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Analysis of the Errors in Armenian Speakers' English Writings: The Role of the Negative L1 Transfer

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Yerevan, Armenia
2010

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We hereby approve that this thesis

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Entitled

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To my parents
For their unsurpassed love and care

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List of Abbreviations

CA	Contrastive Analysis
CAH	Contrastive Analysis Hypothesis
EA	Error Analysis
IL	Interlanguage
L1	Native Language
L2	Second or Foreign Language
EFL	English as a Foreign Language
SLA	Second Language Acquisition
TL	Target Language

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Abstract

The purpose of this study was to investigate the most common grammatical errors in the writing performance of Armenian learners of English. Errors were studied in order to investigate the impact of the Armenian language on the written production in English, particularly the use of Armenian grammatical rules. The analysis showed that the four most common errors were in article use, word order, subject-verb agreement, and purpose infinitive. The contrastive analysis between Armenian and English on these patterns revealed that about 30 % of the total number of errors (n=427) was caused by a direct transfer from the Armenian language. It was also observed that with increasing proficiency, the likelihood of L1 negative transfer decreases. Finally, the results indicated that transfer is a reality and an important determinant in the writing performance of Armenian learners of English. Learners need to understand the differences in the two languages and use appropriate linguistic features to produce good and acceptable sentences in English. It should be mentioned that not all the errors were caused due to the influence of Armenian. Some of the errors reflected the complexities of the English language and common learning strategies employed by the learners.

Chapter 1
Introduction

1.1 Background of the Study

Language learning, like any other learning process, involves making errors. Studying the learner language in terms of the errors is something that teachers have always done for very practical reasons. Through the results of tests and examinations, the errors that learners make are a major element in the feedback system of the teaching-learning process. For this reason, it is important that the teacher should be able to not only detect and describe the errors from a linguistic view, but also understand the psychological reasons for their occurrences.

In language teaching and learning, Error Analysis (EA) is a technique for identifying, describing, and systematically explaining the errors made by a learner, using any of the principles and procedures provided by linguistics (Ellis, 2008). By doing the error analysis, a teacher can concentrate on the materials in which most learners made errors; a teacher can also evaluate him/herself whether he/she succeeds in teaching or not; and finally he/she can improve his/her techniques in teaching by preparing systematic materials. Moreover, the findings of EA may lead teachers to devise appropriate materials and effective teaching techniques in order to cope with the erroneous structures produced by their learners (Celce-Murcia, 2006).

The inevitable existence of errors has led researchers to study them and find out the natural steps for language learning. Thus, researchers and teachers of foreign language have come to realize that the errors a learner makes in the process of language learning is needed to be analyzed carefully, as they possibly hold in them some of the keys to the understanding of second language acquisition (SLA) (Larsen-Freeman & Long, 1991).

Research in the field of SLA cannot ignore the existence of native language (L1) influence. Whenever the learner is not sure about the correct target language (L2) form he/she usually generalizes and approximates L2 structures and consequently transfers some features from his/her previously acquired languages to L2 (Odlin, 2003). Hence, not all errors made by language learners are the result of overgeneralization of target language forms, or erroneous 'guessing' on the part of the learner. Some errors are due to (conscious or unconscious) transfer from another language. The role of cross-linguistic influence or linguistic transfer in second language acquisition has been a field of extensive research in the past few decades (Ellis, 2008; Gas & Selinker, 2001; Larsen-Freeman & Long, 1991; Odlin, 1989). In second language acquisition, the knowledge of L1 in L2 acquisition can indeed have a facilitation or inhibition effect on the learner's progress in mastering a new language (Gas & Selinker, 2001). Erroneous performance in L2 caused by the constraints existing in the native language can be an example of negative transfer. Accordingly, English teachers will be able to be more effective when considering the differences between the native and target language and consequently prevent the errors that may arise from those differences. Through an awareness of the effects of the native language influence, teachers will be able to become aware of the reality of transfer in second language acquisition.

In this respect, the aim of this study is to point out the significance of learners' errors for they provide evidence of how language is learned and what strategies or procedures the learners are employing in the language learning process. This study considers the importance that cross-linguistic influences have on second language acquisition, trying to analyze how negative transfer affects the process of writing on a second language. In this research, emphasis is on written production by Armenian learners of English as a foreign language (EFL).

1.2 Objectives of the Study

Based on the research purpose, the objectives of the current study are the following:

1. To describe the grammatical errors that are found to be significant in the writing samples of advanced and intermediate level students.
2. To reveal the common errors made by Armenian EFL learners and to describe the possible causes of the errors, since this may help the teachers as well as the students to improve in the teaching-learning process.

1.3 Significance of the Study

The results of this study could be utilized by course designers and curriculum developers to find out what items are important to be included in the syllabus. Analysis of errors can help identify learners' linguistic difficulties and needs at a particular stage of learning. Hence, it can serve as a basis for remedial courses. Moreover, test makers can make use of the results of errors analysis by concentrating on those grammatical elements, which are proved to be difficult for the students.

This study might help the teachers find out the answers why their students go on making the same errors even when such errors have been repeatedly pointed out to them.

1.4 Research Paper Outline

The outline of the contents of the current research study is as follows:

Chapter I presents the introduction of the study that consists of the background of the study, objectives, significance of the study, and research paper outline.

Chapter II provides a theoretical background for Contrastive Analysis, Error Analysis, and finally it reviews the literature on the notion of L1 Transfer.

Chapter III is research methodology, including description of the data and participants, as well as data collection and data analysis techniques.

Chapter IV illustrates and analyses the findings of the study. Errors made by Armenian EFL learners are identified, described, and categorized. Finally, through the contrastive analysis between Armenian and English the sources of these errors are determined.

Chapter V covers the conclusion of the study, the implications of the findings for teaching English to Armenian speaking students; and, finally, discusses the limitations of this study and proposes future areas of research.

Chapter 2
Review of the Related Literature

In this chapter, relevant literature on error analysis, contrastive analysis and the notion of L1 transfer will be reviewed. The historical perspectives of these three phenomena will be presented. Their advantages and disadvantaged will be pointed out. To this end, the discussion will lead to the formulation of research questions.

2.1 Historical Background of Contrastive Linguistics

Comparative studies in linguistics have a long history. The pioneers were the "Sanskrit grammarians" who opened the stage of comparative studies in linguistics in 1816 with the publication of Franz Bob's "*On the Systems of Conjugation in Sanskrit"*. The new science of comparative linguistics, which was then called *comparative philology,* aimed at comparing one language with another and classifying according to similarity or divergence. However, as Lord (1966) noted, in those investigations, linguists were not interested in the meaning of their comparison or "the significance of the relations they discovered" (p. 9) and consequently, their method was exclusively comparative but not historical. In addition, it was in the 1870s that comparative philology began to take a new shape, moreover "this renovated science had only a limited connection with the earlier phase" (Lord, 1966:7). It was Robert Lord who suggested adopting the term *Comparative Linguistics* for this new phase of comparative philology, because "it is from the 1870s that the science of general linguistics took shape" (p.10). Swiss comparative linguist Saussure (1959) described the characteristics of comparative linguistics in the following words:

> *The results of comparative studies are placed in their historical perspective and thus linking the facts in the natural order. Thanks to this, language is no longer looked upon as an organism that develops independently but as a product of the collective mind of linguistic groups* (cited in Lord, 1966, p. 6*).*

Thus, since the 1870s, the purpose of comparative studies has been to establish language-specific, typological, and/or universal patterns, categories and features (c.f. Lord, 1966; Fisiak, 1981; Krzeszowski, 1990).

Apart from these types of comparative studies that demonstrate family relations between cognate languages or illustrate the historical developments of one or more languages there is still a third one that also involves the method of comparing languages. In this case, two languages are compared to determine differences and similarities between them for theoretical and pedagogical purposes rather than for grouping them genetically or typologically (c.f. Gómez-González & Doval-Suárez, 2003; Krzeszowski, 1990; Jackson, 1981; Fisiak, 1981; di Pietro, 1971). Since the 1940s, this type of comparative studies has been termed as *Contrastive Analysis (CA) or Contrastive Studies.* The following prophetic statement made by Benjamin Lee Whorf in 1941 gave a new name to this kind of phenomenon; i.e. *Contrastive Linguistics (CL*) (Fisiak, 1981).

> *Much progress has been made in classifying the languages of the earth into genetic families, each having descent from a single precursor, and in tracing such developments through time. The result is called "comparative linguistics". Of even greater importance for the future technology of thought is what might be called "contrastive linguistics". This plots the outstanding differences among tongues-in grammar, logic, and general analysis of experiences* (Whorf, 1941 cited in Di Pietro, 1976, p. 10).

According to Fisiak (1981, p.1), CL is a sub-discipline of linguistics "concerned with the comparison of two or more languages or subsystems of languages in order to determine both the differences and similarities between them". Contrastive analysis is thus a method of contrastive linguistics that is a branch of theoretical linguistics.

Fisiak (1981) distinguished between *theoretical* and *applied* contrastive studies. According to him,

> *Theoretical contrastive studies give an exhaustive account of the differences and similarities between two or more languages, provide an adequate model for their comparison, and determine how and which elements are comparable, thus defining*

> *such notions as congruence, equivalence, correspondence, etc. … Applied contrastive studies are part of applied linguistics. Drawing on the findings of theoretical contrastive studies they provide a framework for the comparison of languages, selecting whatever information is necessary for a specific purpose, e.g. teaching, bilingual analysis, translation, etc.* (Fisiak, 1981*, p.*2).

Thus, the focus of contrastive studies may be on general or on language specific features. The study may be *theoretical*, the general value of which is to describe the convergence/divergence phenomena of two languages in order to contribute to the general linguistic theories. On the other hand, the study may be *applied*, i.e. carried out for a specific purpose. The applied contrastive studies compare languages usually with the aim of assisting language learning by identifying important differences between learners' native and target languages. In the North American tradition, contrastive studies were conducted with the goal of improving classroom materials; this was the reason that applied contrastive studies received popularity in North America. CA was mainly regarded as an applied branch of linguistics serving practical pedagogical purposes in foreign and second language teaching. In contrast, in the European tradition, the goal of contrastive studies was to gain a greater understanding of the nature of languages and thus, within the European tradition, contrastive studies were considered as a sub-discipline of linguistics and in the American tradition, it was a sub-discipline of applied linguistics (c.f. Fisiak, 1981). Fisiak (1981) pointed out that these two traditions of CL should be kept distinct, as their purposes are not the same, otherwise there would be a misconception on the real nature of CL, which happened in the 1960s proceeding by the failure of CL.

Nonetheless, the argument whether it belongs to 'pure' or 'applied' science has been the topic of many discussions. Still, there is not a consensus on this issue (c.f. Kurtes, 2006; Gomez-Gonzales & Doval Suarez, 2003; Krzeszowski, 1990). However, Kurtes (2006) pointed out that there is no justifiable reason to insist on the distinction between the two;

instead, the term contrastive studies should be used to cover both. He asserts that the results of CA are relevant to both 'pure' (e.g. typological studies) and applied linguistics (e.g. language teaching methodology, translation studies, etc.); moreover, being a branch of applied linguistics, the results of CA are primarily relevant to foreign language teaching methodology.

The first published contrastive works in the field of linguistics that appeared in the last decade of the 19th century were predominantly theoretical, and the applied aspect was of secondary importance (c.f. Fisiak, 1981; Sajavaara, 1981; Di Pietro, 1976). However, according to Di Pietro (1976), all the published contrastive studies, which were conducted before the decade of the 1940s, were "sporadic". Only in the 1930s, "the first sign that a momentum was building in the contrastive studies of languages" (ibid.p.10) began to be observed with the publication of different papers on comparison of different levels of two or more languages (e.g. phonology, morphology, syntax, lexis, etc.). Thus, until the 1940s theoretically oriented contrastive studies were prevailing in CL. However, after the Second World War, applied contrastive studies reached their heyday and CL thus served practical pedagogical purposes in foreign and second language teaching/learning (c.f. Fisiak, 1981; Di Pietro, 1976; Lado, 1957). Di Pietro (1976:10) pointed out that "theoretical implications of contrastive studies were to come to its application in foreign language teaching" in those years. Thus, what was the reason for the shifting the focus towards applied contrastive studies?

2.2 The Development of Applied Contrastive Analysis

Comparison of languages for pedagogical purposes goes back to the very beginnings of foreign language teaching. The origins of contrastive studies as a pedagogical procedure can be traced back to the 15th century. Krzeszowski (1990) mentioned that the systematic

written records about this procedure can be observed from the middle of the 15th century. Since the 1940s, the term 'contrastive linguistics', or 'contrastive analysis', has been recognized as an important part in foreign language teaching.

The Second World War aroused a great interest in foreign language teaching. There was a growing need to develop the most effective and economical methods and techniques of teaching foreign languages in order to post large number of American servicemen all over the world. It was therefore necessary to provide these people with at least basic verbal communication skills (Richards & Rodgers, 1998). This led government officials in the United States of America to request the services of prominent linguists for the developments of specialized language courses and materials that focused on aural/oral skills (Block, 2003; Brown, 2001)

Help was sought from the field of structural linguistics and behavioristic psychology, which were gaining popularity in those days, in order to "bring the whole of their theoretical armory to bear upon the creation of a foreign language teaching method" (Johnson & Johnson,1999, p. 20). The time was "ripe for teaching revolution" (Brown, 2001). The Army Specialized Training Program (ASTP) was established which came to be known in the 1950s as the *Audio-lingual Method.*

The combination of the principles of structural linguistics and those of the behavioristic psychology became the basis of the Audio-lingual method that ruled the field of foreign language teaching for more than a quarter of a century (Mitchell & Miles, 1998).

In the *behavioristic* view, language is learnt through repetition and positive or negative reinforcement (Richards & Rodgers, 1998; Mitchell & Miles, 1998). Language is acquired through the process of habit and stimulus/response associations (Mitchell & Miles, 1998). By forming stimulus-response behavior patterns, second language is learnt in the same way as the first language (Richards & Rodgers, 1998; Mitchell & Miles, 1998).

As far as its linguistic content is concerned, the unit of language is 'structure'; i.e. the students are to orally recite the basic sentence patterns and grammatical structures, as it is assumed "in the oral communication context people will not use language beyond the sentence level" (Farhady & Delshad, 2006, p. 94). The underlying linguistic theory of this method is the *structural linguistics*, according to which language is a system of structurally interrelated elements.

In the Audio-lingual method, the role of the native language thus took on a great significance. If the acquisition of L1 involves the formation of a set of habits then the same process must also be involved in L2 learning, with the difference that "some of the habits appropriate to the L2 will already have been acquired, while other habits will need to be modified, and still others will have to be learned" (Mitchell & Miles, 1998, p. 24). Therefore, L2 learning process involves replacing those habits by a set of new ones and thus "the old L1 habits will *interfere* with this process, either helping or inhibiting it" (Mitchell & Miles, 1998, p. 24). To be able to determine which old habits are the causes of interference, the structures of the two languages are systematically compared within a structuralist paradigm.

Thus, as stated by Richards and Rodgers (1998, p. 52), "the problems of learning a foreign language were attributed to the conflict of different structural systems." In the Audio-lingual method, the extent of difficulty lay in the similarities and differences between L1 and L2. The main difficulty of L2 learning was attributed to prior L1 knowledge. Consequently, the best pedagogical tool for foreign language teachers was having sound knowledge of those structures of L2 that were *different* from those of learners' L1.

Hence, researchers began to compare pairs of languages to pinpoint the areas of differences, therefore of difficulty. *Contrastive Analysis*, thus being emerged from the principles of structural linguistics and behaviorist psychology, was considered as a "rigorous means of deciding what to teach, when to teach and how to teach" (Block, 2003, p. 14).

According to Block (2003, p. 15), one of the main reasons that CA gained momentum in those years was that it was "systematic [and] coherent; [i.e.] it manifested the logical progression from a theory of language and theory of learning to a theory of language learning". It was assumed that one could make predictions about the success of learning and language teaching materials based on the comparison between two languages. This had its influence on the syllabus-design guidelines and material development the principles of which were based on the following assumption:

> *"The most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learners" (Fries, 1945, p. 9, cited in Lado, 1957, p. 1).*

Thus, CA reached its heyday after the Second World War, which was the first scientific attempt to understand language learning and to improve language teaching (Block, 2003). Moreover, since the 1940s, 'contrastive linguistics' has especially been associated with applied contrastive studies advocated as a means of predicting and/or explaining difficulties of L2 learners (c.f. Krzeszowski, 1990; Fisiak, 1981). CA, thus, in the modern sense of this term, is the comparison of grammatical and phonological systems of pairs of languages for pedagogical purposes. In language teaching, CA has been influential through the Contrastive Analysis Hypothesis.

2.3 Theoretical Principles of Contrastive Analysis Hypothesis

By considering the main differences between L1 and L2, one can anticipate the errors learners will make when learning an L2: errors indicate differences. As Weinreich (1953 cited in Larsen-Freeman & Long, 1991:53) asserted, "The greater the difference between two systems; i.e. the more numerous the mutually exclusive forms and patterns in each, the greater is the learning problem and the potential area of interference." This conviction gave rise to *Contrastive Analysis Hypothesis* (CAH), which claims that the learning problem and

area of interference derive from the differences between L1 and L2 systems: it is the main obstacle to second language learning (c.f. Ellis, 2008; Larsen-Freeman & Long, 1991; Fisiak, 1981; Di Pietro, 1976). Consequently, errors occur primarily because of this difference when the learner *transfers* native language 'habits' into the L2, and "these errors can be *predicted* and remedied by the use of CA" (Ellis, 2008, p. 47). This assumption is clearly stated by Lado in his seminal work *Linguistics across Cultures:*

> *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"* (Lado, 1957, pp. vii-2).

Lado supported the conviction that if L2learners were made aware of the ways in which their L1 and L2 differed, this would facilitate foreign language learning. He went even further by claiming that the elements of L2 that are similar to learners' L1 will prove simple to learn, while those that are different will be difficult.

> *In practical terms, we understand that the use of a grammatical structure depends heavily on habit. ... From the observation of many cases the grammatical structure of the native language tends to be transferred to the foreign language ...we have here the major source of difficulty or ease in learning the foreign language. ...Those structures that are similar will be easy to learn, ... and those structures that are different will be difficult* (Lado, 1957,pp 58-9).

Hence, Lado suggested that there are two types of language transfer: *positive transfer (facilitation)* and *negative transfer (interference*). When two languages are similar, positive transfer will occur and facilitate L2 learning; but when L1 and L2 features are different, negative transfer or interference will result and inhibit L2 learning (c.f. Ellis, 2008; Krzeszowski, 1990; Gass & Selinker, 1983; Fisiak, 1981; Di Pietro, 1976; Lado, 1957). Wardhaugh (1970) referred to this phenomenon as the *strong version of CAH.* This version of CAH is also known as CA *a priori*; i.e. "before the fact" (Brown, 2007, p. 256).

Brown (2007,p. 168) indicated, “Contrastive analysis hypothesis stresses the interfering effects of the first language in second-language learning” and claimed, in its strong form, “second language learning primarily, if not exclusively, is a process of acquiring whatever items are different from the first language”.

In CAH, thus native language is seen as the major source of error in the production and/or reception of a second language. According to Lado,

> *Individuals tend to transfer the forms and meanings and the distribution of forms and meanings, of their native language and culture to the foreign language and culture-both productively … and receptively (*Lado, 1957: vii-2).

Thus, errors will be made when learners encounter structures in L2 that differ from their L1 or are unfamiliar to them in their L1. This is the reason that typological similarity is important to CAH (August, Shanahan & Shanahan, 2006). Languages that are typologically similar share more structural features than languages that are typologically different (August, Shanahan & Shanahan, 2006). Hence, it will be easy to learn a language that is typologically similar to learners’ L1. In addition to this, there are certain procedures that should be employed in order to know what differences and similarities are between the two language systems.

2.3.1 Procedures of Contrastive Analysis

The prerequisite for any contrastive study is the availability of accurate and explicit procedure in order to predict learners’ errors. Lado (1957) was the first to suggest a systematic set of technical procedures for the contrastive study of languages. Some contrastive analysts have proposed some steps, which should be followed while conducting a CA. Performing a CA usually involves four steps: description, juxtaposition/selection, comparison/contrast, and prediction (c.f. Ellis, 2008; Whitman 1970; Lado, 1957).

The first step in executing a contrastive analysis is to provide description of the aspects of the languages to be compared. Lado (1957) stated both descriptions should contain the form, meaning, and distribution of the structures. Second, selection of the items or certain areas is made in order to make a detailed comparison. Juxtaposition is a step where one decides what is to compare with what. In this stage, the researcher establishes the *tertium comparationis* (TC) and the application of the appropriate TC helps the contrastive researchers to establish a "valid criterion of comparison" between languages (Connor, et.al. 2008, p. 28).

In the comparison stage, the actual comparison and contrast of the two systems are performed; i.e. areas of similarity and differences are identified. Not always are the two steps of juxtaposition and comparison kept discrete. Under the influence of the mother tongue, the differences are transferred into the learner's language – i.e., interlanguage – hence, interference can occur. In this stage, areas which are likely to cause errors are determined. This expectation is called *prediction*. Those predictions can be arrived at through the formulation of a hierarchy of difficulty (Ellis, 2008).

2.3.1.1 Tertium Comparationis

An important issue that the researcher should take into account before performing a CA is to know what can be compared in the observed languages. According to Kurtes (2006, p. 833), "the comparability criterion, one of the major theoretical concepts of contrastive studies, has to be established prior to any analysis itself". To deal with the problem of comparability is to find out equivalent structures in L1 and L2, as "only equivalent systems, structures, and rules are comparable" (Krzeszowski, 1981, p.72).

All comparisons are based on the assumption that the structures to be compared have certain things in common, and that "any differences between them can be laid against this common background" (Kurtes, 2006, p. 5). Krzeszowski (1990) named this common

platform of reference "*tertium comparationis*". The concept of *tertium comparationis* is equated with the concept of *equivalence* that assumes that there is a universal feature, a common platform of reference that is the starting point of any comparison. Chesterman (1991, p.162) defined TC as a "shared common denominator in terms of which the comparison can be carried out". As stated by Gómez-González and Doval Suárez (2003, p. 28) "equivalence or TC are two sides of the same coin and for that reason they are used interchangeably".

Depending on the platform of reference or *'tertium comparationis*' (common platform of comparison or shared similarity), two objects of analysis may appear either similar or different (Krzeszowski, 1990). In order to determine that two or more linguistic elements are (dis)similar it is important that they have some common ground or TC. In CA, it has been important to compare items that are comparable.

Krzeszowski (1990) proposed to distinguish between seven types of equivalence or TC in CA. Each type of equivalence is related to a certain type of tertium comparationis. Thus, each type of TC will determine a different type of equivalence. Accordingly, Krzeszowski distinguishes the following seven types of TC: 1) statistical equivalence, 2) translation equivalence, 3) system equivalence, 4) semanto-syntactic equivalence, 5) rule equivalence, 6) pragmatic (functional) equivalence, and 7) substantial equivalence.

Similarities and differences are to be observed in the form, meaning, and distribution of the relevant linguistic element (Krzeszowski, 1981). Contrasted elements can be similar in form, but different in meaning and distribution. It is not an easy task to establish the TC of a comparison, however, generally, equivalence can primarily be established with reference to:

1. Meaning
2. Structure
3. Function

4. Rule or process
5. Textual and discoursal features

Krzeszowski (1981, p. 72) pointed out that the attempt to establish TC resulted in "inventories of differences and similarities between the compared items" and thus finding out the amount of difficulty involved in learning those items. These attempts became the basis of establishing hierarchies of difficulty that provided the degrees of similarity and/or difference between the compared items (Krzeszowski, 1981).

2.3.2 Hierarchy of Difficulty

The scholars of the 1960s "recognized different kinds of 'difference' and also attributed to them different degrees of 'difficulty' (Ellis, 2008, p. 307). Stockwell, Bowen, and Martin (1965) proposed a scheme for judging these various levels, in order to provide a systematic basis for predicting difficulty. They presented a "*hierarchy of difficulty*" of learning problems based on the types of differences between languages.

They stated, "The construction of hierarchy of difficulty depends on the assumption that some correspondences are more difficult to master than others. … Hierarchy of difficulty is a set of predictions, which must be tested against observation of the problems students, do in fact have" (Stockwell et. al, 1965, p. 282). Stockwell and his associates constructed hierarchy of difficulty for phonological and grammatical systems. Their grammatical hierarchy had 16 levels. Later Prator (1967 cited in Brown 2007, p. 250) "captured the essence of this grammatical hierarchy in six categories of difficulty." In *Table 1,* the six categories are given in ascending order of difficulty.

Table 1 ***Degrees of Difficulty***

Levels	Types of difficulty	Interpretation
0	**Transfer**	No difference is present between the two languages.
1	**Coalescence**	Two items in L1 become coalesced into essentially one item in L2

2	**Underdiffrentiation**	An item in L1 is absent in L2.
3	**Reinterpretation**	An item that exists in L1 is given a new distribution in L2.
4	**Overdifferentiation**	A new item entirely must be learned.
5	**Split**	One item in L1 becomes two or more in L2.

Adapted from Brown, 2007, pp.250-251

According to these hierarchies, the greater the difference between languages, the more persistent the predicted errors will be (c.f. Ellis, 2008; Brown, 2007; Ziahosseiny, 1999; Larsen-Freeman & Long, 1991).

2.4 Criticism of Contrastive Analysis Hypothesis

Contrastive Analysis Hypothesis did not hold long in its original form. CAH claimed to predict all learners' errors they made when using L2. However, empirical studies conducted in the 1970s could not maintain this claim, making it clear that CA could only predict *certain* problematic areas for learners. The *strong version* of CAH gradually fell out of favor in the 1970s (Ellis, 2008). As Krzeszowski (1990) mentioned, the applied CA depends not only on linguistic theories but also on different disciplines relevant to teaching. The major criticism was the argument that CAH was strongly associated with behaviorism, which gradually lost credibility since the appearance of Noam Chomsky's classic review of Skinner's *Verbal Behavior* (Chomsky, 1959 in Larsen-Freeman & Long, 1991). Chomsky rejected the structuralist approach to language description as well as the behaviorist theory of language learning. "Language is not a habit structure. Ordinary linguistic behavior characteristically involves innovation, formation of new sentences and patterns in accordance with rules of great abstractness and intricacy" (1966, p.153 cited in Richards & Rodgers, 1998, p. 65). Moreover, it was believed that the process of L2 acquisition was very similar to the process of L1 acquisition, which takes place without explicit attention to language forms. Not the L1 system, but the L2 system guides the process of acquisition. Universal innate

principles were considered to be the main factors for L2 acquisition. Thus, with the popularity of Chomsky's Universal Grammar, which denied the existence of transfer phenomena, and with this shift in the linguistic and learning theories, scholars cast doubt on the validity of CAH.

Moreover, the research findings indicated, "the influence of L1 was much less than it is claimed by the CAH" (Ellis, 2008, p. 310; c.f. Richards, 1981; Fisiak, 1981; Sanders, 1981; Sridhar, 1981; Nemser, 1981; Dulay & Burt, 1974). It was soon pointed out that many errors predicted by CA were not observed in learners' language. One of the main features of CAH, its predictability of errors, began to be the topic of many arguments and research topics. Just because grammatical structures in two languages are different, this does not mean that the L2 learners will find them difficult. Ellis (2008) showed that many errors predicted to cause learning difficulties for students do not create any problems. Analyses of the errors revealed that predicted errors were not always made and errors that were made could not always be traced back to L1; i.e. they were not interference errors, resulting from transfer (c.f. Dulay & Burt, 1973). It appeared that many errors that L2 learners made could not easily be classified as being caused by interference from L1. Even more confusingly, some errors were made by learners irrespective of their L1. Many errors were due to developmental processes common to all learners regardless of their L1.

Research has showed that L1-L2 difference does not necessarily mean difficulty in L2 learning, moreover, "wherever patterns are minimally distinct in form or meaning in one or more systems, confusion may result" (Brown, 2007, p. 253). Thus, it was concluded "it is the similarities between the two languages that tend to cause many problems" (Larsen-Freeman & Long, 1991, p.106). Odlin (1989) for instance, reported that although Spanish has a copula verb similar to English 'be' in sentences such as '*That's very simple'*, L1 Spanish learners of L2 English omit the copula in early stages of acquisition: saying 'That *very simple'*. This kind

of interpretation of language learners' errors brought about the *Moderate Version of CAH or* as Brown (2007, p. 253) stated *"subtle differences" version of CAH,* which was a blow to the strong version of CAH. However, Hayati (1997) mentioned that the moderate version of the CAH could be considered a different theory and not a variety of the CAH. The reason is that this version of CAH insists on the similarities as the sources of difficulty in L2 learning, which is different from the principles of CAH.

Another problem that was given to CAH was the establishment of hierarchies of difficulty as a result of CA. Marton (1981) stated that these hierarchies were of a very general character and thus sequencing the teaching materials could not be based on them. Instead of paying a lot of attention to the target structure for the only reason that it does not occur in learners' L1, it is better to practice the structure, which has a high frequency in the target language (Sanders, 1981). Thus, these hierarchies "are a sort of blueprint, onto which different structures of particular languages may be mapped" (Marton, 1981, p. 63). The reply to this criticism was that CA could be one of the several criteria on which teaching materials could be sequenced (Sanders, 1981; Marton, 1981)

The last major criticism against CAH was that the results from CA do not have immediate use in the classroom. Fisiak (1981) stated that these results were for textbook writers and they were not intended for classroom use. They could be a useful technique, "employing the previous knowledge of the learner, informing him/her about the similarities and differences between his/her L1 and the target language" (Marton, 1981, p. 173). However, "there is a fear that basing teaching materials on CA may result in the learner's being presented with only fragments of the target but not with its whole system" (Marton, 1981, p. 174).

These developments, along with the decline of the behaviorist and structuralist paradigms considerably weakened the appeal of CAH (c.f. Ellis, 2008; Gass & Selinker,

1983; Fisiak, 1981). The CAH did not prove to be workable at least in its originally expressed version; i.e. strong version. Wardhaugh (1970, p. 129) stated, "This version can work only for one who is prepared to be quite naïve in linguistic maters." Spolsky (1979, p. 253) mentioned that " there is a good reason to believe that a contrastive analysis is a useful (some would say necessary) preliminary to the development of good teaching materials, but none for suggesting that it is in any way a sufficient condition or a complete basis for a theory of language learning."

Despite these points of criticism, CA has contributed to the current theory formation by revealing the important role of L1 in SLA process. The value and importance of CA lay in its ability "to indicate potential areas of interference and errors" (Fisiak, 1981, p. 7). Thus, CA remains a useful tool when searching for potential sources of trouble in foreign languages.

2.5 Emergence of Error Analysis

The challenges to the validity of the strong version of CAH and the rejection of the theoretical underpinnings of CAH in behaviorism made the researchers look for an alternative method to investigate L2 acquisition. The focus was more on the language produced by the learners; i.e. the learners' *interlanguage* (IL), a term coined by Selinker (1972), rather than the target language or the mother tongue.

As an attempt to mitigate the criticism of the strong version of CAH, Wardhaugh (1970) proposed a distinction between the *strong* and the *weak* version of CAH or as CA is usually called *a posteriori*; i.e. "after the fact" (Brown, 2007, p. 256). CA *a posteriori* allows the investigator to focus attention just on those areas that are proven by error analysis to be the difficult ones. According to these claims, in this study CA *a posteriori* will be used. As it is stated above, CA *a priori* sometimes predicts difficulties that do not occur and it is a waste of time and energy on the part of the researcher to conduct the analysis.

Wardhaugh (1970, p. 4) stated, “the weak version requires of the linguist only that he use the best knowledge available to him in order to account for observed difficulties in L2 learning.” In other words, linguists are able to use the linguistic knowledge available to them in order to report the observed difficulties in L2 learning. As mentioned by Wardhaugh (1970, p. 5) “it starts with the evidence provided by linguistic interference and uses such evidence to explain the similarities and differences between systems”.

Thus, it is necessary to have a comparison between two language systems to predict some learning difficulties, but these predictions can only become useful after they are empirically tested with actual data of learners’ errors. The weak version is believed to be the more valid one of the two, and is certainly a more realistic and practical approach to detecting the source of errors (Wardhaugh, 1970).

With the emergence of the weak version of CAH, researchers and teachers came to realize that errors are “red flags” that provide evidence of the learners’ knowledge of L2 rather than “flaws” that needed to be eradicated (Gass & Selinker, 2001; Richards, 1984; Dulay & Burt, 1974). Errors were not seen as “evidence of pathology on the part of the learner” but as a “normal and healthy art of the learning process” (Carter & Nunan, 2001, p. 88). Thus, there emerged a need to analyze these errors carefully as “they possibly held in them some of the keys to the understanding of the process of SLA” (Brown, 2007, p. 257). In a sense “errors are windows into the language learner’s mind” (Saville-Troike, 2006, p. 9). As mentioned by Littlewood (1984, p. 24), “errors are the *product* of learning and from them we can make inferences about the process”. Corder (1981, p. 12) noted, “errors are not to be regarded as signs of inhibition, but simply as evidence of the learners’ strategies of learning.” It was Corder, who made the first argument for the significance of learners’ errors in his seminal paper written in1981.

Corder (1981, pp. 10-11) pointed out three factors that make learners' errors significant. First, they show teachers what progress learners have made and what remains for them to learn. Second, they provide researchers with the evidence of how the language is acquired as well as what strategies learners are using in order to learn the language. Thirdly, they are necessary for learners themselves as errors are usually regarded as a "device" learners use to test their hypotheses concerning the language being learnt. Errors thus show that learners are exploring the new language system rather than just 'experiencing interference' from old habits (Saville-Troike, 2006). Errors are considered an important factor for learning: "you can't learn without goofing" (Dulay and Burt, 1974, p. 95).

Eventually, the significance of learners' errors signaled the development of the weak version of CAH into a new field of interest in applied linguistics; i.e. *Error Analysis (EA).* In other words, there was made a shift of pedagogical interest from contrastive analysis to error analysis.

The emphasis switched to a primary focus on the analysis of learners' errors. Fisiak (1981, p. 7) noted "psychological and pedagogical factors contribute to the formation of errors; therefore, EA as a part of applied linguistics cannot replace CA but only supplement them". Contrastive studies predict errors, while error analysis verifies contrastive predictions*: "a posteriori*, explaining deviations from the predictions" (Fisiak, 1981, p. 8). This new approach implies a different, *non-contrastive* concept of error (Corder, 1974).

EA differs from CA by proposing that learner errors are not just due to interference or transfer from L1 but they are "evidence of underlying, universal learner strategies" (Byram, 2000, p. 198). As mentioned by Spolsky (1979, p. 252) "CA is concerned with the language description (general or autonomous linguistics), EA with language acquisition and learning (psycholinguistics)". EA switched the emphasis from prediction of difficulty to observation of difficulty, which is then explained with reference to contrastive analysis. As

Sajavaara (1981) stated, it is a wrong assumption that CA and EA only complement each other, rather they are two fields of inquiry that concentrate on learners' language. This is the reason that CA and EA "should be correlated within this framework" (Sajavaara, 1981, p. 45) and consequently they cannot be separated. Wardhaugh (1970), states that CA had no predictive power and that "contrastive studies could only be useful after the fact". Lee (1974) suggested that CA should be used along with EA whenever possible to understand whether the error is due to L1 influence or not. Thus, it can be stated that CA might be supplemented by the results of EA.

Corder (1981) mentioned that EA could be seen as having two aims: pedagogical that shows teachers what errors can be expected from a certain learner; and it can be theoretical, which addresses the question of learners' interlanguage competence. Theoretical analysis of errors primarily concerns the process and strategies of language learning and its similarities with first language acquisition. In other words, it tries to investigate what is going on in the minds of language learners. Secondly, it tries to decode the strategies of learners such as overgeneralization and simplification. 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.

The underlying principles of EA is that "learning is fundamentally a process that involves the making of mistakes, … [and] these mistakes can be observed, analyzed and classified to reveal something of the systems operating within the learner" (Brown, 2007, pp.257-259). Thus, EA emphasizes "the significance of errors in learners' *interlanguage* system" (Brown, 2007, p. 204). EA emphasizes learners' "creative ability to construct language" (Saville-Troike, 2006, p. 37). As Dechart (1983) stated errors reflect a stage of development in one's interlanguage.

2.6 Practical Aspects of Error Analysis

The study of errors is a fundamental part in applied linguistics. It provides a validation of the findings of CA. EA "confirms or disproves the predictions of the theory lying behind the contrastive studies and thus EA is an experimental technique for validating the theory of transfer" (Corder, 1981, p. 34). Moreover, as mentioned by Byram (2000), the results obtained from EA can provide feedback for language learning theory and teaching. In order to have satisfactory information about the "processes of language learning" and the "strategies adopted by the learner in the process of language learning" (Corder, 1981, p. 35), better techniques for the identification and description of the errors should be developed. Hence, "the satisfactory explanation of errors is dependent upon an adequate description of errors" (Corder, 1981, p. 36). To analyze errors in a proper way and to achieve this aim, it is thus important to have a clearly established procedure. Corder (1981) suggested the following steps in EA research: data collection, identification, description, explanation, and evaluation of errors.

2.6.1 Collection of Errors

The initial step of error analysis requires the *selection* of a corpus of language. According to Ellis and Barkhuizen (2005, p. 57), "the nature of the collected sample may influence the nature and the distribution of the errors observed. This is the reason that several factors should be taken into account such as the *learner*, *language,* and *production* as shown in *Table 2*.

Table 2 ***Factors Affecting Learner Errors***

Factors	Description
Learner	
• **Proficiency level**	• Elementary, intermediate or advance
• **Other language**	• L1 or L2
• **Language leaning background**	• Instructed, naturalistic or mixed
Language	
• **Medium**	• Oral or written

• **Genre**	• Conversation, narrative essay
• **Content**	• The aim of the discourse
Production	
• **Unplanned**	• The discourse is produced spontaneously
• **Planned**	• The discourse is produced after planning or is given time for planning

Adapted from Ellis and Barkhuizen, 2005, p.58

2.6.2 Identification of Errors

Once a corpus of a learner language has been collected, the errors have to be *identified*. Corder (1981, p. 37) stated that in this stage "we compare the learner's erroneous utterance with what a native speaker would have said to express the meaning …. [In other words], we compare the original utterances with the correct utterances having the meaning intended by the learner". Only a careful investigation of learners' intention will show whether an error is present or not. In order to understand this, we should ask learners what they intended to say in their L1 and then translate it into the target language. However, if the learner is not present, we should interpret his/her utterance on the basis of its *form*; i.e. whether it is grammatically acceptable or not (ibid.). In addition to this, we should also find out whether the utterance is *appropriate in the given context* or not. Thus, the success of detecting errors "depends upon having adequate interpretations of the learner's intentions" (Corder, 1981, p. 44) on the basis of grammatical acceptance and context-appropriacy.

Besides the above-mentioned factors that are important to identify errors, Corder also suggested making a distinction between a *mistake* and an *error*, "which are technically two very different phenomena" (Brown, 2007, p. 257). Corder (1981) made use of Chomsky's "competence versus performance" distinction by associating *errors* with failures in competence and *mistakes* with failures in performance. In other words, a *mistake,* characterized as unsystematic, is a "slip of tongue" which is due to "memory lapses, physical states, and psychological conditions" (Corder, 1981, p. 10). Mistakes occur accidentally sometimes due to random guesses, and when the attention is called learners can correct them

easily. They do not reflect learners' developing system as "they are the result of more transitory features of the situation of the learner's performance" (Littlewood, 1984, p. 31).

An *error,* however*,* is characterized as systematic, consistent, which "reveals the learner's underlying knowledge of the language to date" (Corder, 1981, p. 10). Errors may give valuable insights into language acquisition because they are goofs in learners' underlying competence (Dulay & Burt, 1974). When L2 learners make errors this means that they have incomplete knowledge of the target language and they are not always able to correct the errors they make.

However, to differentiate between errors and mistakes is not an easy task (Corder, 1981; Brown, 2007). A general criterion adopted by most error analysts for distinguishing between errors and mistakes is *the frequency of occurrence*. Brown (2007) states that if learners constantly use a particular form incorrectly then we may conclude that such a form is an *error* indicating that learners do not have enough competence to make a correct use of that particular language. Errors, which have a low frequency, are considered as mistakes and those with high frequency as systematic errors. However, frequency alone will not give an adequate basis to determine what constitutes an error and what a mistake. Low frequency of certain errors may, indeed, be due to the low frequency of that particular grammatical element or avoidance strategy employed by the learner (c.f. Schachter, 1974). This means that we should also examine *the cause or the source* of that error and if it turns out to be rule-governed that recurs consistently in learners' performance, then we deal with an error but not a mistake, in spite of its low frequency of occurrence.

Ellis (2008) thus suggested two ways to distinguish between an error and a mistake. The first one is to check the *consistency* of learners' performance. If they sometimes use the correct form and sometimes the wrong one, it is a mistake. However, if they always use it incorrectly, it is then an error. The second way is to ask them to correct their own deviant

utterance. Where they are unable, the deviations are errors; where they are successful, the deviations are mistakes.

Errors can also be identified based on the distinction between two related dimensions of error: *domain,* and *extent***.** Domain is the "rank of linguistic unit from phoneme to discourse that must be taken as context in order for the error to be understood, and *extent* is the rank of linguistic unit that would have to be deleted, replaced, supplied or reordered in order to repair the sentence" (Lennon, 1991 cited in Brown, 2007, p. 263). This suggestion by Lennon is parallel with Corder's other categorization of *overt* and *covert errors*. Overt errors are unquestionably ungrammatical at the sentence level and covert errors are grammatically well formed at the sentence level but are not interpretable within the context of communication. For example, "*I'm fine, thanks*." Is a correct sentence but if it is given as an answer to the question of "*How old are you?"* it is a covert error.

Ellis (2008) stated that the problems in identifying errors make it necessary for researchers to provide inter-rater reliability measures for the errors they have identified. However as Duskova (1969 in Ellis, 2008, p. 50) mentioned "the number of cases in which it was hard to decide whether an error had been made… did not exceed four per cent of all the errors examined".

2.6.3 Description of Errors

According to Corder (1981, p. 36), "the description of errors is a linguistic operation". Errors are described by "the application of linguistic theory to the data of erroneous utterances produced by a learner" (ibid.).

The description of learners' errors involves two steps (Ellis & Barkhuizen, 2005):

- The development of descriptive categories for coding the errors
- Recording the frequency of errors in each category

The descriptive categories (taxonomy) should be "well-developed, elaborated … and also it must be simple and self-explanatory (i.e. user-friendly)" (Ellis & Barkhuizen, 2005, p. 60). Usually descriptive taxonomies are of two types: *linguistic taxonomy* and *surface structure taxonomy*.

In linguistic taxonomies, errors are classified and described in terms of their linguistic characteristics. Linguistic taxonomies indicate the number and the proportion of errors in either different levels of language (whether an error is phonological, morphological, syntactic, etc.), or in specific grammatical categories (e.g. articles, prepositions, or word order). A distinction may also be drawn between lexical and grammatical errors. It is the nature, type of the errors detected which determine the categories, and not the researchers' predetermined error types (Ellis & Barkhuizen, 2005). Alternatively, he/she can modify the existing taxonomies and make them more relevant to his/her data. As mentioned by Ellis and Barkhuizen (2005, p. 61), "errors should be classified in terms of the target language categories that have been violated rather than the linguistic categories used by the learner".

A number of categories for describing errors have been identified in EA research (c.f. Ellis, 2008; Dulay, Burt & Krashen, 1982). According to Scholfield (1995), errors can be classified according to four categories: *spelling errors, grammatical errors, vocabulary errors,* and *L1 induced errors*. However, he states that there is an overlap between these categories, which is a "sure sign of faulty scale" (p.190) as spelling or grammar errors may also be L1 induced. Thus, an error may fall in more than one category at once. Scholfield (1995:190) suggested recognizing that "we really need two scales because there are two relevant variables". Scholfield offers a cross-classificatory categorization of errors. He mentions that we should understand the *cause* of the error, but not only "what *kind* of thing has been got wrong" (ibid.).

Kind of error: *Spelling-Grammar-Vocabulary-Discourse*

Cause of error: *L1-Target Language-some other causes*

Hence, any error should be recorded on two scales (variables) and it will be classified in one category of each scale. Thus, from the cause of an error one can make interpretations about "the kind of error" involved. Thus, in describing errors and classifying according to the above-mentioned category, we should also explain why it was made by the learner.

Celce-Murcia (2006) proposed a more comprehensive linguistic taxonomy based on the errors made by fifty English as a foreign language (EFL) students whose native language was Armenian. Her taxonomy is divided into seven categories most of which have several subcategories: 1) errors in the noun phrase, 2) errors in the verb phrase, 3) errors in the prepositional phrase, 4) errors at the clause level, 5) lexical errors, 6) errors in mechanics, 7) spelling errors.

In addition to the linguistic categorization, errors can also be classified according to their processes; i.e. ways in which errors are made by L2 learners. This are called *surface structure taxonomies* that are based "on the ways surface structure is altered" (Dulay, Burt and Krashen, 1982, p. 150).

Generally, four main processes that are the cause of erroneous constructions have been identified in the literature (c.f. Brown, 2007; Dulay, Burt and Krashen, 1982; Corder, 1981). The description of errors is generalized as of *addition* of some unnecessary or incorrect element, *omission* of some required element, *substitution* of an incorrect element, and *misordering* of the elements. The notions of *omission, addition, selection,* and *ordering* can be extended and generalized across all error types, for instance grammatical errors can involve omission of an essential grammatical word, or wrong word order, etc. (Scholfield, 1995). If this is so, then "these four 'alteration types' do cross classify the other scales" (Scholfield, 1995, p. 190). Within these categories, different linguistic levels can be considered, such as phonology, lexicon, syntax, discourse, etc. Thus, different types of errors

can be distinguished within a linguistic category by means of a surface structure category. In other words, we can explain the "kind of error" in a more detailed way. This combination of categories can maximize the practical application (for example to teaching) (Ellis & Barkhuizen, 2005).

Ellis (2008) maintained, "Classifying errors in these ways can help us to diagnose learners' learning problems at any stage of their development and to plot how changes in error patterns occur over time." This categorization can be exemplified as follows:

Omission:

Morphological omission	*A strange thing happen to me yesterday.
Syntactical omission	* Can go out?

Addition:

In morphology	* The girl**s** is here.
In syntax	* The Armenia
In lexicon	* She worked there during two years ago.

Selection:

In morphology	* He is tallest than me.
In syntax	* I want that you do it.

Ordering:

In pronunciation	* fignisicant for 'significant'; *prulal for 'plural'
In morphology	* get upping for 'getting up'
In syntax	* He is a dear to me friend.
In lexicon	* key car for 'car key'

Thus, when errors are classified according to the appropriate descriptive category, the frequency of error types can be recorded; in order to show how many times a particular type of error has been made by the learners.

Errors not only vary in the linguistic categories they belong, but also in magnitude. It can include a phoneme, a morpheme, a word, a sentence, or even a paragraph. Due to this fact, Brown (2007) distinguished between *global* or *local***.** Global errors hinder communication. They prevent the message from being understood as in the example below:

** I like bus but my mother said so not that we must be late for school.*

On the other hand, local errors do not impede comprehension; the hearer can guess the intended meaning even if there is a minor violation of one linguistic element of a sentence

* *I no want to go there.*

2.6.4 Explanation of Errors

The next step in EA is determining the sources of errors in order to understand why they were made. A central aspect in EA has been regarded the analysis of error sources. Researchers believe that the clearer the understanding of the sources of learners' errors, the better L2 teachers will be able to understand the process of L2 learning (Ellis, 2008). Brown (2007, p. 177) stated, "By trying to identify sources we can begin to arrive at an understanding of how learners' cognitive and affective self relates to the linguistic systems and to formulate an integrated understanding of the process of SLA".

According to the principles of CAH errors were assumed as being the only result of interference of the first language habits to the learning of second language. However, with the field of error analysis, it has been understood that there are different other reasons for the errors to occur.

There are a number of different sources of competence errors, which have been proposed by different scholars. Two main sources of learners' errors are explained nearly in all the attempts to identify sources of learners' errors: these are *interlingual* and *intralingual* errors (c.f. Ellis, 2008; Brown, 2007; Corder, 1981; Richards, 1971).

2.6.4.1 Interlingual Errors

Errors that are considered to be the result of interlingual transfer are attributed to the native language. Interlingual errors occur as a result of "utilizing some L1 feature (phonological, lexical, grammatical or pragmatic) rather than that of the target language" (Ellis, 2008, p. 59). However, this should not be confused with behaviouristic approach of

language transfer. Error analysis does not regard them as the persistence of old habits, but rather as signs that learners are internalizing and investigating the system of the new language. Corder (1981) stated, "What is happening in such cases is that the learner is using certain aspects of his/her mother tongue to express his/her meaning because his/her interlanguage lacks to do it". Interlingual errors may occur at different levels such as transfer of phonological, morphological, grammatical, and lexica-semantic elements of the native language into the target language.

CA is considered as an important process when analyzing this type of errors. Thus, CA can be considered as a "branch of EA… [that] can only account for the errors that are due to the interference" (Farhady & Delshad, 2006, p. 55). CA should be used as a methodological option to determine the errors, which are the result of interference, i.e. to understand the effect of L1 on L2 acquisition (Larsen-Freeman & Long, 1991).

Interlingual errors are generally understood as *transfer errors,* more specifically these errors can be traced to L1 *interference* that is the negative influence of L1 on the performance of the target language (Richards, 1971). It is a process, which happens "whenever there is a statistically significant predominance of the native language of one of the two alternative linguistic entities … the predominance entity being an error since it deviates from an experimentally established norm of that foreign language" (Selinker, 1983, p. 14). Odlin (1989) stated negative transfer is relatively easy to identify as it involves "divergence from norms in the target language" (p.36). However, it is not justified to claim that an L2 error that shows a similarity to an L1 feature is the result of transfer, as "such conclusions are not warranted unless it can be shown that these errors are not developmental (i.e. do not occur in the interlanguages of all learners)" (Ellis, 2008, p. 400). Thus, the basis of interlingual errors is the notion of transfer that regained its significance in the error analysis research.

2.6.4.2 Intralingual Errors

Interference from learners' L1 is not the only reason for committing errors. Interference from the mother tongue is a major source of difficulty in L2 learning and "CA has proved valuable in locating areas of interlangauge interference" (Richards, 1971, p. 207). Many errors, however, derive from the strategies that are used by the learners when learning the target language as well as "from the mutual interference of items within the target language" (ibid.), and this cannot be accounted for by CA. These types of errors are common in the speech of second language learners, irrespective of their mother tongue and they are generally referred to as intralingual and developmental errors.

Dulay and Burt (1974) claimed that L2 learners largely followed the same strategies as L1 learners, and that the errors in their interlanguage were mainly intralingual or developmental in nature. According to Richards (1971, p. 206), "Developmental errors reflect the learner's competence at a particular stage and illustrate some of the general characteristics of language acquisition". These errors reflect the strategies by which the learner acquires the language. Developmental errors are made because of "the incomplete application of rules and the building of false systems or concepts", in other words when the limited experience becomes the reason for the errors. Intralingual errors reflect the general characteristics of rule learning, such as faulty generalization, incomplete application of rules" (Richards, 1971, p. 207).

Intralingual errors occur due to the language being learned, independent of the native language. Richards (1971, p. 202) states that learners produce such items, "which reflect not the structure of the mother tongue, but generalizations based on partial exposure to the target language". Thus, the learner, in this case, tries to "derive the rules behind the data to which he/she has been exposed, and may develop hypotheses that correspond neither to the mother tongue nor to the target language" (Richards, 1971, p. 203). Intralingual errors result from faulty or partial learning of the target language rather than language transfer. They may be

caused by the influence of one target language item upon another. For example, learners attempt to use two tense markers at the same time in one sentence since they have not mastered the language yet. When they say: * "*He is comes here*", it is because the singularity of the third person requires "*is*" in present continuous, and "-*s*" at the end of a verb in simple present tense. In short, intralingual errors occur as a result of learners' attempt to build up concepts and hypotheses about the target language from their limited experience with it. Learners may commit errors due to this reason in many ways as in the following examples:

** He made me **to** go.*

** I feel happily**.***

** I don't know why **did** he say it.* (Erdogan, 2005, p. 266)

Intralingual errors usually include *overgeneralization, simplification, communication-based* and *induced errors.*

2.6.4.3 Overgeneralization

Errors or deviations from the target norm are mostly due to two learning strategies: generalization and simplification. Simplification is the strategy when the learner uses simpler structure in his or her interlanguage. Generalization is the "negative counterpart of the intralingual transfer" (Brown, 2007, p. 264). Generalization is a fundamental learning strategy. Littlewood (1984, p. 23) stated, "We allocate items to categories; on the basis of these categories, we construct 'rules' which predict how the different items behave". Sometimes these predictions are wrong, because of the overgeneralization of the rule. In other words, whenever learners meet a new pattern or a new rule they think that the pattern or rule applies to all cases without exception. For instance, an L2 learner uses the following sentence: "*She must goes"* Here the strong rule of using "s" in the third person singular is overgeneralized by the learner, and he/she retains the "s" with the auxiliary verb. Littlewood

(1984) states that transfer and overgeneralization belong to the same underlying strategy of using previous knowledge to understand the concept.

2.6.4.4 Context of Learning

A third source of error "although it overlaps both types of transfer" (Brown, 2007, p. 266) is the *context of learning*. Sometimes in the classroom context, the teacher can become the source of an error by giving faulty explanations about the concept or the textbook itself can provide the learner with an incorrect presentation of a structure or word. Teaching methods and materials may be unsuitable or faulty, for example, thus becoming the cause of errors, which have nothing to do with strategies of language learning. Consequently, the learner makes what Richards (1971) called "false concepts" or as Stenson (1974) termed "*induced errors"* because of the pedagogical procedures contained in the textbook or employed by the teacher. Here, however, L1 interference, and psychological factor cannot be dismissed.

2.6.4.5 Communication Strategies

There are cases when learners' errors do not result from any underlying system, but from some other influences such as the use of the immediate *communication strategies.*

Communication strategies as defined by Brown (2007, p. 132) show "how we productively express meaning, how we deliver messages to others". Learners use communication strategies to get their message across in order to compensate for the limited linguistic resources available to them. However, in this case learners may use such techniques that can become the sources of errors. In other words, communication strategies are used when learners are compelled to try to express a meaning for which they do not know the appropriate rule. In order to get the meaning across, learners try to use the language rules in a way that will solve the problem. In order to cope with a communication problem, learners

will use their L1 or use L2 items that are not completely appropriate. In trying to communicate, learners may compensate for the missing knowledge by paraphrasing, borrowing words from their native language. Approximation, word coinage, circumlocution, prefabricated patterns, or false cognates may also become sources of errors (Tarone, 1981).

Though different researchers mentioned different sources of errors, it is not an easy task to differentiate the errors with respect to their sources because a large number of learners' errors are ambiguous and we must be careful "when claiming to have identified the cause of any given error type" (Schachter & Celce-Murcia, 1977, p. 275). In fact, many errors are the result of a multiple, rather than single sources. To reflect this, Dulay and Burt (1974, p. 115) established a category called ambiguous goofs, which is defined as "those that can be categorized as either Interference-like Goofs or L1 Developmental Goofs".

2.6.5 Evaluation of Errors

Thus, going through the stages of EA to examine the error from the point of view of the learner who makes them, the last stage error *evaluation* involves "a consideration of the effect that errors have on the person addressed" (Ellis, 2008, p. 63). The person (i.e. judge) who evaluates the error should decide which errors are more serious, which errors are problematic. Thus, they should make judgments on the *error gravity,* which should guide the teachers on what errors to pay more attention (Ellis, 2008).

Krashen (1982) spoke about three kinds of errors, which he considers the most relevant errors that are to be dealt with; these are *global* errors, *stigmatized* and the *most frequent* errors. Global errors, which make communication impossible because they disable the comprehension of the communicative message, are necessary to be corrected. Stigmatized errors (use of taboo words, socially unacceptable words, or violent language) are to be treated

immediately. The group of the most frequently occurring errors includes errors, which are to be corrected no matter which group they belong to.

2.7 Limitations of Error Analysis

EA was one of the first methods to investigate learner language in order to discover how learners acquired L2. EA clearly showed that the errors made by the learners have different sources and they do not come from their first language only. However, in the 1980s EA gradually lost its popularity as more and more criticism was expressed against this approach. Several problems and limitations have been pointed out that made EA "an imperfect research tool" (Ellis, 2008, p. 19). Larsen-Freeman and Long (1991, p. 62) considered the faults of EA "too blatant for it to continue to serve as the primary mode of SLA analysis".

The main criticism against EA was "the total reliance on errors in the absence of other information" (Gass & Selinker, 2001, p. 68). By focusing only on errors, researchers failed to see the "whole picture" (Larsen-Freeman & Long, 1991, p. 61). Researchers focused on "what the students were doing wrong but not what made them successful" (Larsen-Freeman & Long, 1991, p. 61). Both errors and "non-errors" should be in the focus of researchers in order to provide a complete picture of a learner language. Thus, because of these limitations, EA have been evolved into *Interlanguage* (IL) theory in SLA the reason of which is that IL theory focuses on learners' language systems as a whole, rather than only on what can be wrong with it; i.e. investigating the learner language partially or investigating its errors (Selinker, 1972). Nevertheless, EA is not totally neglected in the study of IL, where "the first type of investigation corresponds to what is often called 'error analysis' [and]… on the basis of this analysis the investigator sets up specific hypothesis about the possible nature of the learners' approximative system" (Corder, 1981, p. 69).

Another challenge against EA was that productive data was overstressed. However, comprehension data is equally important in developing an understating of the process of L2 acquisition (Brown, 2007). Because EA focuses only on learners' *production*, some important features of learners' competence may not be apparent; e.g. the structures they avoid. Schachter (1974, p. 361) states, "If a student finds a particular construction in the target language difficult to comprehend it is likely that he will try to avoid producing it." Thus, if a learner finds a particular structure difficult, we will resort to avoidance: he will avoid using it. The EA is deficient as it is incapable of explaining the phenomenon of avoidance. Avoidance is considered an important issue in EA.

One more problem with EA is that it does not provide a clear picture of how the learner develops knowledge of an L2 over time, as "most of the studies are cross-sectional in nature affording a very static view of L2 acquisition" (Ellis, 2008, p. 68). EA gives a partial picture of L2 acquisition by focusing on the errors, which learners produce at a single point in time.

Celce-Murcia and Schachter (1977) pointed out that we should not supply simple quantification of a particular error: they are not useful. They state that we should treat error frequency with greater sophistication by considering the number of times it would have been possible for the learner to make a given error as well as by taking into account the number of times the error occurred (i.e. article and prepositions are frequent errors because the need to use them arises so often). Thus, we should focus on *relative* rather than on *absolute* frequency. To calculate relative frequency, the number of words and sentences in a corpus is essential, and this will show the percentage of accuracy, as well as how often the L2 learner uses a particular structure both correctly and incorrectly in a given corpus (Celce-Murcia & Schachter, 1977).

Dulay, Burt, and Krashen (1982) pointed out three major conceptual weaknesses of EA. The first lacking point in EA is the confusion of description of errors with errors of explanation, the second is the lack of precision and specificity in the definition of error categories, and the third is the simplistic categorization of learners' errors. Chau (1975, p. 122) also mentioned about these weaknesses by stating, "The most serious weaknesses of EA is a lack of objectivity in its procedures of analysis, of defining and categorizing errors". The reason is that errors are explained according to inadequate taxonomies that are often based on non-observable, subjective characteristics, including also overlapping categories (Abbott, 1980). Nowadays, it is claimed that taxonomies should be grounded on the description of observable data (c.f. Ellis & Barkhuizen, 2005) and include well-defined linguistic categories to minimize subjectivity in the process of error diagnosis and categorization (Dagneaux, Denness, & Granger, 1998). Thus, the researchers should carefully work out the methodological procedures of EA in order to come up with reliable and objective results.

During the 70s, EA experienced both popularity and an attack. Although the weaknesses mentioned above considerably reduce the usefulness of EA, EA "has continued to figure in the study of L2 acquisition" (Ellis, 2008, p. 47). All the limitations mentioned above do not question the validity of EA as a whole but highlight the need for a new direction in EA studies. One possible direction is the use of the computerized corpora in EA research that will solve the methodological weaknesses that the traditional EA had. The advent of computer-based analysis of learner language gave a rebirth to error analysis research. Degneaux, et al. (1998) expected that the rapid progress of computing technology and learner corpora will solve the problems and overcome the limitations of traditional EA. The advancement of the computing technology has made it possible to perform EA more effectively mainly by annotating errors; however, the basic motivations for error annotation are the same as those of traditional EA, such as describing learner language and improving

second-language pedagogy. Computer-aided error analysis (CEA) "will help material designers produce a new generation of pedagogical tools, which being more "learner aware" cannot fail to be more efficient" (Dagneaux et. al., 1998, p. 173). CEA uses computer tools to tag, retrieve, and analyze errors. However, it must be noted that human researchers still have a lot of work to do in the same manner as in traditional EA, such as establishing an error typology for error tagging or examining results obtained from CEA (Degneaux, et al., 1998).

Thus, the study of errors is still recognized as a 'fertile' enterprise (c.f. Ellis, 2008; Ellis & Barkhuizen, 2005; Dagneaux et al. 1998). For researchers, errors can reveal much about the process by which L2 is acquired and the kinds of strategies learners use in that process. For language instructors, errors can give hints about the extent to which learners have acquired the language system and what they still need to learn. Finally, for learners themselves, access to the data marked for error provides important feedback for improvement (Ellis, 2008).

2.8 Pedagogical Implications of Error Analysis

Despite the above-mentioned limitations, EA plays a great role in language teaching. EA has been applied to help L2 teachers recognize, describe, and explain learners' errors. They are the signs of learners' progress, which can reveal their level of language ability (Farhady & Delshad, 2006). Moreover, errors showed how learners develop their competence in the target language by moving through a series of stages. In each of these stages, learners made particular types of errors, and "each stage could be seen as a kind of interlanguage or 'interim language' in its own right" (Carter & Nunan, 2001, p. 90).

The findings of EA may lead educators to devise appropriate materials and effective teaching techniques, and constructing tests suitable for different levels and needs of learners. EA helped to make errors "respectable"- it made people understand that errors should not be

regarded as “signs of inhibition, but simply as evidence of his/her strategies of learning” (Corder, 1981). Errors tell teachers how far towards the goal their learners have progressed and what remains for them to learn (Corder, 1981). Errors are a means of feedback for teachers reflecting how effective they are in their teaching style and what changes they have to make to get higher performance from their students. Furthermore, errors indicate teachers the points that need more attention. Additionally, errors show the way to be treated when their sources are identified correctly.

Errors are significant data for syllabus designers as they show what items are important to be included or which items need to be changed in the syllabus. Celce-Murcia (2006) maintained that an error-based analysis can give reliable results upon which remedial materials can be constructed. In other words, analysis of L2 learners’ errors can help identify learners’ linguistic difficulties and needs at a particular stage of language learning. Celce-Murcia (2006) conducted EA on Armenian EFL students in order to design a syllabus for an intensive four-week remedial English course. She examined the essays of students who scored 500 or below on the TOEFL test. Her results showed that Armenian EFL learners have difficulty in noun classification, article, preposition usage, and word order. The results also indicated that the learners needed more practice in combining simple sentences with conjunctions as well as avoiding using some conjunctions in academic writing at the beginning of a sentence. Thus, such findings can help the course designers to prepare materials that will reflect the linguistic problems that were found out through EA.

There is sufficient evidence at this point to indicate that error analysis is a useful tool in the study of second language acquisition. Moreover, as Ellis (2008) noted, EA is currently served as a “means of investigating a specific research question rather than for providing a comprehensive account of learner’s idiosyncratic forms” (p. 64). As Odlin (2003, p. 478) pointed out the existence of cross-linguistic influences is undeniable” in light of the above-

mentioned points, EA thus can be a useful research tool to explore the role of L1 transfer on second language learning.

2.9 Reappraisal of the Notion of Transfer

Language transfer has always been a key issue in applied linguistics, second language acquisition, and language teaching. Within the past half century, however, its importance in second language learning has been reevaluated several times.

The origin of the term goes back to the behaviorism according to which L1 habits influence the acquisition of L2 habits. In the 1950s, it was often considered the most important factor in theories centered around second language learning and second language teaching. This is the reason that it lost its popularity in the 1960s when the behaviorism was under attack.

In the 1960s, with the advent of the error analysis, learners' errors were seen not "as evidence of language transfer but rather as that of the "creative construction process" (Odlin, 1989, p. ix). The error analyses of the 1960s and 1970s showed that some types of errors were common in the L2 speakers of any native language. From that, researchers found common patterns between second language acquisition and child native acquisition. The important similarities between first and second language acquisition did much to bring the notion of transfer into disrepute and some researchers denied the existence of language transfer in favor of Universalist explanations. As Gass & Selinker (2001, p. 89) pointed out "the acceptance and/or rejection of language transfer as a viable concept has been related to the acceptance rejection of the specific theory with which it has been associated".

However, the empirical research in the 1970s and 1980s has led to new and more solid evidence for the importance of transfer in SLA process. Research reestablished language *transfer* as a major factor in SLA. This led to the return of CA in applied linguistics,

which is now termed as *cross-linguistic analysis* (c.f. James 1998; Odlin, 1989; Kellerman and Sharwood-Smith, 1986; Gass & Selinker, 1983). The notion of transfer has revived under the label *cross-linguistic influence* (Odlin, 2003; Kellerman and Sherwood Smith, 1983) and remains one of the most fundamental issues in SLA research. Gass & Selinker (1983, p.7) stated, "We feel, however, that there is overwhelming evidence that language transfer is indeed a real and central phenomenon that must be considered in any full account of the second language acquisition process."

Transfer is a general term "describing the carryover of previous performance or knowledge to subsequent learning" (Brown, 2007, p. 102). In the case of transfer, the learner uses his/her "previous mother-tongue experience as a means of organizing L2 data" (Littlewood, 1984, p. 25). As Corder (1983, p. 79) mentioned, L1 provides "rather rich and specific set of hypothesis" that the learner can use.

Different terms and phrases have been used by researchers to refer to the phenomenon of language transfer: language mixing (Kellerman, 1983; Selinker, 1972), linguistic interference (Wardhaugh, 1970), language transfer (Odlin, 1989; Kellerman, 1983; Selinker, 1972; Lado, 1957), the role of the mother tongue and native language influence (Corder, 1983). Corder argued that *mother tongue influence* should be used instead of the term *transfer,* as the term "*transfer*" was generally associated with the behaviorist theory (Ellis 2008; Ritchie & Bhatia 1996; Larsen-Freeman & Long 1991; Odlin 1989). He stated, "What is happening in such cases is that the learner is using certain aspects of his/her mother tongue to express his/her meaning because his/her interlanguage lacks to do it" (Corder, 1983, p. 92). To describe the effect of L1 in SLA, *cross-linguistic influence* was proposed by Kellerman and Sharwood-Smith (1986) as an extensive term for transfer which includes not only transfer as it shows in comprehension and production, but also borrowing in Corder's (1983) terminology.

Shachter (1974) defined transfer in much broader terms; i.e. “incorporating all prior linguistic knowledge”. Kellerman (1983) suggested that the term be restricted to “those processes that lead to the incorporation of elements from one language into another” (p. 3). Odlin (1989, p. 5) stated that transfer just means “the influence resulting from similarities and differences between the target language and any other language that has been obviously, and perhaps imperfectly, acquired”. This definition thus suggests that transfer can occur at all the linguistic levels: phonological, lexical, syntactical, and semantic levels, linguistic as well as discoursal, and pragmatic levels (Ellis, 2008; Larsen-Freeman & Long, 1991; Odlin, 1989; Corder, 1981; Richards, 1971). However, even Odlin (1989) stressed that this definition is only a working definition, since there are problematic terms within the definition. Odlin stated that “A fully adequate definition of transfer seems unattainable without adequate definitions of many other terms, such as strategy, process and simplification….One might plausibly argue that a fully adequate definition of transfer presupposes a fully adequate definition of language”. (p. 28).Therefore, “transfer” should be seen as a general cover term for a number of different kinds of influences from languages other than L2. Thus, transfer effects can be measured through investigating errors (negative transfer), facilitation (positive transfer), avoidance, and over-use of target language forms through error analysis (Ellis, 2008; Odlin, 1989).

Transfer effects can be examined either through learners’ reception or production data. Ellis (2008) stated that production data can be naturalistic elicited by means of tasks and tests. Narratives can be a good source of data to examine both linguistic and conceptual aspects of transfer (Ellis, 2008). Odlin (2003, p. 452) pointed out that “the most convincing evidence will come from multiple sources; spoken and written performances as well as responses to measures of perception, comprehension, or intuition”.

There are different factors that "inhibit or promote transfer (i.e. constraints on transfer)" (Ellis, 2008, p. 379). According to Odlin (2003, p. 454), "a constraint could be anything that prevents a learner from either noticing a similarity in the first place or from deciding that the similarity is a real and helpful one". Kellerman (1979 cited in Odlin, 2003) suggested two interacting factors, which are involved in language transfer. One is learners' perception of L1 to L2 'distance' (learners' *psychotypology*) and the other is the degree of *markedness* in L1 structure.

Difference between languages do not always lead to difficulties for L2 learners, *markedness* theory offers a solution to this problem. Linguistically unmarked features are those that are universal in most of the world's languages, and these are thought to be more transferable than typologically unusual features (Eckman, 1977). According to Jordens & Lalleman (1996, p. 47), "if there are two ways to express the same meaning: one of the possibilities has a special status, or is *marked*". Ellis (2008, p. 381) defined the term "marked" as "some linguistic features are 'special in relation to others, which are more 'basic'. SLA research has revealed that marked structures in the target languages are more difficult to learn than unmarked structures, and therefore marked structures in L1 are seldom transferred to L2, if at all.

Transferability of linguistic elements in Kellerman's framework is a relative notion depending on the *perceived* distance between L1 and L2 and the structural organization of learners' L1. In other words, transfer errors are not only based on structural distance between L1 and L2 but also on "how the learner perceives this distance". Kellerman (1979 cited in Odlin, 2003) used the term *psychotypology* to refer to learners' perception about language distance. Moreover, Odlin (2003, p. 443) also stated transferability of the linguistic elements depends partially on learners' "perception of interlingual identification". Much of what is called cross-linguistic influence depends on learners' judgment on the similarity between L1

and L2. In cases where the judgments are accurate, the transfer will be positive and will facilitate L2 learning. Thus, good prediction on the kind of transfer "requires close study of what learners understand and produce" (Odlin, 2003, p. 478).

The notion of perceived distance constantly changes for learners as they acquire more of the target language. Thus, learners' proficiency level also seems to be a relevant factor in determining when transfer will occur. Kellerman (1979, cited in Odlin, 2003) showed that learners improved in their ability to identify acceptable and unacceptable structures with increasing proficiency. It is significant that transfer errors are more frequently met with beginners than with intermediate students. Brown (2007, p. 263) stated that in the early stages of L2 acquisition the native language "is the only previous linguistic system upon which the learner can draw". The beginner has little knowledge of L2 in order to make hypothesis about rules, this is the reason that he/she uses his/her L1 more frequently (Kellerman, 1979, cited in Odlin, 2003).

According to Odlin (2003, p. 478), there are many questions about transfer that are still left unanswered: "whatever underlies the very real effect of transfer remains elusive". He goes on to state that "there does not yet exist any comprehensive theory of language transfer". However, Odlin pointed out some of the most important tendencies that are seen in transfer research. By reviewing research in this field Odlin (1989, p. 52) came to the following conclusions: 1) transfer occurs in all linguistic subsystems, 2) transfer occurs both in informal and formal contexts, 3) transfer occurs among children as well as among adults, 4) language distance is a factor that affects transfer, 5) typological factors can affect the likelihood of transfer, 6) transfer can sometimes involve unusual structures, 7) nonstructural factors can affect the likelihood of transfer.

Ellis (2008) stated two main problems in the study of transfer; i.e. the problem of how to distinguish communication and learning transfer, and the problem of how to compare two

languages. Ellis mentioned that it is difficult to make a distinction between the errors that are the result of some compensatory strategy and those errors that are evidence of learners' knowledge of the L2 system. Comparisons of the target language and learners' previously acquired languages also create a problem in transfer research as was evident in contrastive analysis. The problem lies in meeting "the criteria of descriptive and explanatory adequacy that any description of language must meet" (p. 402). In addition to this, there is a problem of equivalence; i.e. finding a theoretically sound basis for comparing two languages. Ellis states these problems are "less acute" now than earlier, "given that less emphasis is placed on preparing comprehensive contrastive analyses and more on the detailed examination of specific linguistic elements" (ibid.).

The role of L1 in SLA is a complex and controversial field of linguistic studies. Although L1 transfer and CAH are problematic in certain aspects, it is impossible to deny their existence. Since the early days of CA great advancements have been made in the study of transfer, and nowadays the role of any prior linguistic knowledge remains one of the most fundamental issues in SLA research and its continuous discovery makes us better understand the process of second language learning. As Brown (2007, p. 252) pointed out, "prior experience plays a major role in any learning act, and that the influence of native language as prior influence must not be overlooked".

In fact, in recent years there has been a successful reappraisal of the role of L1 in SLA. It is hard to assess exactly how important L1's role is in SLA, but just as Ellis (2008, p. 40) put it: "The learner's L1 is an important determinant of SLA. It is not the only determinant, however, and may not be the most important. But it is theoretically unsound to attempt a precise specification of its contribution or even try to compare its contribution with that of other factors."

Today there is a widespread agreement that L1 clearly helps, not inhibits, the process of L2 learning. To what extent it actually helps depends on the relationship between L1 and L2. L1 knowledge is viewed as a resource or a strategy, which learners can use, both consciously and subconsciously, to overcome their limitations (Ellis, 2008).

What is important to note is that transfer does not occur only across related languages; "it is part of a universal phenomenon where learners try to facilitate the learning process by making use of any prior linguistic knowledge they have" (Ringbom, 2007, p. 5). It is important to notice that the notion of transfer is one of the main factors that make the acquisition of L1 different from the acquisition of L2 (Schachter, 1983). Moreover, as Ellis (2008, p. 402) claimed, "No theory of L2 use or acquisition can be complete without an account of L1 transfer".

2.10 Statement of Purpose

This study considers the importance of cross-linguistic influences on second language acquisition, trying to analyze how negative transfer affects the process of writing on a second language. In this research, emphasis is on written production by Armenian learners of English as a foreign language.

The study will follow the procedures of EA mentioned above in terms of identifying, describing, and explaining the errors of the learners made in their writings. This study uses EA as a research tool to detect the number and nature of errors made by Armenian EFL learners by focusing mainly on the errors that are the result of L1 transfer that will be explained by conducting a CA of that particular element.

In light of the above-mentioned factors, the research questions to be addressed are:

1. *What are the major sources of errors in the English writing of Armenian EFL learners?*
2. *To what extent does L1 affect the writing performance of Armenian EFL learners?*

3. *What are the major types of transfer errors in the English writing of Armenian EFL learners?*
4. *Does the proficiency level affect the proportion of transfer errors in the English writing of Armenian EFL learners?*

Chapter 3
Methodology

This study employed the techniques of Error Analysis to explain the occurrence of learners' errors in their writing samples. In this chapter, first the description of the data and participants will be given. Then data collection and data analysis techniques will be explained as well as what statistical techniques were performed to answer the proposed research questions. Finally, information about what calculations were performed will be presented.

3.1. Data and Participants

The corpus available for this study consisted of 149 essays written in English by native speakers of Armenian in the years of 2007-2009. The samples were collected from the learners who wrote the additional essay of the institutional TOEFL Paper-based Test (PBT) as a measure of their writing ability as well as from the learners who took a placement test to the General English Classes (GEC) of the Extension Program at the American University of Armenia (AUA). One of the items of the GEC placement test was a constructed response task as a measure of learners' writing ability. The learners were required to write an essay on a given topic within 40 to 45 minutes without consulting dictionaries or reference books.

The writing samples were divided into two parts: essays (n=72) written by advanced level students and those (n=77) written by intermediate level students. The participants who took TOEFL PBT were regarded as having an advanced level of English proficiency with scores ranging between 540 and 590. The learners who took the GEC placement test were regarded as having a higher intermediate or intermediate level of language proficiency as determined by the results of the GEC placement test, which had sections on grammar and vocabulary as well as on listening and reading skills. In fact, it is important to notice that

there was not much of a difference between the essays written by the participants of intermediate and higher intermediate levels; i.e. the length and the number of errors in those essays were nearly the same. This is the reason that in the current study the essays written by intermediate and higher intermediate level participants were combined and were regarded as *intermediate*.

3.2. Data Collection and Analysis

In this study, 149 essays written by Armenian EFL learners were analyzed to investigate the nature and sources of learners' errors. The written samples were grouped according to the participants' proficiency level in order to find out if L2 proficiency is a determinant factor affecting the extent of transfer. After grouping the essays, the following steps were taken when conducting the error analysis: *identification* of errors*, classification* of errors based on the grammatical analysis of the errors and *explanation* of the errors by determining their sources (Ellis, 2008).

First, the deviant forms were identified on the basis of grammatical acceptability and context-appropriacy; i.e. those linguistic elements, which were not grammatically acceptable and were not appropriate in the given context were considered errors. In addition to grammatically incorrect forms, contextually inappropriate elements were also considered errors. For instance, a singular subject with a plural verb was labeled a "subject verb agreement" violation, while a correctly formed verb in the past tense was labeled "incorrect tense" if the context clearly showed a present-tense orientation.

The corpus of essays was closely examined twice in order to ensure consistency of error identification. For the first time, each essay was read carefully, the erroneous structures were identified, and then the deviant forms were typed into the computer with their clausal context. For the second time, all the essays were reread to ensure that the errors had been

properly recorded. By analyzing the essays for the second time, 35 erroneous structures were identified that had not been detected before.

In order to classify the errors, an error classification scheme developed by Celce-Murcia (2006) was adapted for this study. Her error inventory is based on the errors made by Armenian EFL students. It consists of the following seven categories: 1) errors in the noun phrase, 2) errors in the verb phrase, 3) errors in the prepositional phrase, 4) errors at the clause level, 5) lexical errors, 6) errors in mechanics (punctuation, capitalization) and 7) spelling errors. However, Celce-Murcia's taxonomy is only limited to specific types of errors that were made by the participants of her study. Therefore, in the current data, several types of errors (e.g. errors in the use of adjectives and adverbs) were observed that were not included in her inventory. Hence, there arose a need to extend her taxonomy and to include other grammatical categories or subcategories that may cause difficulty to the learners. In the current study, Celce-Murcia's categorization has been extended on the basis of various approaches on the same issue proposed by the following researchers: Darus and Ching, 2009; Darus and Subramaniam, 2009; Keshavarz, 2008; Granger, 2003 & Dagneus et. al, 1998.

For instance, subcategories such as *negative construction* and *question formation* were added to the current taxonomy by consulting Darus and Ching's (2009) study on the analysis of Malay EFL students' errors. Keshavarz (2008) conducted an error analysis on Iranian EFL students' writings and he found errors in the use of *conditional sentences, negative constructions,* and *active/passive voice.* Since these types of errors were observed in the current data, they were added to the existing taxonomy. Further, Darus and Subramaniam (2009) observed errors in *noun/pronoun agreement.* Since the participants of this study had problems in this area as well, these error types were also inserted into the taxonomy as one of the agreement-type errors. One of the error categories that was proposed by Dagneus et. al. (1998) was errors in the use of *adverbs* and *adjectives* and as there were such types of errors

in the participants' written works, these grammatical categories were added to the taxonomy as well. Thus, the purpose of those modifications was to make the taxonomy more applicable to the current data.

Table 3 displays the error taxonomy that was adapted for the current study by consulting the above-mentioned authors.

Table 3 *Error Taxonomy Adapted for the Current Study*

Category	Subcategory	Example
Noun phrase	▪ Count/non-count nouns ▪ Articles use o Definite o Indefinite o Zero article ▪ Pronouns o Types of pronouns	• Incorrect number on noun • Incorrect use of count/non count nouns • Omission of the definite/indefinite article • Overuse of the definite/indefinite article • Incorrect use of the definite/indefinite article • Lack of number agreement between the determiner and the head noun • Use of a wrong quantifier • Incorrect pronoun choice • Inappropriate pronoun use • Overuse of pronoun
Verb phrase	▪ Tense o Present o Past o Future ▪ Aspect o Progressive o Perfect ▪ Modal auxiliaries ▪ Copula 'be' ▪ Active/Passive voice	• Incorrect use of tense form • Incorrect modal • Missing modal • Extra modal • Incorrect use of the modal auxiliary verb • Overuse or omission of copula 'be' • Wrong use of active and passive voice
Adjectives* and Adverbs *	▪ Degrees of comparison ▪ Place of adjectives in attributive phrase ▪ Degrees of comparison ▪ Place of adverbs in the sentence	• Incorrect adjective choice • Incorrect use of adjective • Mixing up adjectives and adverbs • Incorrect adjective order • Incorrect use of adverbs
Prepositional phrase		• Incorrect use of preposition • Missing prepositions • Extra preposition

		• Omitting preposition with di-transitive verbs
Verbals	▪ Infinitive ▪ Gerund	• Incorrect use of gerund and infinitive
Clauses	▪ Word order ▪ Questions (Special, Tag, Yes/No, Wh-) ▪ Negative constructions ▪ Conditional clause ▪ Restrictive/non-restrictive relative clauses o Relative pronouns ▪ Conjunctions ▪ Mood o Subjunctive ▪	• Disordering/Inversion of subject and verb • Wrong word order in *wh* noun clause • Relative pronoun deletion • Incorrect use of relative pronouns • Incorrect use of conjunctions • Overuse or omission of conjunctions • Errors in the use of conditional sentences • Wrong use of negative constructions • Wrong question formation
Agreement	▪ Subject-verb agreement ▪ Noun/pronoun agreement	▪ Incorrect subject-verb agreement `

Adapted from Darus & Ching, 2009; Darus & Subramaniam, 2009; Keshavarz, 2008; Celce-Murcia, 2006; Granger, 2003; Dagneus et. al, 1998

The errors found in the essays were classified according to the above-mentioned scheme. Every grammatical error was recorded except for spelling errors, errors in mechanics and lexical errors, which were ignored. Each error was then labeled according to the grammatical rule that had been violated. A total of 427 errors were identified in the corpus of 27,576 words and assigned to one of the main categories of the error taxonomy (see Appendix 1).

Some of the errors were loaded into the *Markin* 3.1 software program in order to cite them as an example in the error inventory (c.f. Darus & Subramaniam, 2009). *Markin* 3.1 is a computer program that is used for marking and annotating text documents through computer. The annotation buttons in the software were customized accordingly based on the error classification scheme.

There was observed a difference between the number of words produced by the advanced participants and those by the intermediate ones and because of this distribution, the

relative frequencies of the errors in each proficiency group were calculated in order to have a precise picture of the data. This showed in which proficiency group errors were more frequently met by taking into account the number of words produced by the participants.

Drawn from the data, a total of 23 grammatical error types were recorded out of the mentioned seven grammatical categories. The frequencies of the error types in each proficiency group was added up in order to find out the number of occurrence of each error type in the data, regardless of the participants' proficiency level. Moreover, the Chi-square analysis of the error types was carried out to find out the cut-off point that would determine those error types that were significant in the current corpus. The cut-off value at .05 level of significance (d.f. =1) was determined which corresponded to a particular observed frequency of one of the error types. Those error types that fell beyond that frequency value were considered significant and those below that point were considered not significant, and hence, ignored in this study.

In the next step, the probable causes of the errors were determined in an attempt to explain why such deviances occurred most frequently in the writing performance of the participants. In order to accomplish this "we need to ask what processes learners invoke when they do not know the target-language form" (Ellis & Barkhuizen, 2005:65). Since the focus of this study was the role of L1 transfer in writing in a foreign language, contrastive analysis (CA) was performed on each error type in order to find out whether the errors were caused by the influence of the learners' native language or that of the target language itself. As mentioned by Ellis (2008), Byram (2000) and Fisiak (1981) to name but a few, CA should be used along with EA whenever possible to understand whether the error is due to L1 influence or not.

Each error type was explained in terms of the grammatical rules of the English language. First, the description of the linguistic element under investigation was provided

both in English and in Armenian. Then the actual comparison and contrast of the two systems were performed on that particular structure; i.e. areas of similarity and differences were identified. The contrastive analysis indicated what types of errors had been made because of the direct transfer from the Armenian language as well as what errors types had been committed regardless of the participants' L1.

The proportion of interlingual and intralingual errors was calculated in order to find out the major source of errors in the English writing of Armenian EFL learners. Finally, the proportion of transfer errors was determined in each proficiency group in order to find out if the language proficiency level has an influence on language transfer; i.e. in which proficiency group transfer errors are more frequently met.

Chapter 4
Results and Discussion

In this chapter, the findings of the present study in light of its objectives will be presented and discussed. First, the errors made by the participants will be identified in terms of their types, second the explanation of these errors will be presented, and then their potential sources will be determined through the contrastive analysis between Armenian and English.

4.1 Results

In this study, 149 essays written by Armenian EFL learners were analyzed. 72 essays were written by advanced EFL learners and 77 by intermediate EFL learners. Altogether 27,576 words were analyzed. The total number of grammatical errors that were found in 149 essays was 427. *Table 4* displays the general information about the data in terms of the number of words, number of errors, and the percentage of errors in each language proficiency group.

Table 4 *General Description of the Data*

	Number of words	**Number of errors**	**Percentage of errors**
Advanced essays	18,354	253	1.38%
Intermediate essays	9,222	174	1.89%
Total	27,576	427	3.27%

By taking into account the total number of words in the essays, it was revealed that intermediate participant made more errors than advanced ones. Errors constituted 1.89% of

the total number of words in intermediate essays, while in advanced essays only 1.38% was erroneous structures.

The 427 errors are classified into seven grammatical categories, most of which have several subcategories (see Appendix 1). The categories are the following: 1) errors in the noun phrase, 2) errors at the clause level, 3) errors in the verb phrase, 4) errors in agreement, 5) errors in the use of verbals, 6) errors in the prepositional phrase, and 7) errors in the use of adjectives and adverbs. The current taxonomy provides a language-specific classification of errors that is based on the grammatical rules of the English language.

Table 5 displays the frequency and percentage values of the errors in each grammatical category as well as in each proficiency group in descending order.

Table 5 *Error Category Breakdown Among Advanced and Intermediate Learners*

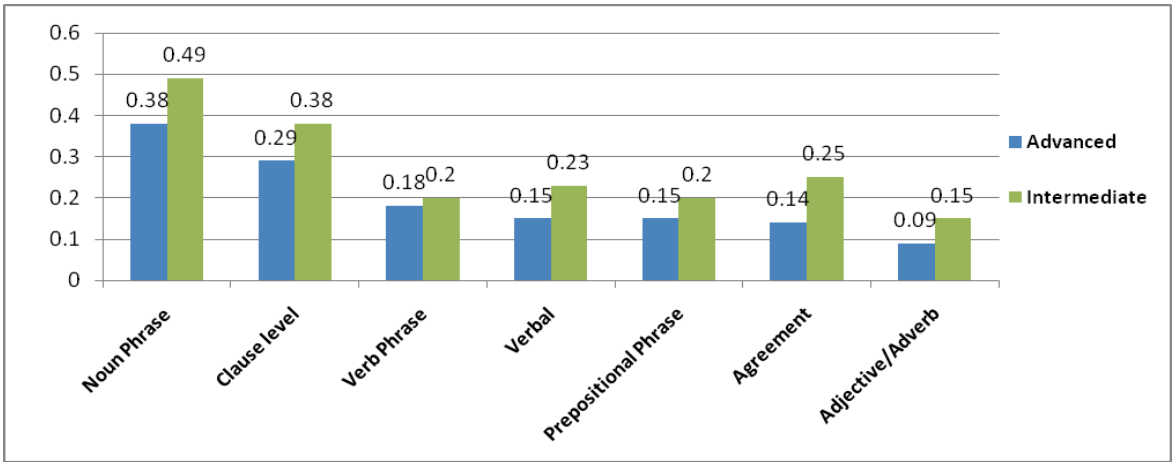
Type of error: *Advanced*	**No. of errors**	**Percentage (n=18354)**	**Type of error: *Intermediate***	**No. of errors**	**Percentage (n=9222)**
Noun phrase	70	.38%	Noun phrase	45	.49%
Clause level	53	.29%	Clause level	35	.38%
Verb phrase	33	.18%	Agreement	23	.25%
Verbal	27	.15%	Verbal	21	.22%
Prepositional phrase	27	.15%	Prepositional phrase	18	.20%
Agreement	26	.14%	Verb phrase	18	.20%
Adjective and adverb	17	.09%	Adjective and adverb	14	.15%
Total	**253**	**1.38%**	**Total**	**174**	**1.89%**

Table 5 shows that the frequencies and the percentage values in both of these groups are different. Moreover, the percentage values of the error categories in intermediate essays are higher than in advanced ones. However, errors in the *noun phrase* and at the *clause level* constitute the two most serious grammatical problems among intermediate and advanced learners. The third most serious grammatical problem that advanced learners had is in the *verb phrase* whereas the intermediate learners had difficulty in *subject-verb agreement* that constitutes the third most serious problem among intermediate learners. Similar results were observed in the study conducted by Celce-Murcia (2006) on the English writing samples of

the Armenian EFL learners. The error analysis of the Armenian EFL students' writings showed that the four most common errors committed by the learners was in the *noun phrase*, at the *clause level*, in *subject-verb agreement* and in the *verb phrase* respectively. The causes of these errors were not discussed in Celce-Murcia's study and we cannot make judgments on the sources of these errors unless contrastive analysis of these elements is performed (see section 2.2). Only after contrasting the two language systems, will we be able to state that these kinds of errors are either the product of the complexities of the English grammar or they can be traced to the Armenian language.

Figure 1 depicts the distribution of different error categories with regard to the proficiency level of the learners.

Figure 1 The *Distribution of Error Categories Among Advanced and Intermediate Learners in Terms of Their Percentage Values*



It is necessary to point out that the total number of errors for each grammatical category may not necessarily indicate the difficulty level of the categories for the students (Darus & Subramaniam, 2009). It is not quite appropriate to assume that lower number of errors indicates a less difficult grammatical element for the students. Rather, the fewer number of errors may simply mean that within this particular corpus, the errors in a particular category occur as frequently as it does in other categories. Moreover, the lack of occurrence

of certain grammatical elements may also have influence on the frequency distribution of the errors in certain grammatical categories (Darus & Ching, 2009).

Drawn from the data, a total of 23 grammatical error types were recorded out of the mentioned seven categories. *Table 6* shows the frequency distribution of error types in the corpus of 27,576 words. It also presents the Chi square value of these error types in order to uncover the cut-off point that will show what types of errors are significant in the current corpus.

Table 6 *Error Type Breakdown*

Type of error	No. of errors: Total	X^2
Article	79	189.5
Word order	45	35.6
Subject/verb agreement	37	17.1
Purpose infinitive	35	13.5
Tense/aspect	26	2.6
Copula 'be'	25	1.9
Incorrect preposition	19	0.0
Count/non-count	17	0.2
Preparatory 'there'/ 'it'	16	0.5
Omission/overuse of preposition	15	0.8
Conditional	14	1.3
Noun number	14	1.3
Number agreement	12	2.6
Zero preposition	11	3.4
Mixing adjective and adverb	11	3.4
Degree of comparison	10	4.3
Place of adverb	7	7.6
Bare infinitive	7	7.6
Conjunction	7	7.6
Gerund	6	8.9
Complex object	6	8.9
Pronoun	5	10.3
Adjective with auxiliaries	3	13.5
Total	**427**	

X^2 critical=3.84 d.f. =1 p < .05

The X^2 critical at the .05 level of significance is 3.84; i.e. for one degree of freedom the cut off value of X^2 is 3.84. As *Table 6* displays, the cut off value corresponds to p*urpose infinitive* error type the frequency value of which is 35. The error types that fall above that

value are considered significant. Thus, in the current corpus only the following four types of errors were determined to be significant: Article usage, Word Order, Subject-Verb Agreement, and Purpose Infinitive.

*Table 7*displays the breakdown of the above-mentioned four types of errors among the proficiency groups.

Table 7 *Breakdown of the Errors that were Found to be Significant Among Advanced and Intermediate Learners*

Type of error	No. of errors: *Total*	Percentage: *Total* (n=27576)	No. of errors: *Advanced*	Percentage: *Advanced* (n=18354)	No. of errors: *Intermediate*	Percentage: *Intermediate* (n=9222)
Article	79	.28%	47	.26%	32	.35%
Word order	45	.16%	29	.16%	16	.17%
Subject/verb agreement	37	.13%	16	.09%	21	.23%
Purpose infinitive	35	.12%	19	.10%	16	.17%
Total	**196**	**.71%**	**111**	**.60%**	**85**	**.92%**

Thus, only 41% of the total number of errors (n=482) was revealed to be significant. The differences between the observed and expected frequencies of these four error types do not occur due to chance alone. This means that there are other causes that should be investigated in order to find out why the participants made those errors more frequently than other types of errors.

4.2 Discussion

In this section, the explanation of errors is presented in descending order based on their proportions. A contrastive analysis of the erroneous grammatical elements between Armenian and English is conducted in order to determine the sources of the errors. Sample of students' errors are displayed with their clausal context. It should be noted that the examples in the sentences only show the errors in the area specified and other errors in the sentences are not taken into consideration. The occurrence of multiple errors in a single sentence was

very common among the participants. Therefore, the same sentence could be quoted several times in different categories of errors. The Armenian sentences are presented both in the Armenian scripts and in Romanized transcription.

4.2.1. Analysis of the Errors in Article Use

In the current data, errors in the use of articles make up the largest category of errors in the classification scheme. Article errors constituted .28% of the total number of words of which .26% were made by advanced level participants and .35% by intermediate ones.

Article errors are categorized into two types: omission and overuse. Omission refers to the lack of an article when it is required. The distribution clearly shows that the omission of the articles is the main problem area for Armenian learners, with the indefinite article the main source of the trouble. This type of errors had the highest frequency (n=59). Overuse, on the other hand, indicates articles which were used where they were not needed (n=20).

These errors can be attributed to more than one source, the most obvious of which may be native language transfer, as the learners may be giving the equivalent native language structure as the result of their inadequate knowledge of the target language. However, in order to make judgments about the cause of these errors, it is necessary to show the usage of the articles in both English and Armenian. For this reason, a contrastive analysis is conducted only on those types of article errors that were most problematic for the participants.

4.2.1.1 The Article System in English and Armenian

An ***article*** is a word that combines with a noun "to signal generecity or specificity aspects of the noun it modifies" (Gordon & Krylova, 2000, p. 114). The three main articles in the English language are ***the***, ***an*** and ***a***. The absence of any of these forms in front of a noun is assumed to be a *zero* article (**ø**). In English, the choice of the correct article depends on the character of the noun (Gordon & Krylova, 2000).

The Armenian language also has an article system that is similar to that of English in meaning; however, the form is highly varied. In Armenian, definiteness is expressed by marking the noun with the affixes /-□ / [ə] or /-□ / [n], and indefiniteness is expressed by the absence of /-□ / [ə] or /-□ / [n] and sometimes with the addition of /□□/ [mi] before a noun. This corresponds to the English definite (*the*) and indefinite (*a/n)* article system. However, even though the concept is present in the two languages, their realizations are different.

For example, the Armenian and English sentences below are equivalent in translations:

Example: *Give me **the** pen!*-□□□□ □□□ □□□□□*:*
[tur indz dritʃə]

Example: *Give me **a** pen!*-□□ □□□□ □□□□ □□□*: or* □□□□ **ø** □□□□ □□□*:*
[mi gritʃ tur indz] [gritʃ tur indz]

As we can see, in Armenian, the definiteness is expressed by affixing the noun, while the indefiniteness is expressed either by placing the word / □□/ [mi] before the noun or without affixing the noun. The Armenian indefinite article / □□/ [mi] is optional and in many cases it can be omitted. That is, while English requires the use of an indefinite article, Armenian may show indefiniteness by not using an article at all. The fact that the Armenian marker for indefiniteness is optional in contrast to that of English is probably the cause of the learners' deviation from the target language rule.

In spite of the aforementioned similarities between Armenian and English article systems, Armenian learners often produce ungrammatical structures when using articles. Celce-Murcia's (2006) analysis of the errors made by Armenian EFL learners revealed that the highest proportion of errors was in the use of articles. In her study, errors in the article use dealt with the omission/overuse of the definite and indefinite articles. Similar results were recorded by Bataineh (2002) who examined the writings of Arabic speaking learners. Arabic

also has similar article system to that of English. He recorded only one type of article errors that could be traced back to the influence of Arabic. The learners omitted the indefinite article because Arabic does not have a distinct marker for indefiniteness the way English does. This indicates that the learners' L1 plays a major role in the acquisition of English article system: "It has been documented in L2 studies that learners of English generally have difficulty acquiring articles especially among learners from first languages [that do not have article system]" (Wong & Quek, 2007).

Celce-Murcia and Larsen-Freeman (1999, p. 271) stated, "articles are understandably problematic from a cross-linguistic perspective". Articles are believed to be a source of difficulty for EFL learners, especially for those whose native languages do not have articles (e.g., Russian) or do have articles or article-like morphemes (e.g. Armenian) which are used in ways that differ from that of English articles (ibid.). Moreover, this difficulty may be partly due to the fact that there are many rules governing the use of articles and there are many instances where the use of articles does not seem to follow any clear rule (Swan, 1995). Thus, to be able to use an article properly, the students have to be sensitive in differentiating the use of the definite article, indefinite article, and even using no article at all.

4.2.1.2. Omission and Overuse of the Indefinite Article

In the current data a total of 51 errors related to the use of the indefinite article were found. Below are some of the erroneous sentences made by the participants where they omitted or overused the indefinite article (see *Appendix 2* for more examples).

It becomes reason *Indefinite article*
In big company *Indefinite article*
I have job *Indefinite article*
She is interesting person *Indefinite article*
Greece is very beautiful city *Indefinite article*
A *Overuse of "a"* *blond hair*
The traffic problem is unavoidable fact *Indefinite article*

Give me a[Overuse of "a"] *good advice*
A[Overuse of "a"] *work*

Though Miller (2005, p. 82) states that "*a* or *an* is slightly less problematic for most students, since its use is restricted to singular, countable nouns" in the current data, errors in the use of the indefinite article were made by the participants most frequently. The probable cause of the learners' deviation from the target language rule lies in the fact that there are two ways of expressing indefiniteness in the Armenian language; i.e. marked and unmarked which is different from the way English does.

In English, *a (an)* signals that the modified noun is indefinite, referring to *any* member of a group. The indefinite article is used with singular nouns when the noun is general and not known (i.e. not definite) to the reader/listener. The use of the indefinite article depends on whether the noun is countable or uncountable (also called "count" and "mass"). Countable nouns are those, which may take a plural form (such as "tables" or "children"), while uncountable nouns (such as "water" or "information") do not have plural. In English, nouns denoting material (e.g. water, bread, gold, paper, etc.) and abstract nouns (e.g. love, happiness, advice, work, news, etc.) are considered to be uncountable.

Celce-Murcia and Larsen-Freeman (1999) claimed that the problematicity of the use of the article system is due in part to whether or not the lexical classification into countable versus uncountable nouns corresponds in the native and target languages. For example, *news* and *work* are uncountable in English, but countable in Armenian. The count/mass distinction is a very important aspect of the English article system. Count/mass distinction determines whether a noun selects *a* or *zero article (ø)* in indefinite contexts.

Thus, the indefinite article is only used if the noun is countable, singular, and has not been mentioned before.

Example: *I have read* ***a*** *book on this topic*.

Example: *I have* **ø** *information for you.*

In the first example, the reader/listener does not know yet which book is referred to, since the '*book'* is countable and singular, the indefinite article is used. In the second example, the '*information'* is uncountable, therefore *zero article* is used.

In the Armenian language, the same meaning of indefiniteness is expressed either by placing the indefinite article /□□/ [mi] before the noun it refers to or without using any article that is called *zero indefinite form*. Hence, indefiniteness in Armenian appears as unmarked by using the bare noun and as marked by using the indefinite article /□□/ [mi] with countable singular nouns.

Example: *He is reading* ***a*** *book now.*

□□□□ □□ □□ □□□□ □ □□□□□□□□:
[hima na mi girk e kardum]

Or

□□□□ □□ **ø** □□□□ □ □□□□□□□□:
[hima na girk e kardum]

In the first Armenian sentence, the indefinite article is used, while in the second, zero indefinite article is used, and in contrast to the English language in both of the cases, the sentences are considered grammatically correct.

Due to the aforementioned differences between the two languages, the learners who do not have a deep understanding of the English article system, very often transfer the Armenian language rule to the English language. As the *zero indefinite article* is unmarked in Armenian and is used by Armenians more frequently in every day speech, it is easily transferable into the English language. This is the reason why the Armenian EFL learners omit the indefinite article with singular count nouns. Moreover, as in Armenian the plural nouns are used without the indefinite article, in the current data no error was found on the use of the indefinite article with plural nouns. Thus, the Armenian language both helps and inhibits learners to produce grammatically correct sentences in English. In short, the sources

of those errors where the participants omitted the indefinite article are in the Armenian language.

Like English, in the Armenian language, nouns are classified into count and non-count. In Armenian, concrete nouns are countable that denote concrete entities that are accessible to the senses, observable or measurable (Asatryan, 2002). They denote objects, state of affairs, materials (e.g. gold, water, paper, rain, snow, etc). Abstract nouns are uncountable that denote non-observable and non-measurable entities (e.g. love, freedom, speed, deaf etc.) (Asatryan, 2002). Thus, in Armenian, only abstract nouns are considered to be uncountable, while nouns of substances are countable. For instance, *news, information, knowledge, work* are countable in Armenian but uncountable in English. In Armenian, only countable nouns can be used with the indefinite article / □□/ [mi], or as indicated above, in most cases zero indefinite article is used both with countable and uncountable nouns.

Due to these differences between the count/mass nouns in Armenian and English, Armenian learners use the indefinite article with such kinds of words that are countable in Armenian. For instance, in the current data, the following words were used with the indefinite article: *information, news, work, advice, success, hair,* and *water*. All these words are countable in Armenian; i.e., they can take the indefinite marker / □□/ [mi] and they can be used in plural.

Thus, the differences between the indefinite article system of Armenian and English as well as count/mass distinction in the two languages make it difficult for students to grasp the English notion of the indefinite article. This is the reason why the participants made the highest proportion of errors in the use of the indefinite article. This study confirms the results of the error analysis discussed by Celce-Murcia (2006) that a considerable percentage of total errors committed by Armenian EFL learners is found in the use of the indefinite article which results in the negative transfer from the Armenian language.

4.2.1.3. Omission and Overuse of the Definite Article

In the current data, 28 errors were recorded in the use of the definite article. *Table 8* displays some of the errors of this type (for complete list of errors refer to *Appendix 2*).

Table 8 *Examples of Errors in the Use of the Definite Article*

Non-generic use	Do not do same*Definite article* work many times
	All parts of world*Definite article*
	In 21st*Definite article* century
	By help*Definite article* of
	The step that brought hope for success was idea*Definite article* to connect
	It is bad for boys*Definite article* who likes to drive
Generic	There are the*Overuse of "the"* different opinions that it is right
	To build a road for the*Overuse of "the"* bicycle riders
	Besides it he is writing the*Overuse of "the"* poems about life
	The*Overuse of "the"* computers are good inventions
	I have found out a number of the*Overuse of "the"* disadvantages and advantages for each type

The participants had problems in using the definite article to express both generic and non-generic meanings. Celce-Murcia (2006) has also revealed that the second most frequent errors made by Armenian EFL learners are in the use of the definite article.

Ansarin (2008) stated that the acquisition of the English definite article systems has been one of the difficult areas for foreign and second language learners. As Master (2002) stated the reason for this difficulty is in the wide variety of usage of the definite article. It is more problematic when the learners' L1 does not have a definite article system. As it is stated by a number of researchers, the root of the problem lies in the contrast between the two

languages involved (Farahani, Roodbari & Ghodrazi, 2009; Ekiert, 2007; Lu, 2001). Thus, in order to find out why Armenian learners make errors in the use of the definite article, it is necessary to contrast the two languages and find out the sources of these errors; i.e. whether these errors are intralingual or interference.

When referring to a particular thing or person, that is shared by the speaker and the hearer, the definite article *the* is used in English that proceeds the noun. It is used when the speaker knows specifically what is being talked about and assumes that this knowledge is shared by the hearer (reader) (DeCarrico, 2000). The definite article ***the*** is compatible with both count and mass nouns (e.g. *the dog, the water*). What determines the choice between ***the***, on the one hand, and ***a*** or **ø** on the other, is definiteness. The task for L2 learners is therefore, to know whether a noun refers to a) a count or mass entity, and b) a definite or indefinite entity. Thus, definiteness and count/mass distinctions are the crucial features for the appropriate use of articles in English.

In English, the definite article has two distinct functions:

a. ***Generic***, in which all or most members of a set are referred to (Celce-Murcia & Larsen-Freeman, 1999, p. 279). When expressing a generic meaning, ***the*** is used with singular nouns. The noun here is used to refer to the entire class of objects/concepts.

   Example: ***The computer*** *is a remarkable machine.*

   However, when the noun is plural and is used in a generic sense, no article is used. Thus, the omission of articles also expresses a generic (or general) meaning

   Example: **ø** ***Computers*** *are remarkable machines*

b. ***Non-generic***, in which one or more individual members of a set are referred to (Celce-Murcia & Larsen-Freeman, 1999, p. 279). Liu and Gleason (2002) indentify four types of non-generic uses of the definite article:

1. *Cultural use*, where *the* is used with a noun that is a unique and well-known referent in a speech community.

   Example: ***the*** *sun,* ***the*** *world,* ***the*** *moon,* ***the*** *president*

2. *Situational use,* where *the* is used when the referent of the first-mentioned noun can be sensed directly or indirectly by the interlocutors or the referent is known by the members in a local community. The noun is definite because of the shared knowledge. For example, if the writer has written '*the dog*– this means the writer assumes that the reader will know that the reference here is to a particular dog.

   Example*: Do not go there.* ***The*** *dog will bite you.*

   Example: ***The*** *girl was very sad. He gave* ***the*** *girl the book.* (Both the speaker and the hearer know what girl is being talked about)

3. *Structural use,* where *the* is used with the first mentioned noun that has a modifier. '*The'* indicates that the noun is definite, that it refers to a *particular* member of a group. As mentioned by Celce-Murcia and Larsen-Freeman, 1999, p. 280) '*the'* is used with post-modifiers such as relative clauses, prepositional phrases, appositives.

   Example*:* ***The*** *girl in blue.*

   Example*: He is* ***the*** *friend who I trust a lot.*

   Example*:* ***The*** *door of the house was open*

4. *Textual use*, where *the* is used with a noun that has been previously referred to or is related to a previously mentioned noun.

   Example*: There was a letter on the table.* ***The*** *letter was written by her friend.*

   Example: *He bought a book. He later spoke about* ***the*** *author*.

Besides the above-mentioned usages of the definite article, there are certain cases where the use of the definite article is not determined by the context or by the linguistic and sociolinguistic background knowledge of the learners. As mentioned by Gordon and Krylova (2000), besides the grammatical use of the articles, there is also a traditional one, which does not follow certain rules. As indicated by Celce-Murcia and Larsen-Freeman (1999, p. 280) "some uses of the definite article are culture-bound, which makes them particularly difficult for learners who do not share the culture behind the language". They are the following:

i) ***The*** is determined not only by nouns but also by particular adjectives. Superlative adjectives tend to come with *the*, like "*the* highest", "*the* best," and "*the* most beautiful." There are also some other words which behave in the same way to "identify unique things" e.g. "*the* same", "*the* last," and "*the* right", the next", "the first", "the second", "*in the past", "in the future*" (Swan, 2005). As Celce-Murcia and Larsen-Freeman (1999) put it ***the*** is used with ranking determiners and adjectives.

ii) The definite article is used with certain proper nouns, which "seems to be based mainly on tradition" (Gordon & Krylova, 2002, p. 320). It lacks regularity and does not always seem to be consistent.

Example: ***The*** *Nile*

The *USA*

The *Alps*

Thus, in the English language, the definite article expresses both generic and non-generic meanings. Further, it is used with some words and expressions, which seem not to follow any grammatical rule.

The Armenian language also has a definite article that is expressed by the suffix /-□ / [ə] or /-□ / [n]. This definite article typically assigns definite reference to the noun and is

suffixed to the noun stem, or to the plural suffix, or to the case ending (Papoyan & Badikyan, 2003). The selection of /-□ / [ə] or /-□ / [n] depends on the phonetic environment of the noun it modifies. If the noun has a final consonant, /-□ / [ə] is added to it. If it ends in a vowel, /□/ [n] is used. Thus, both Armenian and English have definite article the usage of which depends on the shared knowledge by the speaker and the hearer. However, in Armenian, it is done with the help of affixation and in English, the article is placed before the noun it modifies. In most cases, the Armenian definite article performs the same functions as the English one does. However, there are certain differences between them.

Like English, in Armenian, the definite article also performs two functions: generic and non-generic. In *table* 9*,* the differences and similarities between English and Armenian definite articles are displayed both indicating generic and non-generic meanings.

Table 9 *Differences and Similarities Between Armenian and English Definite Articles: Generic and Non-Generic Use*

Category	Armenian	English	Explanation
Generic	□□□□ □□□□□□ □□□□□□□ □: [kovə tnajin kendani e]	**The** cow is a domestic animal.	No difference
	□□□□□□ □□□□□□ □□□□□□□□□□ □□: [koverə tnajin kendaniner en]	**ø Cows** are domestic animals.	In contrast to English, in the Armenian language, the definite article is used in a generic sense both with plural and singular nouns if the noun it modifies is the subject of the sentence .
Non-generic			
Cultural	1. □□□□ □□□□□□ □: [arevə ʃoghum e] 2. □□□□□□ □□ □□□: [tesel es arev]	1. **The** sun is shining. 2. Have you seen **the** sun?	In Armenian, the use of the definite article with these kinds of words is not obligatory, unless that object is the subject of the sentence.
Situational	□□ □□□ □□□□□□: □□□□□ □□□□ □□□: [mi gna ajntegh: ʃunə kktsi kez]	Do not go there. **The** dog will bite you	No difference
Structural	1. □□	1. **The** girl in a black shirt is	No difference

	□□□□□□□□□□□□□ □□□□□□ □□ □□□□□□ □: [sev vernaʃapikov aghtʃikə im kujrn e] 2. □□□ □□□□□ □□□ □□: [tan durə bats er]	my sister. 2. **The** door of the house was open	
Textual	□□ □□□□□ □□□ □□□□□□□: □□□□□□ □□□□□ □□ □□ □□□□□□□ □□□□□□: [mi namak kar seghanin: Namakə grvats er ir ənkerotʃ koghmits]	There was a letter on the table. **The** letter was written by her friend.	No difference

Thus, in the Armenian language, the use of the definite article with common nouns mainly depends on the context. However, there are differences between the two languages in the use of the definite article. As a rule, in Armenian, the subject is affixed by the definite article. Further, in Armenian, the use of the definite article is not obligatory with nouns that are unique unless they are the subject of the sentence.

There is one more difference between the Armenian □ [ə] and the English *the* when they are used with plural nouns to indicate a generic meaning. In English, it is manifested with a zero article, while in Armenian the definite article □ [ə] is used to express the same meaning.

Drawing from this difference, in the current corpus the participants overused the definite article with plural nouns to indicate generic meaning. Having incomplete knowledge of the generic use of the definite article in English, the participants directly transferred the Armenian language rule to the English language, which resulted in making grammatically incorrect sentences.

Example: *There are the*Overuse of "the" *different opinions that it is right*

I have found out a number of *the* *Overuse of "the"* *disadvantages and advantages for each type*

To build a road for *the* *Overuse of "the"* *bicycle riders*

In the non-generic use of the definite article, there were also a number of errors, which were classified into the above-mentioned four main types.

The participants omitted the definite article in those cases where the referent was a unique entity.

Example: *All parts of* *world* *Definite article*

The source of these kinds of errors could be traced to the Armenian language, which does not have an obligatory use of *the* that is culture bound. As mentioned by Ansarin (2008), if learners commit definite article errors in the such contexts, this means that the formal classroom training and the exposure to the foreign language has not yet helped the learners to fully grasp the cultural knowledge. If this is so, the learners transfer their L1 language rules to the English language. In Armenian, if the noun, which is unique or well-known referent in a speech community and is the subject of the sentence, only in this case it takes the definite article. Thus, in the sentences that the participants omitted the definite article with these kinds of nouns, this means that these nouns do not perform the role of the subject in the sentence. In short, only the errors made in the *generic* and *cultural* uses of the definite article are caused by the interference of L1.

As for the other uses of the definite article, the participants' L1 mostly helped them to obtain the knowledge that is mainly linguistic; i.e. to use it properly where its need was signaled textually, structurally, or situationally. However, several errors were observed in only situational and structural uses of the definite article in spite of the fact that no difference was found in the situational and structural uses of the definite article between English and Armenian. No error was detected in the textual use of the definite article.

Errors in the *situational* use

Example: *The second is political situation*[Definite article]

The step that brought hope for success was idea[Definite article] *to connect*

Depend on situation[Definite article]

You do not have to wait in crowded metro[Definite article]

Errors in the *structural* use

Example: *By law*[Definite article] *of the country*

By help[Definite article] *of*

The main problems are shortage[Definite article] *of time, loss*[Definite article] *of*

It is bad for boys[Definite article] *who likes to drive*

The source of these errors may be either transfer of training caused by faulty material presentation by teachers, textbooks, or second language-learning strategies, the processes by which learners form hypotheses about the nature of the target language. In such situations, the Armenian language could help them use the definite article correctly. The teachers can make the learners aware of the similarities between English and Armenian. Further, they could highlight those cases where the direct translation into Armenian could help them use the definite article correctly.

Although it is primarily the context, which rules the use of the definite article, there are also various semantic and syntactic constraints controlling its use. Below the obligatory uses of the definite article in Armenian as well as its comparison with the English language is presented.

Table 10 *Differences and Similarities Between Armenian and English Definite Articles: Other Uses*

Armenian	English	Explanation
1. □□□□□ □□ □□□□□□□ □: [tomn im ənkern e] 2. □□ □□□□□□ □□ □□□□□□□□: [es gnum em hajastan] 3. □□□□□□□□□□ □□□	**1. ø** Tom is my friend. **2.** I go to **ø** Armenia. **3. ø** Armenia is an old country.	Proper names can be used with the definite article in Armenian, depending on the context. While in English only specific groups of proper names can be used with *the*.

□□□□□ □: [hajastanə hin erkir e]		
□□ □□□□□□□□ □□□□□□□□ □: [na amenalav usanoghn e]	He is **the best** student.	Like English, in Armenian if the nouns are modified by an adjective to any superlative degree, the definite article is used.
□□□□□□ □□□□ □□□□□□□ □ □□□□: [aratʃin dasə sksvum e hima]	**The first** class starts at the moment.	Like English, if the noun is modified by an ordinal number, the definite article must be used in Armenian

Drawing from these similarities and differences between the two languages, in the current data, no definite article error was found with the superlative degrees of the adjectives. The participants did not make definite article errors with proper names, though there were differences between the two languages on the use of the definite article with proper names. This means, that the participants mastered the rule very well and did not overuse *the* with these kinds of nouns.

Errors were also detected with the ordinal numbers, where the learners omitted the definite article though no difference between the languages was found in this category. This could be explained by the incomplete application of rules of the definite article.

In short, the sources of the errors in the use of the English articles could be either the participants' L1 or their incomplete knowledge of the English article system. The results of the contrastive analysis showed that there are more similarities between the English and Armenian article systems than differences. Thus, more errors were detected in such situations where there was a difference between the two languages. As mentioned by many researchers (Farahani, Roodbari & Ghodrati, 2009; Ekiert, 2007; Lu, 2001), errors in the article use are caused by the learners' L1. Farahani, et. al. (2009) and Ekiert (2007) examined the written works of Iranian and Polish students respectively, and found out that the mismanagement of the article system is the most frequent cause of grammatical error in the students' writing. The reason for this difficulty is the learners' L1, as these languages do not have an article

system. Hence, in the current corpus, errors were made only in such situations where the use of the article differs in the two languages.

Thus, out of 79 errors, 67 are interference errors and the other 12 errors, found in the use of the definite article were not the result of the direct transfer from the Armenian language. They are intralingual errors the cause of which is the complexity of the English article system. Moreover, as stated by Wong and Quek (2007) "the difficulty is compounded by the fact that the rules that native speakers have imposed upon article usage contain so many exceptions as to be almost useless as a basis of explanation to non-native speakers". These rules can be internalized through more practice and exposure to the target language.

Thus, these results show that Armenian learners tend to refer to their L1 whenever they face difficulties using articles in English. In general, the findings of the study show that the Armenian students were very much influenced by their L1 in their process of learning English, which were evidently illustrated in their writings. Therefore, the students need to understand the differences between the languages and make use of the unique features of the languages to produce good and acceptable sentences.

Further teachers need to emphasize how the articles are handled in English and Armenian. It is important to make the students aware of the differences in the article system of these languages. Teachers should also highlight certain rules in Armenian that are not appropriate to be used when they write in English. This is to ensure that the students apply correct strategies while writing in English and hence, decrease the occurrence of article errors. As indicated by Wong and Quek (2007, p. 8) "without proper pedagogical intervention, article errors may become increasingly fossilized and difficult to eradicate". Thus, direct teaching could produce positive results.

4.2.2 Analysis of the Errors in Word Order

Errors in word order (n=45) constitute the second most frequent grammatical problem after the errors in article use. As stated by Odlin (1989:95) "word order is one kind of syntactic pattern susceptible to native language influence". Thus, the cause of these violations may come from the difference between English and Armenian word order rules.

English is considered a Subject-Verb-Object (SVO) type language. In other words, SVO is the type of languages in which the *subject*, *verb*, and *object* of a sentence appear (usually) in that order.

Example: *I have time*.
S V O

This structure is rigid in English while in Armenian the word order is relatively free, though the SOV (Subject –Object-Verb) order predominates. Thus, in a simple Armenian clause, in both questions and statements, the conjugated verb usually occupies the final position.

Example: □□ □□□□□□□ □□□□□:
S O V
[es zhamanak unem]

I time have. (Incorrect in English)

However, there is nothing dogmatic about this rule; i.e. the Armenian word order is flexible thereby the sentential constituents may occur in various positions in the clause. Thus, it is also accurate to reformulate the above sentence and place the predicate before the object.

Example: □□ □□□□□ □□□□□□□:
S V O
[es unem zhamanak]

I have time.

The basic Armenian word order to some degree is determined by the pragmatic and semantic factors rather than grammatical ones (Papoyan & Badikyan, 2003). Therefore, we may assume that learners may directly transfer Armenian word order to the English language,

which results in making sentences that are well formed according to Armenian word order rules but rarely or never appear in English.

Example: *First should be enforced (V) taxes (O)*
Everywhere occurs (V) traffic jam (O)
If create normal conditions for them…

The Armenian equivalents of these sentences are grammatically correct. However, they are considered to be grammatically incorrect sentences in English, as the SVO order is not maintained. Hence, the learners who do not master the basic word order rules in English use the Armenian word order when forming English sentences. In the data, there were sentences where the predicate was placed before the subject, which is quite acceptable in Armenian.

***Example**: When come (V) rain or snow(S)*
It is not important what say (V) old people (S)
I was presented in many accidents, which cause (V) women (S)
They live their counties…in which stay (V) their families (S)

Thus, the flexibility of the Armenian word order is the cause of making word order errors in English. Odlin (1989) pointed out that "speakers of flexible languages "may use several word orders in English even though English word order is quite rigid" (p.87). Thus, as she noted "rigidity appears to be a transferable property" (ibid.). Jianhua (2007) stated that the most common errors made by Chinese EFL learners is in word order, and its main cause is the difference between Chinese and English word order since the former has a flexible word order and the letter fixed. Hence, Celce-Murcia (2006, p.7) suggested the learners "should not experiment with word order in English" in order to avoid such kinds of errors. She found errors in word order to be relatively common among Armenian learners and noted that teachers should "address [these errors] from the start" (ibid.).

Besides the above-mentioned errors, a number of errors were found in the word order of *wh-direct object clauses* (i.e. embedded questions). The problem that learners may have

with these clauses is the correct word order. Students used question word order (i.e., subject-auxiliary inversion) in noun clauses introduced by a question word.

Example: *I do not know* how is it[Word Order] *in other countries*
Think about how do people[Word Order] *make*
They know how amazing is it[Word Order] *for Armenians*
It is not important where do you[Word Order] *live*
I do not know how has he[Word Order] *learnt*

The reason for making such kinds of errors is that the learners over-generalize the question formation rules over making *wh-nominal clauses* (Berk, 1999).

The learners applied the inversion rule of forming questions in making wh-embedded questions, where inversion does not occur. However, one can argue that these types of errors are also the result of negative transfer from Armenian. In forming special questions (wh-questions) in Armenian, an inversion occurs whereby the normal word order is changed. The interrogative pronoun (wh-word) is placed in initial position that is followed by an auxiliary (aux). Both in English and Armenian the inverted word order is applied when forming special questions.

Example: □□°□ □□ □□□□□:
[u res gnum]
Where are you going?

When these kinds of questions are embedded in a sentence, the word order is not changed in Armenian in contrast to English.

Example: □□□□°□ □ □□□□□: (inverted word order)
[vortegh e anan]
Where is Ann? (inverted word order)

□□ □□□□□□ □ □□□□□□`□□□□□ □ □□□□□: (inverted word order)
[na uzum e imanal vortgh e anan]
He wants to know ***where Ann is***. (not inverted)

It could be assumed that besides the complex nature of making embedded questions in English, the cause of making these kinds of errors could also be the Armenian language. Due to this difference, the participants transferred the Armenian rule of forming embedded

questions into English. Pozzan and Quirk (no date) investigated the acquisition of English embedded questions in non-native speakers of English whose L1s differ with respect to question formation and concluded that the inversion errors in wh-embedded questions could not be attributed to transfer of L1 properties. As the Armenian and English question formation rules are similar, we may assume that in the current data the inversion errors in embedded questions could be instances of negative transfer from Armenian, however, the fact that these kinds of errors are common among L2 learners (Odlin, 2003) should not be ignored. Hence, the main cause of these errors lies in the English language system.

In short, the difference between English and Armenian word order makes it difficult for Armenian learners to grasp the basic word order in English. This may be the reason why the learners violate the English word order rules. However, the cause of inversion errors in embedded questions is also be attributed to the complexities of the English language itself.

4.2.3 Analysis of the Errors in Agreement

Errors in subject-verb agreement make up .13 % of the total number of words in the present study. The participants failed to make agreement between subject and verb. They failed to employ the correct rule of subject-verb agreement where a singular subject requires a singular verb. They mostly omitted the '*s'* or '*es'* endings for the present tense verbs when the subject was in the third person singular.

In some cases, the participants simplified and did not use the third person singular inflection.

Example: *My sister* help$^{S/V\ Agreement}$ *me*
He do$^{S/V\ Agreement}$ *not like it*

They also overused it as an agreement marker with subjects of inappropriate person and/or number.

Example: *He has many friends who* likes$^{S/V\ Agreement}$ *him*

Cars makes[S/V Agreement] *life*

Similar results were observed in Celce-Murcia (2006) where it is reported that subject-verb agreement poses difficulty for the Armenian learners. Despite the fact that the subject-verb agreement structure is usually introduced early to students i.e. when they are in the primary level, most of them still face problems in acquiring its correct form. The reason for making such kinds of errors could hardly be attributed to L1 transfer. As Celce-Murcia and Larsen-Freeman (1999) noted, subject-verb agreement poses problems for the speakers of languages that never mark subject-verb agreement.

In English and Armenian, the subject and the verb must agree in number: both must be singular, or both must be plural. In English, this rule is essential in the present tense and with the copula *'be'*. Problems occur in the present tense because an **-s** or **-es** must be added to the end of the verb when the subject is a singular third person.

Thus, the errors made in the subject-verb agreement specifically using the inflected verb with third person singular subjects could hardly be the results of a direct transfer from Armenian. These kinds of errors are specific to learners of different language backgrounds and of different levels of language proficiency (Celce-Murcia & Larsen-Freeman, 1999). They could be considered as intralingul errors that are caused because of the complexity of the English language.

Besides the above-motioned errors, the participants were also confused with some words such as '*people'*, '*everything*' and '*everyone'*, whether it is singular or plural.

***Example**: Everything* are[S/V Agreement] *OK*
Everyone think[S/V Agreement]
People who emigrates[S/V Agreement] *have little money*

As mentioned by Raimes (1990) some pronouns that express the idea of quantity cause problems for language learners. The indefinite pronouns (e.g. ***everyone*** and ***everybody*****,** ***everything)*** are troublesome as they *feel* like more than one person. Therefore, students

sometimes use a plural verb with them though they are always singular and they require singular verbs. Moreover, the Armenian equivalent of these pronouns require plural verb, and if the learners who do not distinguish between plural and singular pronouns in English, they may resort to the Armenian language and directly transfer the Armenian structure to English. Besides, faulty generalization or over-generalization can also be the reason for making such kinds of errors where a deviant structure has been constructed by the students based on their experience of the similar structures in the target language. As to the noun '*people'*, it does not have the plural'*s'* or '*es'* ending and hence this may become the reason for using singular verb with it. Thus, the students must be able to identify the subject whether it is singular or plural.

In short, the source of the errors in subject-verb agreement is in the complexity of the English language. This type of errors may be induced by the nature of the instructions or materials. Another reason for this kind of errors can be overgeneralization when the learner "creates a deviant structure on the basis of other structures in the target language" (Ellis 2008, p. 59). It cannot be attributed to L1 transfer as both Armenian and English have agreement between subject and verb. Celce-Murcia and Larsen-Freeman (1999, p. 58) stated that the slow or late acquisition of the third person singular inflection on the verb might be due to its "lack of perceptual saliency" as it is not easy for the learners to hear the final 's'. The final consonant and consonant clusters tend to be more weakly articulated in English and thus this morpheme is somewhat difficult to hear.

4.2.4 Analysis of the Errors in the Infinitive of Purpose

Compilation and categorization of errors in this study show that errors in the infinitive of purpose make up .12 % of the total number of words in the corpus. The participants had problems in forming the adverbial modifier of purpose introduced by the infinitive. They

overused the preposition *for* with the *–ing form* of the verb to express purpose which is considered grammatically incorrect in English.

Example: *You have to be a good driver for not having* Purpose Infinitive *an accident*
One has to wait for hours for catching Purpose Infinitive *a bus*
She did it for making Purpose Infinitive *us happy*
We will go to Riga for visiting Purpose Infinitive *our relatives*

In the Armenian and English languages, both the infinitive and the gerund (also called *ing-form* of the verb) can be used to express purpose. In both languages, the adverbial modifier of purpose can be introduced by the *ing-form* with the preposition *for* when the subject of the clause is a non-personal noun. In Armenian, such sentences are expressed by the *infinitive in genitive case* (this declension of the infinitive is the gerund form in Armenian) and the preposition Ñ³Ù³ñ [hamar] which is the Armenian equivalent of *for*.

Example: *This tool is used* ***for*** *drilling a hole.*
²Ûë ·áñÍÇùÝ û·ï³·áñÍáõÙ ¿ ³Ýóù µ³ó»Éáõ **Ñ³Ù³ñ:**
[ajs gortsikn ogtagortsvum e antsk bacelu hamar]

This knife is only (used) ***for*** *cutting bread.*
²Ûë ¹³Ý³ïÁ ÙÇ³ÛÝ Ñ³ó ïïñ»Éáõ **Ñ³Ù³ñ** ¿:
[ajs danakə miajn hats ktrelu hamar e]

Thus, in Armenian and in English when we are talking about the purpose of an object or an action, non-finite verb forms are used with the preposition Ñ³Ù³ñ [*hamar*] (*for)*.

However, when purpose is accompanied with reasoning (e.g. why does he/she do something?) both in Armenian and English languages, the adverbial modifier of purpose is introduced only by the infinitive.

Example: *I went out to buy some bread*
ºë ¹áõñë ·Ý³óÇ` Ñ³ó ·Ý»Éáõ:
[es durs gnatsi hats gnelu]

If the preposition *for* or *Ñ³Ù³ñ [hamar]* were used in the above-mentioned sentences, they would be considered grammatically incorrect. However, nowadays the Armenians construct the adverbial modifier of purpose with the preposition *Ñ³Ù³ñ [hamar] (for)* in their every-day speech. They overuse that preposition and make such sentences, which are considered grammatically incorrect in the Armenian language itself.

Example: *I went to London to meet my friend.*
ºë ·Ý³óÇ ÈáÝ¹áÝ` ÇÙ ÁÝÏ»ñáçÝ Ñ³Ý¹Çå»Éáõ Ñ³Ù³ñ
[es gnatsi london im ənkerodzhn handipelu]

However, in colloquial speech Armenians can use such a sentence:

*ºë ·Ý³óÇ ÈáÝ¹áÝ ÇÙ ÁÝÏ»ñáçÝ Ñ³Ý¹Çå»Éáõ **Ñ³Ù³ñ** (coll.)*
[es gnatsi london im ənkerodzhn handipelu hamar]

I went to London ~~for meeting my friend.~~

Thus, there are not differences between English and Armenian in forming the adverbial modifier of purpose. In both languages, the infinitive is used to talk about people's purposes; i.e. the reason for which anything is done. However, in the Armenian every-day speech the adverbial modifier of purpose is expressed by the preposition *Ñ³Ù³ñ [hamar]* that has become nearly indistinguishable from its correct version. That is the reason that Armenia EFL learners who do not master the grammatical rules of forming adverbial modifier of purpose in English resort to this structure. In English, they form the adverbial modifier of purpose with the preposition *for* and *ing-form* of the verb that is not grammatically correct.

Example: *To go to other countries for studying Purpose Infinitive*
They emigrate for seeking Purpose Infinitive better condition
People go abroad for getting Purpose Infinitive education
We pay taxes for forming Purpose Infinitive our social fund

These sentences are instances of the negative transfer from Armenian every-day speech. If learners make such kinds of errors, this means that they have not mastered expressing purpose in Armenian correctly. This is the reason why Armenian EFL learners

directly transfer the Armenian structure (which they use more frequently) to the English language which results in an erroneous structure. According to Kellerman (1979), learners' *perceived transferability* of a particular linguistic structure can result in transferring the native language form into the target language. For instance, the adverbial modifier of purpose is more semantically transparent to Armenian learners with the preposition *Ñ³Ù³ñ [hamar] (for)* than without it. Expressing purpose without the preposition *Ñ³Ù³ñ [hamar] (for)* seems semantically opaque and unusual to most Armenian learners and that is why it is less transferable into the target language.

Thus, the learners themselves should learn how to express purpose in Armenian correctly, and this may help them avoid errors in English. This could result in positive transfer, as there is no difference between English and Armenian in this regard; i.e., in both languages, the adverbial modifier of purpose is formed in the same way. Thus, learners who are more proficient in Armenian will not make such errors. Moreover, learners who are more proficient in the English language know in what cases the adverbial modifier of purpose is used with the preposition *for*. Therefore, a proper attitude towards teaching this grammatical structure should be developed. Teachers should not only point to learners' errors when they commit negative transfer, but also make students clearly understand the reasons for their errors and provide ways to avoid negative transfer.

4.3 Summary of the Findings

In the current study, the total number of errors that were found to be significant was 196. The contrastive analysis between English and Armenian revealed that out of 196 errors 127 were transfer errors that were caused by the direct transfer from the Armenian language. *Table 11* displays the general information about the sources of errors found in the current data.

Table 11 *Frequencies and Percentages of Interlingual and Intralingual Error Sources*

Error source	Frequency	Percentage (n=27576)	Percentage (n=196)
Interlingual	127	.46%	64.7%
Intralingual	69	.25%	35.3%
Total	**196**	**.71%**	**100%**

Thus, 64.7% of the total number of errors is attributed to L1 transfer and 35.3% are intralingual caused by the complexity of the English language. As we can see, negative transfer is an influential factor in Armenian students' English writing. In general, the findings of the study show that the Armenian students' performance was very much influenced by their L1 in their process of learning English, especially in writing. Therefore, the students need to understand the differences between both languages and make use of the unique features of the languages to produce good and acceptable sentences. Teachers need to emphasize how the concepts are handled in English and Armenian. It is important to make the students aware of the differences in the structure of these languages. This may help the students to apply correct strategies while writing in English and hence, decrease the occurrence of errors. Thus, more attention should be paid to those errors that are the result of the direct transfer from the Armenian language.

Table 12 illustrates transfer errors with regard to their percentage values and distribution among the proficiency groups.

Table 12 *Breakdown of the Transfer Errors*

Error type	Percentage (n=18354) *Advanced*	Percentage (n=9222) *Intermediate*	Percentage (n=27576): *Total*

Indefinite article	.13%	.30%	**.18%**
Purpose infinitive	.10%	.17%	**.13%**
Word order	.08%	.12%	**.09%**
Definite article	.05%	.07%	**.06%**
Total	**.36%**	**.66%**	**.46%**

As we can see, the highest proportion of transfer errors was recorded among intermediate level participants. They resorted to the Armenian language when they faced difficulty while writing. As stated by Kellerman (1979) the correlation between low L2 proficiency and transfer applies primarily to negative transfer. Ringbom (2007) suggested that L2 proficiency is a determinant factor affecting the extent of transfer: a learner is more likely to transfer from a language in which he has a higher degree of proficiency to a language in which he has a lower degree of proficiency. Thus, the results show that with increasing proficiency, the likelihood of L1 transfer decreases.

The findings are also in line with the view that not all errors that a learner makes are attributable to the mother tongue. Intralingual errors are also important that are caused by incomprehensive understanding and incorrect application of the target language rules regardless of the learners' L1. *Table 13* displays the breakdown of the intralingual errors.

Table 13 *Breakdown of the Intralingual Errors*

Error type	**Percentage (n=18354)** ***Advanced***	**Percentage (n=9222)** ***Intermediate***	**Percentage (n=27576)** ***Total***
Subject/verb agreement	.09%	.23%	**.13%**
Wh-embedded questions	.07%	.08%	**.07%**
Definite article	.04%	.05%	**.04%**
Total	**.2%**	**.36%**	**.24%**

As it is shown in *Table 13* intermediate level participants made more intralingual errors than advanced ones. The percentage values of different error types are different for interlingual and intralingual error sources. For instance, errors in article use and word order

were found to be more interlingual, whereas errors of subject/verb agreement were mainly intralingual. Thus, teachers may pay attention to different grammatical types of errors with respect to their sources

Chapter 5
Conclusion

This chapter presents the summary of the research findings and discusses the pedagogical implications and applications drawn from this study. It also points out the limitations of the study and explains how the results will provide grounds for further research.

5.1 Conclusion

This study attempted to identify, categorize, and describe the errors in English writing of Armenian EFL learners as well as diagnose their sources. The four most common errors made by the participants were in *the article use, word order, subject-verb agreement*, *and purpose infinitive,* respectively. The contrastive analysis of these error types between Armenian and English revealed that about 30 % of the total number of errors (n=427) was caused by the direct transfer from the Armenian language. This indicates that L1 plays a considerable role in the writing performance of Armenian EFL learners.

Errors in *article use*, *word order*, and *purpose infinitiv*e were attributed to L1 transfer. It was documented that the indefinite article has different realization in Armenian and in English that resulted in omitting the indefinite article where its use was obligatory as well as overusing it where it was not necessary. The participants also overused the definite article with plural nouns to express generic meaning which is also due to the negative transfer from Armenian. It was stated that English has a fixed word order while Armenian word order is more flexible and this difference brought about grammatically incorrect sentences. The last type of transfer errors that was investigated in the current corpus was in forming adverbial modifier of purpose. Though Armenian and English do not differ in this regard, the participants made such kind of errors because of the incorrect use of that structure in the Armenian every-day speech. Thus, errors in the formation of adverbial modifier of purpose were also attributed to the negative transfer from Armenian.

The above-mentioned grammatical structures have different realizations in Armenian and English and those who did not have enough knowledge to use those structures correctly in English, very often resorted to Armenian, and transferred the Armenian grammatical rule onto English.

Moreover, it was found out that the learners' proficiency level influenced the frequency of transfer errors. With increasing proficiency there was observed a decrease in the number of transfer errors. Thus, intermediate learners resorted to their L1 more frequently whenever they faced difficulty in English than advanced learners.

It should be mentioned that the participants' errors were not only caused by the influence of their L1; instead, some of their errors reflected some of the complexities of the target language and common learning strategies employed by the learners. These factors are elements categorized under intra-lingual errors that refer to the application of incorrect strategies while acquiring English. For instance, errors in *subject-verb agreement* could hardly be attributed to L1 transfer since both Armenian and English mark subject-verb agreement. Moreover, most learners with different language backgrounds usually fail to use the inflected verb with third person singular subjects (Celce-Murcia & Larsen-Freeman, 1999). Errors in *wh-embedded questions* were also caused by the complexity of the English language.

The findings of this study provide evidence to conclude that most grammatical problems of Armenian EFL learners are connected with the differences between English and Armenian. Thus, we can see that Armenian language has an influence on the way the learners learn English, but it is not the only or even the chief influence. Some errors derive from the strategies employed by the learners in L2 acquisition (e.g. errors in the use of the definite article) as well as from the mutual interference of items within English itself (e.g. embedded question).

5.2 Pedagogical Implications

Teachers need to be aware that Armenian learners have difficulties in the above-mentioned areas of the English grammar. They have problems with English grammatical rules in addition to problems due to the confusion with the rules in their L1. Thus, teachers should be sensitive to their students' errors and try to focus on the kind of errors students are most likely to make. Teachers should also modify their teaching materials in order to accommodate the students' need. They do need to motivate their students to speak English at home and with their friends in order to reduce the number of errors due to negative L1 transfer, but teachers also need to try to teach the rules and conventions of the English grammar more effectively. The most important strategy may be teaching with a consideration for differences between languages and cultures in order to prevent the errors due to negative transfer. Unless students realize or are told that they are making errors because of the influence of their L1, they will keep resorting to their mother tongue whenever they do not know the grammatical rule or word of the second language they are trying to use. Hence, language teachers should place contrastive analysis and error analysis together as techniques that can provide them with insights into the language learning process.

In conclusion, error analysis can help teachers identify, in a systematic manner, the specific and common language problems their students have so that they can focus more on these types of errors. Such an insight into language learning problems is useful to teachers, because it provides information on common problems in language learning which can be used in the preparation of effective teaching materials. In addition, by being able to predict errors to a certain extent, teachers can better equip themselves to help students minimize or overcome their learning problems. However, it is important to notice that teachers should not give undue attention to errors, as the correct utterance in the target language may remain

unnoticed. Thus, in their observations of errors, teachers should keep the balance and give positive reinforcement to their learners as well as point out those areas that cause difficulty to them.

5.3 Limitations of the Study

The results of the study should be taken with necessary caution in light of the following limitations:

1. The participants were all Armenian students. The results may not be generalized to the speakers of other languages.
2. The participants were of advanced and intermediate language proficiency levels and this was the reason that in the corpus the percentage of the errors was not high. With elementary level participants, more errors would have been observed in the corpus and this might have an effect on the results of this study.
3. The focus of this study was the frequencies of errors. Error gravity or seriousness of each error was not taken into account.
4. As errors may arise from several possible sources, it was quite difficult to include all the variables in this study. Only two of the most important and recognizable sources in grammatical errors-interlingual and intralingual error sources were considered.
5. This study concentrated on transfer errors and intralingual errors were not investigated in detail.
6. The students' avoidance strategy in writing was not taken into account. For instance, some structures, such as present perfect tense form, were not used frequently by the students, either because they might have avoided them.
7. The interactions of other factors involved in the language learning process are the missing items in this research. Many non-linguistic factors such as cultural, social,

and personal factors, literary skills in L1, individual variations that interact with language learning process were not investigated with relation to L1 transfer.

5.4 Suggestions for Further Research

Since this study investigated negative transfer in the written performance of Armenian EFL learners in an attempt to identify errors in writing, it still leaves space for investigations of other transfer phenomena such as facilitation, overuse. A study can address the extent to which learners' L1 facilitates their L2 learning. Moreover, learners may demonstrate a preference of certain grammatical forms or words in L2. Thus, the focus of other research studies may be the investigation of this phenomenon.

It is generally believed that a purely structural contrastive analysis is not enough to account for cross-linguistic differences. Transfer involves many other non-structural factors, which interact with it (Odlin, 1989). Among them are individual variation (e.g. personality, proficiency, aptitude for phonetic mimicry, etc.), age, social context, and linguistic awareness. As stated by Odin (1989, p. 153) "non-structural factors can affect the likelihood of transfer". Hence, the investigation of these factors can give a better understanding of the transfer phenomenon; i.e. whether the probability of transfer is increased or decreased by the influence of the above-mentioned factors.

This study focused on eliciting students' grammatical errors in writing. Another study may concentrate on eliciting students' errors in other areas such as phonology or lexicon. This may give a comprehensive understanding of those problems that Armenian learners may have when learning English.

The seriousness or gravity of error types or their sources may be investigated in further research. The evaluation of the errors will show which errors impede comprehension and consequently direct teachers' attention to these error types.

Finally, this study may lead to further investigation on students' errors as distracters in Multiple Choice Tests. In this way, the avoidance strategy will not be employed by the learners since they cannot avoid those structures which they find difficult because of the differences between L1 and L2 and will mainly rely on their knowledge of grammar.

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Appendix 1

Error Taxonomy

Based on 427 errors made by Armenian EFL learners of intermediate and advanced language proficiency

Category	Subcategory

Clause level	• Conditional sentences
	• Word order
	  o *'Wh'* noun clause
	  o S/V order
	• Complex Object
	• Conjunction
	  o Overuse
	  o Although. . .but
	• Preparatory *There/it*
	  o Missing *'there'*
	  o Overuse of '*it'*
	• Noun clause
	  o *'ing'* clause
	  o Infinitive clause

Verb phrase	• Overuse/omission of copula *'be'*
	• Verb tense and aspect
	  o Past tense
	  o Perfect aspect
	• Modality auxiliary
	  o Overuse of particle *'to'*

Noun phrase	• Article
	  o Zero article with non-count nouns and plurals
	  o Omission of indefinite article
	  o Omission of definite article
	• Count/non-count nouns
	• Number
	  o Irregular plural
	• Pronoun
	  o Possessive
	  o Relative

Verbal	• Bare infinitive
	  o Overuse of *'to'*
	• Infinitive clause of purpose
	• Gerund
	  o Gerund after prepositions

Agreement	• Subject/verb agreement

	• Number agreement
Prepositional phrase	▪ Incorrect use of preposition ▪ Zero preposition ▪ Omission/overuse of preposition
Adjectives and adverbs	• Mixing up adjectives and adverbs ▪ Degrees of comparison o Overuse of '*more'* o Irregular adjective • Adjective with auxiliaries • Order and place of adverbs in attributive phrase

Appendix 2

Article Errors

Omission and Overuse of the *Indefinite* Article

Advanced	
Example	**ID**
He has a news	221
It becomes reason	240
A success	275
She is very selfish person	331
They can find good social status	331
They have not good job	331
Such person, good job	221
Person must die	296
Get chance	128
Take risk	128
Lose job	340
In big company	340
An urban cities	185
An information	172
In smaller organization	348
Has strong character	244
It is great responsibility	212
Happen accident	234
The traffic problem is unavoidable fact	255
A work	297
Depend on situation	298
A many problems	189
As representative of	277
It is huge problem	277
A news	229
To live in country	265

Omission and Overuse of the *Definite* Article

Advanced	
Example	**ID**
USA	218
The second is political situation	240
From the country to country	317
There are the different opinions that it is right	275
To build a road for the bicycle riders	185
In future	185
I have found out a number of the disadvantages and	302

advantages for each type	
Yerevan is not exception	234
By law of the country	298
The main problems are shortage of time, loss of….	358
Do not do same work many times	229
The step that brought hope for success was idea to connect	229
All parts of world	258
In past in future	225
Some of people	150
By help of	150
In future	150
Lifestyle had changed	205
In 21st century	196
US	210

Omission and Overuse of the *Indefinite* Article

Intermediate	
Example	**ID**
that you have car	188
Give me a good advice	136
I have job	156
Having car	132
If you have car	79
She is very good person	138
Owning car is	85
If you have good car	96
It is very mysterious place	110
Greece is very beautiful city	143
A terrible accidents	140
To have your own car is very good thing	140
My mother is good friend for me	115
She is very kind person.	112
She is interesting person	73
She is very kind and clever girl	73
He is very good father	105
She is senior student	53
She is very smart and happy boy	70
She is good player	106
You do not have to wait in crowded metro	120
Greece is very interesting country	80
She is kind person	86
A bond hairs	110
Advantages are that you have car	188

Omission and Overuse of the *Indefinite* Article

Intermediate	
Example	**ID**
in 21 century	126
First disadvantage	128
Beside it he is writing the poems about life	202
For the others	100
It is bad for boys who likes to drive	121
In 21st century	86
In future	87

Errors in Subject-Verb Agreement

Advanced	
Examples	**ID**
Family have emigrated and live	218
One of the important reasons which make it necessary	221
People who emigrates have little money	221
Men and women can die if she or he it want	296
People who has	244
Smoking increase the probability	282
Many people try to have healthy lifestyle which include	282
In country that have	265
Everything are OK	335
It rise rapidly	153
We live in very polluted countries which has a lot of….	273
He go	273
Smoking cause	273
He work	210
Everyone think	315
High taxes is not	265
The young and the old has always	154

Intermediate	
Example	**ID**
He study	120
London is one of the cities that have double buses	162
There is so many places	162
My sister help me	115
She often help me	119
She have brown eyes	73
Tell a man who have a car	101
She study	53
He make me happy	70
He have five albums	106
He do not like it	106
He play in a rock group	106
People who doesn’t	85
Here are many people who works in large cities	106
It is bad for boys who likes to drive	120
Thousands of people dies	75
Cars makes life	75
He has many friend who likes him	110
He remember	110
The car give us	119
One of the people who are special to me	126

Errors in Word Order

Advanced	
Examples	**ID**
They live their counties…in which stay their families	287
I know how can I	221
How I can criticize…?	331
If he it wants	296
Men and women can die if she or he it want	296
The live give to man the God	275
I do not know what can people do	191
People know what is terrorist attack	147
In countries where is capital punishment accepted	102
We do not know what will people choose	350
They will not ask you what was the problem	340
I do not know how can we…..	185
I think that the best will be that if the young man	348
If person drunk	234
I do not know how is it in other countries	255
I was presented in many accidents which cause was of woman	256
There will be not	294
Think about how do people make…	231
You not only can get useful information	231
They know how amazing is it for Armenians	278
I think that this not necessarily be always so	278
First should be enforced taxes	415
Everywhere occur traffic jam	281
It is not important what say old people	154
It is not important where do you live	283
It is important what will remain after you	283
If create normal conditions for them	150
Never in the past was it so easy	235
Nobody it uses	235

Intermediate	
Example	**ID**
It depends where do you live	106
The place where is all past of our country	182
I do not know how has he learnt	160
He began to explain to me where is my name come form	155
The main reason why would I like visit	162
What we are doing we are doing together	153
Hardly some s that has not ever heard his name	105
I very would like	105
I thong the advantages will well tell a man who have car	101
You will ask why am I doing it	106
When come rain or snow	132
She has brown eyes and hair	115
The moving in our country is so, that	60
You have not seen that all	110
Nobody knows how are pyramids built	110
Maria is an interesting girl. Likes to read books.	117

Errors in Purpose Infinitive

Advanced	
Examples	**ID**
They want leave for other countries for working, for studying and for solving their health problems	227
To go to other countries for studying	285
They emigrate for seeking better condition	253
People leave the country for getting better life	240
First a person can't find the job for earning money for his/her life	328
People go abroad for getting education	331
To go to other countries for studying	287
I will go for getting it	221
Terrorists leave their countries for escaping from death penalty	147
People use death penalty for punishing people	308
People use the Internet for getting Information	350
They establish business for keeping….	302
Alternative information source help people for developing their countries	297
We pay taxes for forming our social fund	202
Sending our specialist for practicing abroad	277
People do it for helping	229
He went there for seeing it	281
Government must not spend money for keeping them	210
Government does it for helping people	191
We went there for meeting him	198
He used it for opening	211
People go there for spending their time	278
I do not want to come for seeing him	184
People go to other countries for spending	35
They must d it for not being accused	65

Intermediate	
Example	**ID**
Go there by car for seeing him	128
You have to be a good driver for not having an accident	188
I would go and watch kangaroos for being such interesting creatures	184
My friend went there for getting higher education	32
I will do it for becoming	63
We will go to Riga for visiting our relatives	61
He goes there for bringing it	112
I will go for seeing my family	128

One has to wait for hours for catching a bus	170
She did it for making us happy	126