version of CA hypothesis underpins the emergence of the theory of Error Analysis.

Such emergence, for example is backed up by criticisms of CA who have argued that the difficulties predicted by CA (strong version) often do not show up in the actual learner performance at all. On the other hand, many errors that do turn up in the learner's performance are not predicted by CA. In this case they suggest the weak version of CA i.e., the explanatory function or the weak version, is more acceptable than the strong version of CA, i.e. the predictive function.

4. Transfer Analysis

As stated previously that the inadequacy of CA was noticed by Wardhaugh (1970) who suggested that the CAH should be thought of as consisting of two versions, namely, strong and weak version. The strong version of CA claims that it can predict errors (learning difficulties) by contrasting the NL with the TL, and the weak version makes the more cautious claim that it can explain (diagnose) a subset of actually attested errors. In applied linguistics, CA is then no longer practiced in its strong version (predictive function). Wardhaugh (1970: 144) states that "teachers and linguists have successfully used the best linguistic knowledge available in order to account for observed difficulties in second language learning". This suggests that by conducting a CA, linguists or language practitioners can use the knowledge available in order to explain the difficulties in second language learning. This weak version or the explanatory function of the CA hypothesis is preferable. This tradition has led to a kind of re-labeling of the CA, and is often referred to as *language transfer* by Gass and Selinker (1994: 53), *crosslinguistic influence* by Sharwood Smith (1996: 13), or *transfer analysis* by James (1998: 5). TA as an analytical tool, thus, constitutes "a sub discipline within error analysis which rests upon the assumption that certain deviances in learner production are the result of NL transfer" (James 1990: 489). It is a sub procedure which is applied in conducting EA. In addition, James (1998: 5) insists that TA is no longer CA, since the ingredients of TA are different. Unlike CA which compares the learners' NL with the TL, TA compares IL with the NL.

Later on, EA and IL studies emerged, in part, as a reaction against the classical CA theory. These approaches try to account for the learners' performance in terms of the cognitive processes they make use of in recognizing the input they received from the TL. However, the significance of language transfer could not be denied, and attempts have been made to accommodate the concept of language transfer to more cognitively oriented theories. The present conception views language transfer as a learning process. It is not viewed as the manifestation of a learner's inability

to resist L1 structure, but rather, it is considered as the learners' learning process (cognitive mechanism) in the TL acquisition.

James (1994: 196) states that "there are still a great deal to be done in CA and EA as they are vital components of the applied linguistic and language teaching enterprise". EA came into existence as a reaction against the view of SLL proposed by the strong version of CA theory. That is to say, the weak (the diagnostic) version of CA has become the embryo of EA theory. In its relation to EA, TA is "a sub procedure applied in the diagnostic phase of doing EA" (James 1998: 6). Thus, TA is not an alternative paradigm but a supplementary procedure within EA for handling learner errors that are assumed to be the result of the learners' NL. James (1998: 6) further states that "transfer analysis is something salvaged from CA and added to EA".

5. Error Analysis

Error analysis is "the first approach to the study of SLA which includes an internal focus on learners' creative ability to construct language" (Saville-Troike 2006: 38). The primary focus of EA is on learner errors and the evidence of how learner errors could provide an understanding of the underlying processes of SLL or SLA. Learner errors are "windows into the language learner's mind" (Saville-Troike 2006: 39), since they provide evidence for the system of language which a learner is using at any particular point in the course of L2 development and the strategies or procedures the learner is using in his "discovery of the language". Errors "tell the teacher what needs to be taught, tell the researcher how learning proceeds, and are a means whereby learners test their hypotheses about the second language" (James 1998: 12). The learners' learning processes or learning strategies (Selinker 1977) can be inferred from an examination of learner language protocols, studies of learner introspections, case studies, diary studies, classroom observations, and experimental studies (Long 1990).

6. The Algorithm for Conducting Error Analysis

The term *algorithm* is introduced by James (1998: 267) to refer to "the specification of the set of procedures you need to carry out, together with a statement of the best order to follow, to perform a complex operation". In order to reach the intended goals the researchers can employ a set of procedures to carry out in EA. The set of procedures for conducting EA was originally proposed by Corder (1978: 126); the procedure basically consists of three major stages: recognition, description, and explanation of errors. These stages were subsequently elaborated by Sridhar (1980: 103) into the following steps: (1) Collection of data (either from free compositions by students on a given theme or from examination answers); (2) Identification of errors (labeling with varying degrees of precision depending on the linguistic sophistication brought to bear on the task with respect to the exact nature of the deviation, e.g., dangling prepositions, anomalous sequences of tenses, etc); (3) Classification into error types (e.g. errors of agreement, articles, verb forms, etc.); (4) Statement of relative frequency of error types; (5) Identification of the areas of difficulty in the target language; and (6) Therapy or remedial lessons.

6. Interlanguage

Interlanguage is a study on the language of the second language learners, which currently receives a wider acceptance in the literature of EA. This term was first coined by Selinker (1977; 1997) to draw attention to the fact that the learner's language system is neither that of the mother-tongue nor that of the target language. The learner's language system contains elements of both. If we can imagine a continuum between the L1 system (which constitutes the learner's initial knowledge) and the L2 (which constitutes the TL) we can say that at any given period of L2 development, the learner speaks an IL.

Selinker's IL hypothesis assumes that interlanguage is natural language; it is systematic through its development. Interlanguage reflects the learners' attempts at constructing a linguistic system that progressively approaches the TL system. It evolves overtime as the learners employ various internal strategies to make sense of the input and to control their output. These strategies are central to Selinker's view on IL. It is conceived that IL is the product of an interaction between two language systems, namely, the NL and the TL. It has certain features of both.

Sridhar (1990: 107-108) confirms his predecessors, stating that the term IL seems to be appropriate because (1) it captures the determinate status of the learner's system between his NL and the TL, (2) it represents the typical progress with which the learner's language changes, and (3) it focuses on the term *language* which explicitly recognizes the systematic rules of the learner's performance, from the learner's point of view

The recognition of IL as systematic rules also comes from Sharwood Smith (1994: 7) who explicitly defines it as "the systematic linguistic behavior of learners of a second or other language; in other words, learners of non-native languages". He further states that the word *language* in IL suggests that it is an autonomous system whereas *inter* suggests that this version is supposed to be an intermediate stage in the user's linguistic development. The fact shows that the learners' version of the target language is idiosyncratic in nature; it is distinct from both their NL and TL. As an autonomous system, IL has specific characteristics different from other natural languages.

7. The Characteristics of Interlanguage

Applied linguistic scholars such as Adjemian (1976), Selinker (1977; 1997), and Saviile-Troike (2006) share common ideas about the characteristics of IL as a system. As a language system, IL has main features different from other natural languages, namely: (1) systematicity, (2) permeability, (3) dynamicity, and (4) fossilization.

Systematicity: The property of systematicity follows from the hypothesis that ILs are natural languages. This means that an IL is not a random collection of entities, but systematic. Saviile-Troike confirms the systematicity of IL. He gives further statement that "at any particular point or

stage of development, the IL is governed by rules which constitute the learner's internal grammar. These rules are discoverable by analyzing the language that is used by the learner at that time" (2006: 41).

Though learners' TL utterances may be deviant by comparison with the TL norms, it does not mean that they lack systems. Errors are patterned; some regular errors are evidence to the influence of the native language while others are attributable to the TL. The internal organization of IL can be seen linguistically just like any natural language. Thus, we can learn something about the learners' language system in speech or writing by making a series of description of the learner's interlanguage.

Permeability: The next property of IL is permeability. According to Yip (1995: 12), IL refers to "the susceptibility of interlanguages to infiltration by first language and target language rules or forms." The structures of IL can be invaded or infiltrated by the learner's native language. Especially when the learner is placed in a situation that cannot be avoided, he may use linguistic rules or items from the first language. Similarly, in other situations, the learner may stretch, distort, or overgeneralize rules from the target language in his effort to produce the intended meaning. Both of these processes (native language transfer and overgeneralization) reflect the basic permeability of IL. Permeability is a property unique to interlanguage, which may be different from other natural language systems.

Dynamicity: Interlanguage is dynamic in the sense that "the system of rules which learners have in their minds changes frequently, resulting in a succession of interim grammar" (Saville-Troike 2006: 41). The system of IL is thought to be incomplete and in a state of flux. For this reason, Corder (1982) gives the term "transitional competence" to IL. This expresses the idea that the TL knowledge system being developed by the learner is a dynamic one. It is in a state of flux or constantly changing, as new knowledge of the L2 is added, an adjustment in the competence already acquired takes place. Meanwhile, Namser (1977) refers to this as an approximative system, giving an emphasis that the learner's language is approximative in nature. This especially draws attention to the structural aspects of the learner's language, which is approximative, more or less close to the full TL system. In this sense, the learner may be viewed as progressing along a continuum from zero knowledge of L2 to a level closely resembling the linguistic competence of the native speaker of the TL.

Fossilization: The term fossilization was first introduced by Selinker (1988: 92), to refer to "the persistence of plateaus of non-target like competence in the IL". When its dynamicity and permeability are lost, the features of an IL become subject to fossilization. Normally, we expect a learner to progress further along the learning continuum, so that his competence moves closer to the TL system and contains fewer errors. Some errors, however, will probably never disappear entirely. Such errors are often described as already fossilized, meaning that they have become permanent features of the learner's speech.

A lot of issues have been reported that the vast majority of adult L2 learners fail to achieve native speaker's competence. Estimates of rate of success in adult L2 acquisition typically range from virtually nil (Bley-Vremon, 1989) to 5% (Selinker, 1972). This might be the reason for Han to prefer to use the term *failure* to refer to this phenomenon, and she defines it as "the permanent lack of mastery of a TL despite continuous exposure to adequate input, adequate motivation to improve, and sufficient opportunity to practice" (Han 2004: 4). This phenomenon of non-progression (cessation) of learning an L2 has become a central concern for SLA researchers and has posed a major challenge to second language theorists. In addition to the above two terms, there are other terms which refer to more or less the same thing, namely, partial attainment, backsliding, stabilized errors, persistent of non-target-like performance, cessation of learning, learning plateau, habitual errors, long-lasting free variation, persistent difficulty, ultimate attainment, and incompleteness (Han 2004: 26-27). These terms refer to the same phenomenon but may emphasize different aspects.

Researchers note that fossilization is one of the noticeable characteristics of SLA. Ellis (2004) states that fossilization is part of the IL process which occurs at a certain point in the IL development. Towell and Hawkins (in Han 2004: 13) state that

"even after many years of exposure to an L2, in a situation where the speaker might use that L2 everyday for normal language, it is not uncommon to find that the speaker still has a strong foreign accent, uses non-native grammatical constructions, and has non-native intuitions about the interpretation of certain types of sentence"

Another issue often reported is that there exist just few cases of native-like success among adult L2 learners. Many L2 learners fail to reach the target language competence. They do not reach the end of the IL continuum. They stop learning when their interlanguage still contains at least some rules different from those of the target language system. It is estimated that the rate of success in adult L2 acquisition, defined in terms of the attainment of native like competence, "typically ranging from virtually nil to 5%. If there are exceptional second language learners, they are so rare compared to instances of failure in early first language acquisition" (Birdsong, 2004: 12). Researchers, therefore, have been confronted with one of the most enduring and fascinating problems of SLA, that is, whether or not adults can ever acquire native-like competence in L2.

In addition to the term *fossilization*, Selinker and Lakshamanan (1992) introduce the term *stabilization*. They state that stabilization is the first sign of presumed fossilization. The difference between fossilization and stabilization is permanence. Errors become fossilized when they have become permanently established in the IL of an L2 learner in a form that is deviant from the TL norms and that continues to appear in performance regardless of further exposure to the TL. Meanwhile, stabilized errors are not permanent; they are maintained in the learners' L2 production at a given level of IL development. It is just a momentary halt. Thus, permanence is the only quality distinguishing fossilization from stabilization. If we wish, then, we can make a distinction between stabilized and fossilized errors. Stabilized errors are the ones that eventually disappear as

the learner makes progress, whereas fossilized errors refer to the ones which do not disappear entirely regardless of the input and exposure given to the learner.

It is clear in the above elaboration that *fossilization* is different from *stabilization*. They are not synonymous. Selinker and Han (2001: 282-283) provide a detailed discussion on this issue. In essence, their contention is that stabilization and fossilization can form a continuum. These two, however, should not simply be equated. Fossilization, according to Han (2004: 15) has several properties, namely: (1) fossilizable structures are persistent, (2) they are persistent to external influences, and (3) fossilization affects both child and adults L2 learners alike. With regards to stabilization, there are at least three possible cases, namely: (1) a temporary stage of 'getting stuck', (2) interlanguage restructuring and (3) long-term cessation of interlanguage development.

Case one is a natural phase in all learning whereas case two is superficial, that is, the restructuring interlanguage knowledge produces a surface appearance of the stabilization of certain interlanguage features. In the third case, stabilization becomes a prelude to fossilization. When stabilization constitutes a prelude to fossilization, it is likely to exhibit behaviors such as *non-variant appearance* (i.e. stabilized interlanguage forms which manifest themselves invariantly over time), and *backsliding* (i.e. variational reappearance over time of interlanguage features that appear to have been eradicated).

8. Conclusion

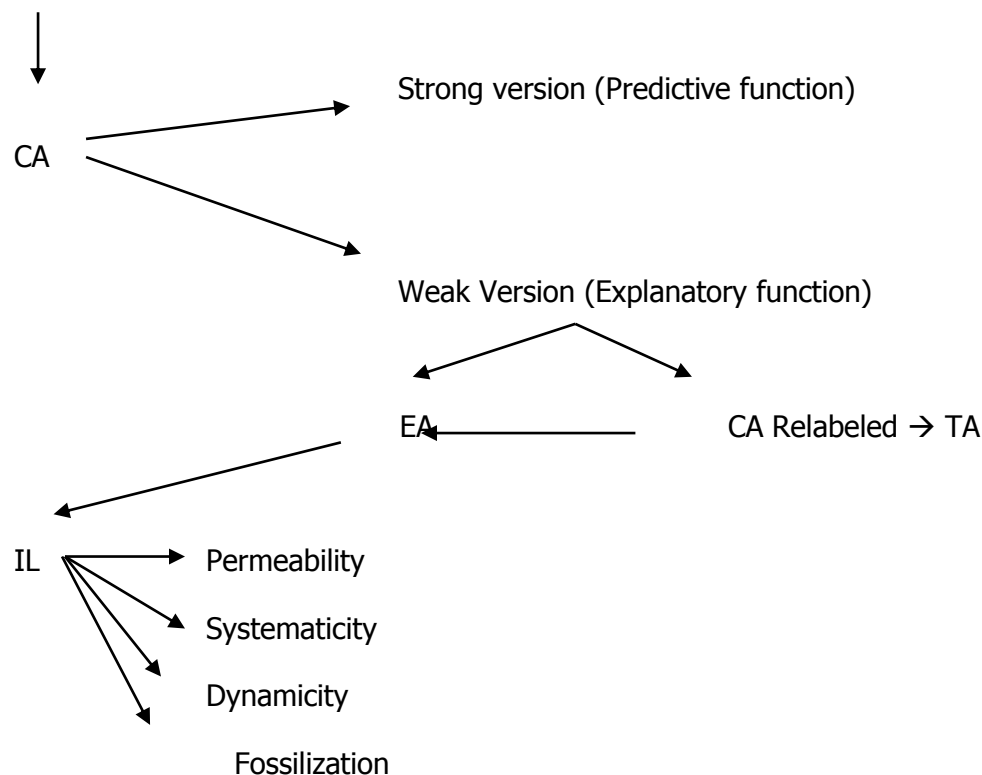
In the course of this paper I have attempted to show that CA, TA, EA, and IL may be looked upon as four evolutionary phases in the attempt to understand and explain the nature of the TL learners' performance. Evolution here may involve the view in or the attitude learners' errors and the explanatory hypotheses regarding the sources of errors. The basic rationale for conducting CA is the phenomenon of language interference or language transfer. CA studies enable to compare two languages in order to predict the difficulties the students may encounter. The difficulties are chiefly due to the differences between the two languages. CA has gained the strong attack on both its predictive function and theoretical basis. This has led to the resurgence of interest in EA. As a pedagogical tool, EA does not suffer from the interest limitations of CA-restriction to errors caused by interlingual transfer. It also provides data on actual problems and not hypothetical problems. Therefore it forms a more efficient and economical basis for designing pedagogical strategies. In addition, Error Analysis also provides teachers with tools for better understanding of the learners' problems in learning the second language.

Interlanguage, a study of the language of the second language learners gains a wider acceptance in the literature of EA. Interlanguage is thought to be distinct from both the learners' first and the target language. It evolves overtime as they employ various learning strategies to the target language. Such strategies are central to Selinker's point of view. Interlanguage is resulted from the learners' attempts to produce the target language systems. He proposes five processes of second

language learning: language transfer, transfer of training, strategies of second language learning, strategies of second language communication, and overgeneralization.

Diagram: CA, TA, EA, and IL as Interrelated Analytical Tools

Behaviorism (Skinner 1957)



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