

Native language interference in learning a second language: Exploratory case studies of native language interference with target language usage

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Introduction

The second language learning environment encompasses everything the language learner hears and sees in the new language. It may include a wide variety of situations such as exchanges in restaurants and stores, conversations with friends, reading street signs and newspapers, as well as classroom activities, or it may be very sparse, including only language classroom activities and a few books.

Regardless of the learning environment, the learner's goal is mastery of the target language. The learner begins the task of learning a second language from point zero (or close to it) and, through the steady accumulation of the mastered entities of the target language, eventually amasses them in quantities sufficient to constitute a particular level of proficiency (Dulay, Burt & Krashen, 1982 and Ellis, 1984).

This characterisation of language learning entails the successful mastery of steadily accumulating structural entities and organising this knowledge into coherent structures which lead to effective communication in the target language (Rutherford, 1987). If this is the case, then we would expect that well-formed accurate and complete target language structures would, one after another, emerge on the learner's path towards eventual mastery of the language. If the learner went on to master the language, we could, in principle, tabulate the expansion of his/her repertoire up to the point where all of the well-formed structures of the target language had been accounted for (Beardsmore, 1982 and Hoffman, 1991).

In reality this is not the case. Second language learners appear to accumulate structural entities of the target language but demonstrate difficulty in organising this knowledge into appropriate, coherent structures. There appears to be a significant gap between the accumulation and the organisation of the knowledge. This then raises a critical question - what kinds of language do second language learners produce in speaking and writing? When writing or speaking the target language (L2), second language learners tend to rely on their native language (L1) structures to produce a response. If the structures of the two languages are distinctly different, then one could expect a relatively high frequency of errors to occur in L2, thus indicating an interference of L1 on L2 (Dechert, 1983 and Ellis, 1997).

Previous Research and the Importance of this Research

Extensive research has already been done in the area of native language interference on the target language. Dulay et al (1982) define interference as the automatic transfer, due to habit, of the surface structure of the first language onto the surface of the target language. Lott (1983: 256) defines interference as 'errors in the learner's use of the foreign language that can be traced back to the mother tongue'.

Ellis (1997: 51) refers to interference as 'transfer', which he says is 'the influence that the learner's L1 exerts over the acquisition of an L2'. He argues that transfer is governed by learners' perceptions about what is transferable and by their stage of development in L2 learning. In learning a target language, learners construct their own interim rules (Selinker, 1971, Seligar, 1988 and Ellis, 1997) with the use of their L1 knowledge, but only when they believe it will help them in the learning task or when they have become sufficiently proficient in the L2 for transfer to be possible.

Ellis (1997) raises the need to distinguish between errors and mistakes and makes an important distinction between the two. He says that errors reflect gaps in the learner's knowledge; they occur because the learner does not know what is correct. Mistakes reflect occasional lapses in performance; they occur because, in a particular instance, the learner is unable to perform what he or she knows.

It appears to be much more difficult for an adult to learn a second language system that is as well learned as the first language. Typically, a person learns a second language partly in terms of the kinds of meanings already learned in the first language (Carroll, 1964; Albert & Obler, 1978 and Larson-Freeman & Long, 1991). Beebe (1988) suggests that in learning a second language, L1 responses are grafted on to L2 responses, and both are made to a common set of meaning responses. Other things being equal, the learner is less fluent in L2, and the kinds of expressions he/she uses in L2 bear telltale traces of the structure of L1.

Carroll (1964) argues that the circumstances of learning a second language are like those of a mother tongue. Sometimes there are interferences and occasionally responses from one language system will intrude into speech in the other language. It appears that learning is most successful when the situations in which the two languages (L1 and L2) are learned, are kept as distinct as possible (Faerch and Kasper, 1983). To successfully learn L2 requires the L2 learner to often preclude the L1 structures from the L2 learning process, if the structures of the two languages are distinctly different.

Beardsmore (1982) suggests that many of the difficulties a second language learner has with the phonology, vocabulary and grammar of L2 are due to the interference of habits from L1. The formal elements of L1 are used within the context of L2, resulting in errors in L2, as the structures of the languages, L1 and L2 are different.

The relationship between the two languages must then be considered. Albert and Obler (1978) claim that people show more lexical interference on similar items. So it may follow that languages with more similar structures (eg English and French) are more susceptible to mutual interference than languages with fewer similar features (eg English and Japanese). On the other hand, we might also expect more learning difficulties, and thus more likelihood of performance interference at those points in L2 which are more distant from L1, as the learner would find it difficult to learn and understand a completely new and different usage. Hence the learner would resort to L1 structures for help (Selinker, 1979; Dulay et al, 1982; Blum-Kulka & Levenston, 1983; Faerch & Kasper, 1983, Bialystok, 1990 and Dordick, 1996).

Dechert (1983) suggests that the further apart the two languages are structurally, the higher the instances of errors made in L2 which bear traces of L1 structures. In both cases the interference may result from a strategy on the part of the learner which assumes or predicts equivalence, both formally and functionally, of two items or rules sharing either function or form. More advanced learning of L2 may involve a greater number of rules or marking features for distinguishing between the two languages. This then raises a pertinent question - does the L2 text have to be syntactically correct for its meaning to be understood? Do the identified errors in the written text reduce

semantic and syntactic acceptability? The answer lies in several domains: the L2 learner's purpose in learning the target language, the learner's L2 proficiency level of the target language and the knowledge state of the learner in L1 and L2.

The focus of the case studies is on specific instances of L1 interference on L2 in the syntactic structures of the second language learner's writing. The present study also identifies the effect of the differences and/or similarities between the structures of L1 and L2 on the target language.

The case studies concentrate on the effect of each of the areas of difficulty identified on a native speaker's interpretation of the written text. The case studies also identify the importance of the learner's knowledge of the syntactic structures of L1, which cause difficulty in L2. With this knowledge the learner is made aware of the errors made and how they may be rectified. This aspect of the study also provides new information in the L2 learning context. Last but not least, the case studies identify the language use and the knowledge of the learner. Hence this study attempts to provide up-to-date evidence in the current L2 learning context.

An important aspect of this study is that it provides an interesting comparison of four languages, namely Vietnamese, Cambodian, Spanish and Italian. The combination of two Asian and two European languages is a move away from a previous research focus on mainly the European languages and this is useful for the current local teaching context.

Research Questions

The case studies were designed to answer the following questions:

1. Are there differences and/or similarities between the syntactic structures of L1 and L2 in a written task in each of the cases?
 - 1a. What are the instances where the syntactic structure of L1 is used in L2, causing an error?
 - 1b. What are the instances where the absence of a syntactic structure in L1 creates a difficulty for the learner in L2?
2. What is the effect of each of the noted areas of difficulty on interpretation of meaning by a native speaker of English?
3. What is the learner's knowledge of the syntactic structure of L1, which causes difficulty in L2?
4. What is the learner's knowledge of the syntactic structure of L2?

The research scope of this paper is limited to the analysis of writing samples of four adult second language learners in the language classroom, with a focus on syntactic structures and takes into account errors made in semantics and spelling.

Research Methodology

The case study methodology in this study was not an experimental intervention. It was designed to uncover something of the complexity of language use in a particular sample of language learners and so it had an explicit descriptive purpose. It aimed to analyse the use of specific parts of language and to use the results of that analysis to make judgements about the status of the L1-L2 interference hypothesis. The interview was a flexible procedure that allowed for probing of the participants' linguistic knowledge. The research questions posed were mainly "what" questions that were exploratory. A goal of the study was to develop a pertinent hypothesis and propositions for further inquiry.

Participants

There were four participants in the study - a Spanish-speaking 21-year-old female (Bianca), a Vietnamese-speaking 39-year-old female (Cath), a Cambodian-speaking 50-year-old female (Sabi) and an Italian-speaking 65-year-old male (Mato). Writing is important for these learners as they either have young school-aged children or grandchildren who request some help with schoolwork from time to time.

Tasks

The four learners were given two sets of sequential pictures, one at a time, and asked to write a story beginning with the first picture and ending with the last, in the order presented in each set. The first set of pictures related to a boy deciding to play tennis instead of washing the car and the second set of pictures related to a driver driving in the opposite direction of the traffic. There was no time limit for the task. However they had to ensure that they had a logical sequence in the written story which related to the pictures.

The learners were then asked to write the same story a second time, in the native language. They were then asked to write a second story in English and the native language for the second set of sequential pictures. The learners were asked to attempt the tasks individually without any group interaction initially. After an individual attempt, they were allowed to interact with each other if they wished. The tasks were part of the classroom activities done in the presence of the teacher.

Writing two stories each in English as well as the native language provided a broader base for the analysis of the errors made. It also provided a suitable sample of written performance, thus allowing a more reliable estimate of the participants' competence.

Interview

After the writing tasks, the four learners were interviewed individually, which were tape-recorded where they were asked to explain why and how they used a specific L1 or L2 structure if there was an error identified. They were also asked what they knew about the structures of L1 and L2 and to make judgements of semantic acceptability of sentences in L1 and L2. They were then asked to self-correct identified errors in the L2 text.

Analysis Procedures

The analysis of the learners' L1 written texts was done with the help of native language experts, while I analysed the English texts. Three L2 native speaker teachers were asked to interpret the learners' L2 written texts and rate these texts for semantic and syntactic acceptability. The purpose here was to answer the pertinent question raised - does the L2 text have to be syntactically correct for its meaning to be understood for L2 learners at the assessed level of L2 proficiency?

Results

The four subjects completed the tasks in an hour. The non-segmented and unedited versions of each learner's written texts were analysed.

L1 and L2 proficiency levels

The four learners were assessed before the tasks, using the Australian Second Language Proficiency Ratings (ASLPR) to determine their L2 writing proficiency. The ASLPR has 12 proficiency levels within a scale of 0 to 5, with 5 indicating native-like proficiency. The ASLPR

was also used as a comparison gauge by the native language teachers to identify the learners' L1 writing proficiency in comparison to their L2 proficiency. These four learners were at level 1+ in their writing skills according to the ASLPR. According to Wylie and Ingram (1995) learners at this level can write simple social correspondence; their language is creative enough to use stock phrases and complex enough to convey in a simple way, their own attitudes to familiar things; they make several mistakes but generally get their ideas across. Table 1 shows the learners' L1 and L2 proficiency levels. The learners were found to have similar levels (1+) in their L1 and L2.

Table 1. Proficiency levels of L1 and L2

Learners' proficiency	Sabi	Cath	Mato	Bianca
L1	1+	1+	1+	1+
L2	1+	1+	1+	1+

L1 errors

An analysis of each learner's writing indicated several grammatical errors. Table 2 shows the L1 errors made by the learners in their written texts, a 'x' denotes an error/s and a '_' denotes a correct response/s made with the specific structure, while a '0' denotes an absent L1 structure altogether.

Table 2. L1 errors for all learners

L1 errors	Sabi	Cath	Mato	Bianca
Apostrophe	0	0	0	x
Punctuation	x	x	x	x
Spelling	x	x	x	x
Prepositions	x	x	x	x
Capital letters	x	x	x	x
Present & past continuous tenses				x
Subject pronouns				x
Vocabulary	x			x
Passive & active voice	0	0		x

L2 errors

Table 3 shows the L2 errors made by the learners in the two writing tasks. For example, all four learners made errors in the use of punctuation (denoted by a 'x'). Mato and Bianca did not use the repeated pronoun as this structure is absent in their L1 (denoted by a '0'). Bianca used subject pronouns appropriately in her L2 texts (denoted by a '_').

A comparison of the analyses of L1 and L2 showed eight syntactical areas bearing signs of direct interference of L1 on L2. The results are shown in Table 4 below, which shows the errors made by the four learners in both their L1 and L2 texts, where the L1 errors were transferred to the L2 texts.

Pairs of languages

Table 5 shows the differences and similarities between the syntactical structures of the learners' native languages when compared to English. The 'A' denotes an absent structure, the 'P' denotes an existing structure with limited use in L1 and the 'S' denotes a similar structure to English. The four languages may be divided into pairs as some of the structures of Vietnamese/ Cambodian and Italian/Spanish bear similarities.

Table 3. L2 errors for all learners

L2 errors	Sabi	Cath	Mato	Bianca
Apostrophe	x	x	x	x
Contractions				x
Punctuation	x	x	x	x
Articles	x	x		
Prepositions	x	x	x	x
Spelling	x	x	x	x
Capital letters	x	x	x	x
Repeated pronouns	x	x	0	0
Subject pronouns	x	x	x	
Present & past continuous tenses	x	x	x	x
Past tense	x	x	x	
Adverbs	x	x		x
Plurals	x			
Incomplete sentences	x	x		
Vocabulary	x	x	x	x
Passive & active voice	x	x	x	x

Table 4.

A comparison of the L1 and L2 analyses indicating areas of L1 interference on L2

L2 errors	Sabi	Cath	Mato	Bianca
Possessive apostrophe	x	x	x	x
Punctuation	x	x	x	x
Passive & active voice	x	x		x
Prepositions	x	x	x	x
Spelling	x	x	x	x
Capital letters	x	x	x	x
Repeated pronouns	x	x	x	x
Present & past continuous tenses	x	x	x	x

Table 5. Pairs of languages

L1 structures	Pairs of languages							
	Cambo		Viet		Italian		Spanish	
Possessive apostrophe	A	x	A	x	A	x	A	x
Punctuation	S	x	S	x	S	x	S	x
Passive voice	P	x	P	x	S		S	x
Prepositions	P	x	S	x	P	x	P	x
Repeated pronouns	P	x	P	x	A	x	A	x
Present & past continuous tenses	P	x	P	x	S	x	S	x
Capital letters	S	x	S	x	P	x	P	x

The results from Table 4 indicating the learners' L2 errors are also shown alongside each structure. For example, the 'x' denotes an error/s made in L2 and a '_' denotes a correct use of the structure. Table 5 then shows that although a structure is present in L1, the learners still made errors with its use in L2, indicating a lack of understanding of its L2 use and the learners used the L1 form in L2,

making errors in L2. Where a structure is absent in L1, for example the possessive apostrophe, the learners did not understand its use in L2, once again making errors. Where the structure, for example the use of punctuation, is similar in its use in L1 and L2, the learners made errors with its use, as they have also made similar errors with its use in L1 in all the cases. This indicates direct interference of L1 on L2.

Self-editing

The learners were observed in terms of the oral group interaction during the tasks. They asked each other for help, particularly with spelling and vocabulary. In the individual interviews, they were asked to explain why they had used specific L1 and L2 structures.

Table 6 shows the L2 self-editing instances by each of the learners. All four learners were able to self-edit some of the errors made in their L2 texts after these errors were pointed out to them individually. In the self-editing, the learners concentrated on the correction of spelling and there were a few instances of syntactical error correction such as punctuation.

Table 6. L2 self-editing

Learners	Sabi	Cath	Mato	Bianca
L2 self-editing				

L2 semantic acceptability

Three L2 native speaker teachers (NST) were asked to interpret the learners' L2 written texts without showing them the sequential sets of pictures the learners had been given for the tasks. The teachers were asked to rate the texts on a scale of 1 (poor), 2 (average) and 3 (good) for semantic and syntactic acceptability in terms of the stories written for the sequential sets of pictures, as indicated in Table 7 below. Text 1 and Text 2 were given similar ratings by the three native speaker teachers. This then meant that the type of writing each learner produced in both texts, Text 1 and Text 2 were of a similar level and could be understood by the L2 native speaker teachers, despite the errors found in the texts. The pertinent question previously raised in this paper was answered - the L2 text does not have to be syntactically correct (by L2 standards) for its meaning to be understood, for L2 learners at the assessed level of L2 proficiency.

Table 7. Native speaker teachers' rating for L2 semantic acceptability

Learners	Rating for L2 semantic acceptability					
	Text 1			Text 2		
	NST 1	NST 2	NST 3	NST 1	NST 2	NST 3
Sabi	2	2	2	2	2	2
Cath	3	3	3	3	3	3
Mato	3	3	2	3	3	2
Bianca	2	2	2	2	2	2

General discussion

This study provided a view and an indication of the kinds of language second language learners produced in writing tasks in the classroom. It also supplied evidence of L1 interference with L2, its extent and effects, as shown in the analysis of the learners' written L1 and L2 texts. This was clearly shown in the way that the learners used their L1 structures to help them form their L2 texts, indicating a direct interference of L1 on L2.

The four learners have received native language linguistic input from their individual environments and positive reinforcements for their correct repetitions and imitations. As a result, habits have been formed which have influenced the L2 learning process as these learners have started learning L2 with the habits associated with L1. These habits interfere with those needed for L2 learning, and new habits are formed. The errors made in L2 are thus seen as L1 habits interfering with the acquisition of L2 habits (Beebe, 1988 and Seliger, 1988). This theory also propounds the idea that where there are similarities between L1 and L2, the learners use L2 structures with ease; where there are differences, the learners have difficulty. The four learners have constructed their own L2 interim rules with the use of their L1 knowledge to help them in the writing tasks, resulting in L2 errors (Ellis, 1997).

Some L2 errors identified in Table 3 such as articles, adverbs, past tense, plurals, contractions and incomplete sentences, were not included in the discussion of the L1 - L2 interference. This was because these errors did not appear in the L1 texts, thus indicating that, although the learners made these errors in their L2 texts, the structures were used appropriately in the L1 texts or the learners did not use these structures at all as these were absent structures in the L1.

The four learners appear to find it difficult to use appropriate L2 responses that are as well formed as their L1 structures. They use the L2 structures partly in terms of the structures already learned in their L1. Hence their L1 responses are grafted on the L2 responses and the kinds of L2 expressions used bear tell-tale traces of the L1 structures (Larson-Freeman & Long, 1991 and Ellis, 1997). This was clearly shown in the way that the learners used L2 structures such as punctuation, capital letters, prepositions and the present and past continuous tenses in their L2 texts. They found these structures difficult to use as these structures are used in a different form in their L1. In some instances, an absent L1 structure such as the apostrophe and the active and passive voice, caused a difficulty for the learners as they were unfamiliar with its use in L2, resulting in errors which reflect a gap in the learners' knowledge (Ellis, 1997).

As Dechert (1988) has already suggested, the further apart L1 and L2 are structurally, the higher the instances of errors made in L2 which bear traces of L1 structures. An important outcome of this study is the significance of the effect of the differences between the structures of L1 and L2 on the L2 written text. Given the proficiency level of the learners in the study, the learners' L2 texts remain semantically acceptable by L2 teachers as shown in the analysis. This then means that the L2 texts do not have to be syntactically correct for its meaning to be understood. The identified L2 errors do not reduce the semantic acceptability of the L2 texts.

Does the learner have to “think” in the target language to be able to produce a meaningful response which may not be syntactically correct but which may still be understood and semantically acceptable? The answer to this question poses a major implication in the second language classroom. If the learner is able to write a semantically acceptable text in L2 (according to L2 standards), then correct syntax need not be the focus of classroom instruction, given the existing knowledge base of the learner whose main purpose of learning L2 is to communicate information in a meaningful way.

This has implications for the teaching and learning process. An understanding of the L1 syntactical structure and the type of errors made in L2 as well as the extent of the learner's knowledge of L1 and L2 syntactical structures, will assist the teaching and learning process by allowing an individualised learning program for each learner. The teacher will be able to predict possible future errors in the target language and may begin to attribute a cause to an error with some degrees of precision. The teacher can also build up a picture of the frequency of types of errors; thus it would be possible to find out whether, for example, L1 interference, or teaching techniques, or

problems inherent in L2, are the major cause of the learner's errors. In this way it is possible to plan classes giving very specific help to the learners.

This case study then paves the way for future research in other areas of second language teaching and learning. Last but not least, this study contributes significantly to the base of knowledge in the second language learning and teaching literature on the effects of interference of L1 on L2.

Conclusions

The major concern of this paper has been with the observable features of interference of L1 on L2 and what its effects are on the syntactic structure of a written task of a second language learner. The learners have used some L1 structures to produce appropriate responses in L2, producing semantically acceptable texts. Subsequently, the learners have also used L1 structures interchangeably with L2 structures, producing inappropriate L2 responses, indicating an interference of L1 on L2. These structures are used to make them understood and reflect the way they arrive at a certain usage at a specific point (Faerch & Kasper, 1983). These structures do not reflect failure in any way but are a means to increase their resources in order to realise their communicative intentions. In using the L1 structures, the learners have taken some risks that include guessing of a more or less informed kind. They have attempted to use invented or borrowed items, all more or less approximated to the rules of L2 structure as far as their knowledge of L2 allows.

When the learners experience gaps in their L2 syntactical structures, they adjust the form of their L2 written responses by using syntactical items which are part of their L1. The analysis of the learners' writing revealed the extent to which their L2 responses are affected by their L1, the procedures used to express concepts for which L2 syntax is unknown and the extent to which and the manner in which L1 syntax interferes with L2 (Bialystok, 1990). The L2 errors made are traceable to the learners' L1 and we can conclude that there is definite interference of L1 on L2 as indicated in the analysis of the eight syntactical areas discussed.

The four learners relate L2 syntax to what they already know about language. The most salient facts they possess about language are those of L1. In the process of attempting to relate L2 to L1, they speculate about the similarity or difference between L2 and L1. The result is a subsumption of L2 under known categories in L1 competence and hence a translation process has taken place (Seligar, 1988). Where the structures of L1 and L2 are similar, the learner's lack of understanding its use in L1 is also reflected as an error in L2.

The use of L1 structures as a principle of fundamental language organisation and processing has immediate serviceability for these learners. The learners bring the form and meaning of both L1 and L2 into closer alignment and thus render usable a complex portion of L2 syntax that would otherwise be for the time being, inaccessible to them. The prior disposition of L1 has affected the L2 responses.

Blum-Kulka and Levenston (1983) contend that all second language learners begin by assuming that for every word in L1 there is a single translation equivalent in L2. The assumption of word-for-word translation equivalence or 'thinking in the mother tongue (L1)' is the only way a learner can begin to communicate in a second language.

This has been clearly indicated in this study where the second language learners have adopted their L1 structures to help them in their L2 texts. These learners will not attain mastery of the target language as long as the process of translation equivalence is in place. Blum-Kulka and Levenston assert that mastery of the second language involves the gradual abandonment of the translation

equivalence, the internalisation of the syntactical structures in L2 independently of the L1 equivalent, and the ability to 'think in the second language'.

These learners have accumulated structural entities of L2 but demonstrate difficulty in organising this knowledge into appropriate, coherent structures. There is a significant gap between the accumulation and organisation of this knowledge. When writing in the target language, these learners rely on their native language structures to produce a response, as shown in this study. As the structures of L1 and L2 have differences, there has been a relatively high frequency of errors occurring in the target language, thus indicating an interference of the native language on the target language, as expected.

Limitations of the Study

This case study was based on an observation of four adult second language learners and an analysis of each of their writing tasks in the classroom. As such, the sample involved was small and there was a limited range of languages analysed - Spanish, Italian, Vietnamese and Cambodian. This being the case, no generalisations for all second language learners are made. The value of this study is, paradoxically, its generalisability to a similar set of circumstances for the type of learners identified in the study. It is generalisable to theoretical propositions and not to populations.

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