A Review of Contrastive Analysis Hypothesis with a Phonological and Syntactical view: A Cross-linguistic Study

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Abstract

Although contrastive analysis has often been questioned for its inadequacy to predict the transfer errors that learners will make in actual learning contexts it cannot be easily denied that "such interference does exist and can explain difficulties" (Brown, 1994, p. 200), especially in the phonological aspects of second/foreign language learning. In this line, the present research is trying to shed light on the concept of contrastive analysis hypothesis by focusing on the background and origins of the concept, then the procedures and its different versions. In addition, the current study will discuss the differences and similarities in the phonology and syntax of two languages, namely Persian and English in order to be able to find the areas of possible difficulty for L2 learners of English.

Keywords: contrastive analysis hypothesis, phonology, syntax, Persian, English

INTRODUCTION

Two of the general hypothesizes concerning second language acquisition are identity hypothesis and contrastive hypothesis (Klein, 1986, p.23).The identity hypothesis asserts that the acquisition of one language has little or no influence on the acquisition of another language. Many scholars accept an "essential identity" of first and second language acquisition (e.g., Jakobovits, 1969; Ervin-Tripp, 1974). On the other hand, the contrastive hypothesis states that the structure of the first language affects the acquisition of the second language (Lado, 1957; Fries, 1945). The term "contrastive hypothesis" refers to the theory itself while "contrastive analysis" focuses on the method of implementation of the hypothesis. On the other hand, "contrastive analysis hypothesis" emphasizes both the theory and method simultaneously.

Background of Contrastive Analysis Hypothesis

Contrastive analysis hypothesis (hereafter simply CAH) was made when the structural linguistics and behavioral psychology were dominant in the sixties. Therefore, the linguistic model of CAH is structuralism which was expounded by Bloomfield (1933), elaborated by Fries (1945) and Lado (1957). Structuralism assumes that is a finite

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structure of a given language that can be documented and compared with another language. Esser (1980, p.181) suggests that contrastive analysis belongs to applied linguistics in that the analysis may yield practical instructional materials.

Behavioral psychology associated with Skinner was the basis of CAH. Any kind of learning is viewed as habit formation. At the cross road one associates the red stop sign with the need to slow and stop the car. Learning takes place by reinforcement. These are concerned with skinner's Stimulus-Response Theory. Associationism and S-R theory are the two psychological bases of CAH (James, 1985). CAH is also founded on the assumption that L2 learners will tend to transfer the formal features of their L1 to their L2 utterances. As Lado (1957, p.2) claims, "individuals tend to transfer the forms and meaning and the distribution of forms and meanings of their native language and culture to the foreign language and culture". This notion of "transfer" means "carrying over the habits of his mother-tongue into the second language" (Corder, 1974, p.158). Ellis (1965) also suggests that the psychological foundation of CAH is transfer theory, substituting the first language for the prior learning and the second language for the subsequent learning.

Foreign language teachers have always thought of the sources of learners' errors in their written productions. In order to prove such a thing they tried to write down the sources of these errors by contrasting their native language and the target language through their observations of the students' performance (Kelly, 1969). Jespersen (1912), Palmer (1917) and especially Fries (1945) assume that native language influences the second language acquisition.

The notion of "transfer" has created some difficulties itself since it is a controversial notion. It was defined differently by different people. Lado (1957) and Fries (1945) defined transfer as the imposition of native language information on a second language utterance or sentence, but for Odlin (1989) it refers to cross-linguistic influence. Schachter (1983, 1992) has considered the fact that learners may have imperfect knowledge of the second language and she even proposed that transfer is not a process at all, but rather a constraint on the acquisition process. Odlin (1989, p.27) has brought some observations about what transfer is not and concluded that "Transfer is the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired". And then he stresses that it is only a working definition. Even recently, Pavlenko and Scott (2002) as cited in Ahmadvand (2008) argued that transfer is not unidirectional but bidirectional and simultaneous that is shown by paradigmatic and syntagmatic categories. All this indicates the degree of the complexity of the notion of transfer without any consensus.

Procedures of CAH

Whiteman (1970, p. 191) breaks the contrastive analysis down to a set of component procedures. The four steps are (1) taking the two languages, L1 and L2, and writing formal descriptions of them, (2) picking forms from descriptions for the contrast, (3) making a contrast of forms chosen, and (4) making a prediction of difficulty through the contrast. To describe the prediction stage stockwell et.al (1965) propose a "hierarchy of

difficulty" based on the notion of transfer (negative, positive, and zero). When the structure of the given two languages are similar, positive transfer will occur while with those that are different, a negative transfer will take place. When there is no relation between those structures of the two languages, zero transfer will occur. Stockwell et al. used the following criteria to establish the 'preferred pedagogical sequence": (1) Hierarchy of difficulty, (2) Functional load, (3) Potential mishearing, (4) Pattern congruity.

Three Different Versions of CAH

In view of predictability, CAH is classified into strong, moderate and weak versions. Wardhaugh (1970) classified the strong version of CAH as the version that claims ability to predict difficulty through contrastive analysis. The assumption is that the two languages can be compared a priori. Wardhaugh (1970, p. 126) notes that contrastive analysis has the intuitive appeal and that teachers and linguists have successfully used "the best linguistic knowledge available ... in order to account for the observed difficulties in second language learning." He called such observational use of contrastive analysis the weak version of CAH. Here, the emphasis shifts from the predictive power to the relative difficulty to the explanatory power of observable errors. This version has been developed into Error Analysis (EA). CAH is a theory or hypothesis while EA is an assessment tool. Weak version focuses not on the a priori prediction of linguistic difficulties, but on the a posteriori explanation of the sources of errors in language learning.

Oller and Ziahosseiny (1970) proposed a moderate version of CAH based on their study of spelling errors on the dictation section of the UCLA placement test in English as a second language. They found that the strong version is too strong while the weak version is too weak. Here they focused on the nature of human learning and proposed the moderate version which is summarized as "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" (p.186).

From the strong version too the moderate version, the popularity of contrastive analysis has been reduced drastically by criticism and new evidence against CAH. However, some scholars continue to make an effort to consider and assess the merits and demerits of CAH. In the present study, we are going to shed a light on the contrastive analysis hypothesis from a phonological and syntactical view, making more outstanding the differences between Persian and English in this respect.

LITERATURE REVIEW

In spite of the fact that CA was found to be successful in foreign language teaching, but because of its limitations it was not practiced much; however it is still alive and a lot of advocators have adhered to it and pursued its goal. Despite the fact that some research has been carried out in the realm of contrastive analysis on Persian learners of English, there are still some gaps which need further investigations. Numerous studies of different

language pairs have already been carried out, in particular focusing on learners of English.

Duskova (1969) investigated Czech learners of English in terms of various lexical and syntactical errors; the production of English relative clauses by Persian, Arabic, Chinese and Japanese students has been analyzed by Schachter (1982). She found that Chinese and Japanese produced fewer relative clauses than did the Iranian and Arab students. The reason was because of the differences between Chinese and Japanese on the one hand and English on the other. Schachter (1982) also did a study and considered the presence of pronouns in the English inter-language of Persian speakers as transfer, and Mohamed et al. (2004) targeted grammatical errors of Chinese learners in English.

Among these studies, commonly observed syntactic error types made by non-native English learners include subject-verb disagreement, noun-number disagreement, and misuse of determiners. There are many other studies examining interlanguage errors, generally restricted in their scope of investigation to a specific grammatical aspect of English in which the native language of the learners might have an influence. To give some examples, Vassileva (1998) investigated the employment of first person singular and plural by another different set of native speakers – German, French, Russian, and Bulgarian; Slabakova (2000) explored the acquisition of telicity marking in English by Spanish and Bulgarian learners; Yang and Huang (2004) studied the impact of the absence of grammatical tense in Chinese on the acquisition of English tense aspect system (i.e. telicity marking).

PROBLEM STATEMENT

According to the contrastive analysis hypothesis formulated by Lado (1957), difficulties in acquiring a new (second) language are derived from the differences between the new language and the native (first) language of a language user. Amongst the frequently observed syntactic error types in non-native English which it has been argued are attributable to language transfer are subject-verb disagreement, noun-number disagreement, and misuse of determiners. Also, Avery and Ehrlich, (1992, cited in Ohata, 2004) believe that the foreign accent of non-natives can be due to the influence of their native languages. It is also stated that the pronunciation errors made by second/foreign language learners are not random errors to produce unfamiliar sounds, but rather reflections of the sound inventory, rules of combining sounds, and the stress and intonation patterns of their first languages (Swan and Smith, 1987, cited in Ohata, 2004).

Although contrastive analysis has often been questioned for its inadequacy to predict the transfer errors that learners will make in actual learning contexts (Whitman and Jackson, 1972), it cannot be easily denied that "such interference does exist and can explain difficulties" (Brown, 1994, p. 200), especially in the phonological aspects of second/foreign language learning. In this sense, the significance of contrastive analysis is not necessarily in the predictability of transfer errors, but in the explanation of learner errors that teachers may face in their daily practices (Celce-Murcia and Hawkins, 1985, cited in Ohata, 2004).

DISCUSSION

Syntactic Features

For the present study, only the three major syntactic error types named above are explored and are used as the syntactic features for classification learning.

Subject-verb disagreement: refers to a situation in which the subject of a sentence disagrees with the verb of the sentence in terms of number or person. An example can demonstrate such an error: *If the situation become worse . . . /If the situation becomes worse . . . .

Noun-number disagreement: refers to a situation in which a noun is in disagreement with its determiner in terms of number. This example demonstrates such an error: *they provide many negative image . . . /they provide many negative images. ....

Misuse of determiners: refers to situations in which the determiners (such as articles, demonstratives, as well as possessive pronouns) are improperly used with the nouns they modify. These situations include missing a determiner when required as well as having an extra determiner when not needed. This example demonstrates such an error: *Cyber cafes should not be located outside airport. /Cyber cafes should not be located outside an airport.

All three syntactic errors exist in non-native English spoken by Persian learners. The plausibly ore annoying errors are phonological errors as most English Native speakers believe that as soon as ESL/EFL learners such as speak, their foreign accents are recognized. Likewise, the sound patterns or structures of their native languages can affect the speech or production of their second/foreign languages. This is the problematic area we are turning to then.

Phonological features

Vowels

Comparing the Persian vowel system with that of English reveals a significant difference in the number of vowels. There are six vowel sounds in the Persian language. Three of them are long and the other three are short. The three long vowels are [i:], [u], and [a]; the three short vowels are [æ], [e], and [o]. The English language has eight diphthongs each of which is a combination of two mono-phthongs one gliding into the other and naturally longer than a pure vowel, whereas, there are only two diphthongs in Persian. All of the Persian vowel sounds are the same or very similar to English vowels; however, English has several vowels that do not exist in Persian which is the cause of difficulty.

The Persian learners of English are often tempted to use the more general items for the more specific ones, thus producing deviant expressions. Furthermore, to use the well-known three-circle metaphor (Kachru, 1992), Iranian people do not belong to the inner circle; most of them are in the expanding circle and some in the outer circle who do not get opportunities to hear and speak English. Consequently, unlike people who fall within

the inner circle, expanding circle members are primarily visual learners, not auditory learners. Learners remain as shy at the exit level as they were at the entry level. Another reason why Iranian students, for example, do not try to speak English is their constant fear of instant teacher correction. As teachers we need to understand and remember the importance of indirect and positive feedback. Clearly, such feedback has encouraging effect on the learners and instills confidence in them. In short, the first priority in such a situation is to make the learners feel comfortable with the language and eradicate the fear of making mistakes. Once the learners are at ease with the teacher and the language, half the battle is won.

Consonants

There are 23 consonant sounds in Persian, most of which are also found in English. The velar fricatives [x] and [q] are the only Persian consonants that do not occur in English. Conversely, there are four English consonants that do not exist in Persian. In the case of initial consonant clusters they insert a vowel in the beginning (epenthesis) and pronounce [st] as in street as [estri:t].

Stress Pattern

Stress means prominence in pronunciation normally produced by four factors: 'loudness' of voice, 'length' of syllables, 'pitch' related to the frequency of vibration of the vocal folds as well as to low/high tone and 'quality' of vowels functioning individually or in combination (Roach 2000). English words in isolation or in connected speech naturally receive stress that eventually results in intonation carrying information over and above that which is expressed by the words in the utterance. Hence, English is a stress-timed language possessing a speech rhythm in which the stressed syllables recur at equal intervals of time (Richards et al. 1985).

Word stress in Persian is progressive and consequently the stress falls on the final syllable of a word. The only exception is for words that their final syllable is a clitic which means an unstressed word that normally occurs only in combination with another word. Phrase stress, however, is regressive; therefore, the stress is on the initial syllable in verbs. For example, the stress of the compound noun baz-kon, which means 'opener', is on the last syllable, while the stress in the verb phrase baz kon, which means 'open', is on the first syllable. The Persian speaking learner confronts considerable problems in assigning stress within English words or sentences because; the degree of predictability of word stress is very low in English especially if we compare it with Persian. A very good example in point is the stressed word in wh- questions in Persian: ch'era mi-xandi? (Why do you laugh?) Which is chera.

However, in English the stressed word in the sentence how are you? is the to be verb. This is the reason most of the Persian learners of English cannot locate the correct stressed word. Furthermore, English stress placement varies according to grammatical categories, for example, 'conduct', 'perfect', 'present', 'produce', and so forth as verbs receiving stress on the second syllables and as nouns on the first, and on the other, he/she is used to

assigning stress almost invariably on the first syllable of every word in his/her first language.

Unlike the Persian language, the English language has strong and weak forms, such as articles (a, an, the), pronouns (he, she, we, you, him, her, them, us), auxiliaries (do, does, am, is, are, have, has, had, can, shall, will), prepositions (to, of, from, for, at), and conjunctions (and, but), which are usually unstressed in connected speech. For example, the /ðe/ is pronounced /ðT/ before consonants and /ð / before vowels in connected speech if it is not stressed for some specific reasons. As the Persian speaking learner is not accustomed to using such forms in his/her mother tongue, he/she certainly finds them problematic in both production and reception.

Intonation Contours

Intonation, the rises and falls in tone that make the 'tune' of an utterance, is an important aspect of the pronunciation of English, often making a difference to meaning or implication. Stress, for example, is most commonly indicated not by increased volume but by a slight rise in intonation.

Stress and intonation are two essential aspects of the pronunciation of English words and utterances since they perform phonological functions. Intonation, part of the supra-segmental phonology of English, is basically constituted of the rising tone: a movement from a lower pitch to a higher one, e.g. yes /ˈjes/ uttered in a questioning manner, and the falling tone: one which descends from a higher to a lower pitch, e.g. yes /ˋjes/ said in a definite, final manner, and plays varied unavoidable functions in the English language, such as attitudinal function, i.e. conveying emotions and attitudes, accentual function, i.e. the placement of the tonic syllable indicating the focus of the information, grammatical function, i.e. the link between the tone unit and units of grammar, and discourse function, i.e. attention focusing and the regulation on conversational behavior, which have little relevance to the Persian language. It is clear that the Persian speaking learners of EFL face difficulty in mastering English intonation due to their mother tongue interference and inadequate training, and their speech then sounds unnatural and even unintelligible.

CONCLUSION

The above analysis, interpretation and exemplification between the two languages have clearly revealed that the Persian speaking EFL learners encounter diverse syntactic, phonetic and phonological problems resulting from two basic causes: (a) the differences between the mother tongue and the target language, and (b) mother tongue interference (MTI). If that is the case, then all the components of the teaching process have to take care of the factors that will help the learners overcome their syntactic phonetic and phonological problems and improve their written, oral and auditory ability.

REFERENCES

Ahmadvand, M. (2008). Analyzing Errors of Iranian EFL Learners in Their Written Productions. Retrieved 12 14, 2008, from http://knol.google.com/k/moslem-ahmadvand/analysing-errors-of-iranianefl/tbh5kkwy5hmk/2?locale=en.

Bloomfield. L. (1933). *Language.* New York: Holt, Rinehart, and Wilson.

Brown, H. D. (1994). *Principles of Language Learning and Teaching* (3rd ed.), Englewood Cliffs, NJ: Prentice Hall.

Corder, S. (1974). Idiosyncratic Dialects and Error Analysis, in Richards, J. (ed.), *Error analysis*: Perspectives on Second Language Acquisition, Essex: Longman, pp.158-171.

Duskova. L. (1969). On sources of error in foreign language learning. *International Review of Applied Linguistics (IRAL), 7*(1):11–36.

Ellis. H. C. (1965). *The transfer of learning*. New York: MacMillan.

Ervin-Tripp. S. (1974). Is second language learning like the first? *Tesol Quarterly, 8*, 111-123.

Esser. J. (1980). CA at the crossroad of linguistics and foreign language teaching. *IRAL, 13*(3), 34-56.

Fries. C. C. (1945). *Teaching and Learning English as a Foreign Language*. Ann Arbor: University of Michigan Press.

Jakobovits. L. A. (1969). SLA and transfer theory: A theoretical assessment. *Language learning. 14*, 1-12.

James, c. (1981). *Contrastive Analysis*. UK: Longman.

Jespersen, O. (1912). *How to Teach a Foreign Language*. London: George Allen.

Kelly, L. G. (1969). 2*5 Centuries of Language Teaching*. Rowley, Mass.: Newbury House.

Klein. W. (1986). *Second language acquisition*. Cambridge: Cambridge university press.

Lado, R. (1957). *Linguistics across Cultures*. University of Michigan Press, Ann Arbor.

Mohamed, M. R., Goh, L., & Wan-Rose, E. (2004). English errors and Chinese learners. *Sunway College Journal*, *1,* 83–97.

Odlin, T. (1989). *Language Transfer*. Cambridge: Cambridge University Press.

Ohata, K. (2004). Phonological Differences between Japanese and English, retrieved, 14 Dec 2008, from Resource Center for Vietnamese Students of English: http://khoaanh.hcmup.edu.vn/index.php?name=News&file=article&sid=608

Richards, J., Platt, J. & Weber, H. (1985). *Longman Dictionary of Applied Linguistics*, England: Longman Group Limited.

Roach, P. (2000). *English Phonetics and Phonology*. Cambridge: Cambridge University Press.

Schachter, J. (1983). "A new account of language transfer", in S. Gass and L. Selinker (eds.), *Language transfer in language learning*. Rowley, MA: Newbury House, pp. 98-111.

Schachter, J. (1992). "A new account of language transfer", in S. Gass and L. Selinker (eds.), *Language transfer in language learning*, Amsterdam: John Benjamins, pp. 32-46.

Slabakova. R. (2000). L1 transfer revisited:the L2 acquisition of telicity marking in English by Spanish and Bulgarian native speakers. *Linguistics*, *38*(4), 739–770.

Stockwell, R., Brown, J. D., & Martin, J. D. (1965). *The grammatical structure of English and Spanish.* Chicago: university of Chicago press.

Vassileva. E. (1998). Who am I/how are we in academic writing? A contrastive analysis of authorial presence in English, German, French, Russian and Bulgarian. *International Journal of Applied Linguistics*, *8*(2), 163–185.

Wardhaugh, R. (1970). The contrastive analysis hypothesis. *Tesol Quarterly, 4*, 66-87.

Whitman, R., & Jackson, K. (1972). The Unpredictability of Contrastive Analysis, *Language Learning, 22*, 29-41.

Yang, S. & Huang.Y. (2004). The impact of the absence of grammatical tense in L1 on the acquisition of the tense-aspect system in L2*. International Review of Applied Linguistics in Language Teaching (IRAL), 42*(1), 49–70.