

# Error Analysis and Second Language Acquisition

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**Abstract**—Error Analysis is one of the major topics in the field of second language acquisition research. Errors are an integral part of language learning. The learner of English as a second language is unaware of the existence of the particular system or rule in English language. The learner's errors have long been interested for second and foreign language researchers. The basic task of error analysis is to describe how learning occurs by examining the learner's output and this includes his/her correct and incorrect utterances. There are two major approaches to the study of learner's errors, namely contrastive analysis and error analysis. Error analysis cannot be studied properly without touching upon the notion of contrastive analysis. Contrastive analysis and error analysis have been commonly recognized as branches of Applied Linguistic Science. This paper examines in detail the three most influential error theories: Contrastive analysis, Error analysis and Interlanguage theory. Corder (1978) maintains that interlanguage can be seen as a restructuring or a recreating continuum and, therefore; evaluates their role in second language acquisition.

**Index Terms**—error, contrastive analysis, error analysis, and interlanguage

## I. INTRODUCTION

The term applied linguistics seems to have originated in the United States in the 1940's. The creation of applied linguistics as a discipline represents an effort to find practical applications for modern scientific linguistics (Mackey, 1965). Applied Linguistics is often said to be concerned with solving or at least ameliorating social problems involving language. "Applied Linguistics is using what we know about (a) language, (b) how it is learned, and (c) how it is used, in order to achieve some purpose or solve some problems in the real world" (Schmitt and Celce-Murcia 2002, p.1). Contrastive Analysis and Error Analysis have been commonly recognized as branches of Applied Linguistics Science.

In the late 1960s and early 1970s, several researches pointed out that the language of second language learners is systematic and that learner errors are not random mistakes but evidence of rule-governed behavior (Adjemian 1976; Corder 1976; Nemser 1971; Selinker 1972). Applied Linguistics has viewed errors not merely by native speakers, but also by non-native speakers. According to Smith and Bisazza (1982) "A speaker's comprehensibility in a language is usually based solely up on the judgment of the native speakers of that language. We are convinced that this criterion is no longer appropriate for speakers of English as an international language. A more useful evaluation of one's English language comprehensibility should be based on the judgment of both native and non-native speakers. English native speakers should be judged for comprehensibility by non-native speakers too" (p.259).

"In the 1950s and 1960s the favored paradigm for studying FL/SL learning and organizing its teaching was Contrastive Analysis" (James, 2001, p.4). "Contrastive Linguistics has been defined as "a subdiscipline of Linguistics concerned with the comparison of two or more languages or subsystems of language in order to determine both differences and similarities between them"(Fisiak,1981,p.1). Carl (1971) maintained that Contrastive Analysis is a necessary component of a second language learning model which reliably forecasts that the speaker of an arbitrary first language is liable to produce grammatically deviant second language sentences, the structural descriptions of which will resemble those of analogous first language sentences.

Error Analysis, a branch of Applied Linguistics emerged in the sixties to reveal that learner errors were not only because of the learner's native language but also they reflected some universal strategies. This is a reaction to Contrastive Analysis Theory which considered native language interference as the major source of errors in second language learning what behavioristic theory suggested. "Applied error analysis, on the other hand, concerns organizing remedial courses and devising appropriate materials and teaching strategies based on the findings of theoretical error analysis" ( Erdogan 2005). Richards (1971, p.1.) explained "the field of error analysis may be defined as dealing with the differences between the way people learning a language speak and the way adult native speakers of the language use the language". Norrish (1983) argued that let us call a systematic deviation, when a learner has not learnt something and consistently gets it wrong, an error...A common example is using the infinitive with to after the verb must ( e.g. I must to go the shops). Let us suppose that the learner knows the verbs want (+ to), need (+ to) and perhaps ought (+ to); by analogy he then produces must (+ to) until he has been told otherwise, or until he notices that native speakers do not produce this form, he will say or write this quite consistently (Norrish, ibid, p.7).

From this developed the conception of "Interlanguage", the proposal that second language learners have internalized a mental grammar, a natural languages system that can be described in terms of linguistic rules and principles (Doughty and Long 2003). When a learner of a language produces the processes are used in learning of the language differs from both his/her mother tongue and the target language is called an interlanguage.

## II. CONTRASTIVE ANALYSIS APPROACH

The American linguist C. C. Fries initiated the study of contrastive linguistics in 1945. This assumption was taken up by Robert Lado more than ten years later in his book, *"Linguistic Across Cultures"* (1957) in which the theoretical foundation of C.A was laid down. The supporters of C.A claimed that the similarities and differences between various languages was enough to deal with the problem of teaching these languages (Ghadessy 1980). Lado(1957) claimed that for the students whose target language is second or foreign language, those elements of the target language that are similar to his/her native language will be simple for him/her and those elements that are different will be difficult. Therefore, Contrastive Analysis gained much important to investigate learner errors in the field of second language acquisition, in which two languages were systematically compared during the 40's and 50's.

The various studies based on C.A have attempted to compare the systems of the native and target language either within the framework of the structure models of language description or within the framework of transformational generative model. The contribution of contrastive analysis relevant to second language pedagogy is: "The description of practical grammar which is made up of sum of differences between the grammar of the source language and that of the target language" (Nickel, 1971, p.9).

Its objectives are summarized in Theovan Els, et al (1984:38) as follows:

- a) Providing insight into similarities and differences between languages;
- b) Explaining and predicting problems in L2 learning;
- c) Developing course materials for language teaching.

Bose (2005) mentioned that one of the reasons for learner errors is the interference of his mother tongue, which is described as the negative and positive transfer between the mother tongue and the target language. The negative transfer happens when the forms of the target language and those of the learner's mother tongue are different from each other whereas, the positive transfer between the mother tongue and the target language is similar. He added that a teacher can plan remedial teaching after he corrects the written compositions of his learners and collects their common errors in a note book. Ferguson (1965) pointed out that one of the major problems in the learning of a second language is the interference caused by the structural differences between the native language of the learner and the second language. A natural consequence of this conviction is the belief that a careful contrastive analysis of the two languages offers an excellent basis for the preparation of instructional materials, the planning of courses and the development of actual classroom techniques (Ferguson *ibid*, p. 4). Mackey (1965) claimed that it has been stated as a principle of applied linguistics that all the mistakes of the language learner are due to the makeup of his native language. This is demonstrably false. Many mistakes actually made have no parallel in the native language. He added that different learners with the same native language do make different mistakes. Mackey again argued "the first language itself is not the only influence on second language learning" (Mackey, *ibid*, p. 4).

Fries (1945, p. 9) argued that "the most effective materials (for foreign language teaching) are those based on a scientific expression of the language to be learned, carefully compared with a parallel description of the native language of the learner.

### A. *Different Versions of Contrastive Analysis Hypothesis*

Wardhaugh (1970) pointed out that the CA hypothesis can exist in two versions: a strong version claims that the difficulties of the learner can be predicated by a systematic contrastive analysis and teaching material can then be devised to meet those difficulties and a weak version claims that no more than an explanatory role for contrastive linguistics: Where difficulties are evident from the errors made by the learners. Comparison between the mother tongue and the target language of the learners may help to explain them. The third version of the Contrastive Analysis was proposed by Oller and Ziahosseiny on the basis of their analysis of the spelling errors committed by some foreign learners of English with different native language backgrounds. They (1970, P. 184) stated that "the categorization of abstract and concrete patterns according to their perceived similarities and differences is the basis for learning; therefore, wherever patterns are minimally distinct in form or meaning in one or more systems, confusion may result". In addition, spelling errors of foreign students whose native language employed a Roman alphabet were compared with spelling errors of foreign students whose native language had a little or no relation to such an alphabet. Oller and Ziahosseiny concluded that as far as English spelling is concerned, knowledge of one Roman writing system makes it more difficult, no less, to acquire another Roman spelling system.

### B. *Criticisms of Contrastive Analysis*

Contrastive Analysis was criticized by the proponents of error analysis; they have argued that Contrastive Analysis focus on differences between L1 and L2 and ignore factors which may affect the second language learner's performance such as his learning and communication strategies, training- procedures, overgeneralization, etc. It shows certain difficulties which do not actually apparent in the learner's performance and conversely and does not predicts many problems which are apparent in learner's actual performance. Fisiak (1981, 7) mentioned that "the value and importance of Contrastive Analysis lies in its ability to indicate potential areas of interference and errors. Not all errors are the result of interference. Psychological and pedagogical, as well as other extra linguistic factors contribute to the formation of errors". A number of researches of learner's errors have been carried out by several researchers in the filed of error

analysis indicated that the influence of the L1 was much less than that said by Contrastive Analysis. Thus, all the mistakes of the language learner are not due to the makeup of his mother tongue. Researches show that factors such as analogical replacement, sheer muddle are cause of errors. Replacement based on analogy often causes the learner to make mistakes when he sets out to apply the rules of second language which he has learnt indiscriminately. Sometimes ignorance of the correct pattern, bad teaching or inadequate practice or a combination of the two yield samples of errors. It is not surprising to see the decline of Contrastive Analysis in the 1970 and replaced by other explanations of learning difficulties such as error analysis and interlanguage.

### III. ERROR ANALYSIS

In recent years, studies of second language acquisition have tended to focus on learners errors since they allow for prediction of the difficulties involved in acquiring a second language. In this way, teachers can be made aware of the difficult areas to be encountered by their students and devote special care and emphasis to them. Error Analysis is a type of linguistic analysis that focuses on the errors learners make. It consists of a comparison between the errors made in the target language and that target language itself. Error analysis emphasizes the significance of learners' errors in second language. It is important to note here that Interferences from the learner's mother tongue is not only reason for committing errors in his target language. As Richards (1971) classified errors observed in the acquisition of English as a second language as follows:

- a) **Overgeneralization**, covering instances where the learners create a deviant structure on the basis of his experience of other structure of the target language;
- b) **Ignorance of rule restriction**, occurring as a result of failure to observe the restrictions or existing structures;
- c) **Incomplete application of rules**, arising when the learners fail to fully develop a certain structure required to produce acceptable sentences;
- d) **False concepts hypothesized**, deriving from faulty comprehension of distinctions in the target language.

Some errors can be attributed to weaknesses or failure of memory (Gorbet, 1979). He added that the theory of error analysis proposes that in order to learn a language, a person creates a system of 'rules' from the language data to which he is exposed; and this system enable him to use it.

According to Sharma (1980) "Error analysis can thus provide a strong support to remedial teaching", he added that during the teaching program, it can reveal both the successes and the failures of the program.

Dulay et al (1982) mentioned that the term 'error' to refer to a systematic deviation from a selected norm or set of norms. Error analysis is useful in second language learning because this will reveal to us- teachers, syllabus designers and textbook writers and the problem areas. It can used to design remedial exercises and focus more attention on the trouble spots. Corder (1974, p.125) stated that "The study of errors is part of the investigation of the process of language learning. In this respect it resembles methodologically the study of the acquisition of the mother tongue. It provides us with a picture of the linguistic development of a learner and may give us indications as to the learning process." Richards et al (1992) mentioned the study of errors are used in order to (1) identify strategies which learners use in language teaching, (2) identify the causes of learners 'errors, and finally (3) obtain information on common difficulties in language learning as an aid to teaching or in development of teaching materials ( cited in Khansir 2008).

Analysis of second language learner's errors can help identify learner's linguistic difficulties and needs at a particular stage of language learning. In general, Error analysis has several implications for the handling of learner's errors in the classroom as follows:

1. Devising remedial measures
2. Preparing a sequence of target language items in class rooms and text books with the difficult items coming after the easier, ones
3. Making suggestions about the nature or strategies of second language learning employed by both first and second language learners.

#### A. *Difference between Error Analysis and Contrastive Analysis*

Error analysis differs from contrastive analysis as follows:

1. Contrastive analysis starts with a comparison of systems of two languages and predicts only the areas of difficulty or error for the second language learner, whereas error analysis starts with errors in second language learning and studies them in the broader framework of their sources and significance.
2. EA unlike CA provides data on actual attested problems and so it forms a more efficient basis for designing pedagogical strategies.
3. EA is not confronting with the complex theoretical problems like the problem of equivalence encountered by CA.
4. EA provides a feedback value to the linguist, especially the psycho-linguist interested in the process of second language learning in ascertaining.
  - a. Whether the process of acquisition of first language and second language learning are similar or not?
  - b. Whether children and adults learn a second language in a similar manner or not?
5. EA provides evidence for a much more complex view of the learning process- one in which the learner is seen as an active participant in the formation of and revision of hypotheses regarding the rules of the target language.

6. CA studies Interlingual error (interference) whereas EA studies intralingual errors besides Interlingual.

#### B. *Some Criticism of Error Analysis*

Some Criticism of Error Analysis is considered as follows:

Error Analysis Hypothesis might have many merits, but it has not escaped criticism at the hands of certain linguists. The main allegation laid against it is that it makes no allowance for “avoidance phenomena” (Schachter 1974). It is meant that the learner strategy of avoiding what is difficult. The informants may not use certain structures, because he knows he gets them wrong. Instead, he might use structures he is certain he will get right. CA predicts difficulties and therefore does not face this avoidance problem. Another reason for weakness of EAH is due to what Ellis (2008) mentioned: “weaknesses in methodological procedures, theoretical problems, and limitations in scope”. Schachter and Murcia (1977) argued that the Analysis of errors in isolation focuses the attention of the investigator on errors and thus excludes the other corpus from consideration, the classification of errors that are identified is not usually proper, statements of error-frequently are quite misleading, the identification of points of difficulty in target language is usually not very correct, the ascription of causes to systematic errors may not be right, and the biased nature of sampling procedures supplies another point of criticism of EA. It meant that so far the collection of data from a number of informants is considered, the very nature of data collection and selection of informants is biased. Therefore trying to drawn statistically significant findings from such samples may be a questionable practice.

### IV. INTERLANGUAGE THEORY

The concept of interlanguage was suggested by Selinker (1972) in order to draw attention to the possibility that the learner’s language can be regarded as a distinct language variety or system with its own particular characteristics and rules (jie,2008).Based on the theory that while learning a second language , learners build up a system for themselves which is different in some ways from their first language and second language systems. The system which the learners build up for themselves has been called interlanguage. According to Adjemian (1976) interlanguages consist of a set of linguistic rules which can generate novel utterances. He claimed about the structure of interlanguages can be derived from grammatical theory; and like natural language, interlanguages can be idealized to make them amenable to linguistic analysis.He added that the universal generalizations that hold for the primary languages also hold for interlanguages. Eckman (1991) claimed that interlanguages are languages and, further, that proposed linguistic universals are fully universal, in the sense that they apply to non- primary as well as primary languages. Ellis (1990) maintains that interlanguage theory can provide an explanation for how both children and adults acquire a second language. According to Tarone,et al (1976) interlanguage productions have the following characteristics:

a) Second Language speakers rarely conform to what one expects native speakers of the target language to produce ,  
 b) Interlanguage Productions are not an exact translation of native language utterances (i.e., first language interference does not play the primary role in the information of interlanguages), c) Utterances in the second language are not randomly produced, and d) Interlanguages are spoken either by adults or by children when second language acquisition is not simultaneous with that of the first language.

Selinker (1972) used the term fossilization to refer to the tendency of many learners to stop developing their interlanguage grammar in the direction of the target language. He argued that interlanguage is a separate linguistic system resulting from the learner’s attempted production of the target language norm; he identified five fossilization processes as follows:

1. Language Transfer: sometimes rules and subsystems of the interlanguage may result from transfer from the first language.
2. Transfer of Training: some elements of the interlanguage may result from specific features of the training process used to teach the second language.
3. Strategies of Second Language Learning: some elements of the interlanguage may result from a specific approach to the material to be learned.
4. Strategies of Second Language Communication: some elements of the interlanguage may result from specific ways people learn to communicate with native speakers of the target language.
5. Overgeneralization of the Target Language Linguistic Materials: some elements of the interlanguage may be the product of overgeneralization of the rules and semantic features of the target language.

Jie ( 2008) mentioned several important criticisms about interlanguage studies as follows:

1. “The concentration on morpho-syntactic development and the failure to deal with semantic development. Interlanguage study is mostly limited to the scope of morpheme and syntax.
2. The failure to define the concept clearly. Spolsky raised a problem with the notion of interlanlanguage which was the tendency to confuse a process with a competence model (Spolsky, 1989,p.33). Selinker seems to prefer a processing model in spite of his use of competence terminology.
3. The failure to develop effective approaches to facilitate empirical studies. The research methods of interlanguage study such as longitudinal and cross-sectional studies are technically inadequate in themselves”.

### V. CONCLUSION

In summary, from what has been discussed above can be a positive learning experience in order to help the learners improve their language and use English flawlessly. All of the three theories can be considered as important factors in second language acquisition. In conclusion, it is important to bear in mind that assesses the contribution of the concept each of these three theories to our understanding of the process of second language acquisition. It is clear that the theories relevant to the issue of linguistic competence of English learner. In addition, the theories concentrate largely on the nature of the Learner's performance.

Behaviorists believed that errors as a symptom of ineffective teaching or as evidence of failure. They also view it as being due largely to mother tongue interference that the teacher has failed to predict and allow for when errors do occur. They are to be remedied by a bombardment of correct forms. This bombardment is achieved by the use of intensive drilling or over teaching. However, for behaviorists, errors are wrong habits that can and should be eradicated while for some others are manifestation of "transitional competence". Corder (1973) called it as an "idiosyncratic dialect".

Learner's errors are seen as an integral part of language learning which is used in teaching grammar, linguistics, psychology etc. Therefore, an integration of three schools is needed to deal with the complexities of second language acquisition and provide empirical evidence for the improvement of teaching methodology, syllabus designs and teaching techniques in English language teaching classroom.

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