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THE RELATIVE INFLUENCE OF SPANISH AND ENGLISH IN THE PORTUGUESE WRITING OF BILINGUAL STUDENTS

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Abstract: Consideration of possible influence of L1 on the acquisition of a TL has recently made a comeback in SLA research. Most work been done in an L1/L2 situation, but recent investigation has looked at Third-Language Acquisition (TLA) as well. A corpus of written work of Spanish/English bilingual students of Portuguese (of three different linguistic backgrounds) is examined for evidence of negative transfer from the two prior languages. The results were analyzed for error type (four categories) and apparent source (Spanish/English/Non-transfer) and divided by student type. Spanish yielded significantly more influence than English for most students, but the rate of "non-transfer" errors was even higher. It is concluded that Spanish yields heavy influence on the learning of Portuguese for bilingual students, favored by its proximity to the TL and, for Anglo students, by its status as an L2, both factors found important in general TLA research. Consideration is given to pedagogical application of findings.

Keywords: Hispanic, Anglo, Brazilian, writing, composition, error, bilingual, heritage language, third-language acquisition, language transfer.

0. Introduction

In the early days of modern applied linguistics, the 1940s and 1950s, the influence exercised by the learner's first language (L1) on the target language (L2 or TL) was considered transcendental, such that the profession witnessed the dominance of the Contrastive Analysis Hypothesis espoused by Charles Fries in 1945 and reinforced by Robert Lado in 1957 and a decade or so of careful contrastive studies that were intended to predict learning difficulties, depending on the specific language

pair involved. Researchers began to notice, however, that relatively few actual difficulties seemed to be traceable directly to L1, and more profound work began in analyzing what Selinker dubbed as *interlanguage*: that form of L2 performance that learners produce before they achieve full competence, if ever. The divergences from native standard – errors – could be used to find out more about the acquisition process.

By the 1980s, the role attributed to L1 in second-language acquisition had been greatly reduced, especially once it was determined that the learning order followed in the acquisition of an L2 is similar, no matter what L1 is involved (Dulay, Burt and Krashen, 102). Except for the obvious fact that one's foreign accent could often reveal his or her native language, any influence from L1 came to be seen as almost trivial for language learning. In terms of numbers, Dulay, Burt and Krashen show research that suggests that children have an incidence of 4% to 12% of L2 errors attributable to L1, while adults show an index between 8% and 23%. Ellis (29) reports on other studies with a variety of languages that indicate somewhat higher numbers, ranging from 23% in a study of Arabic/English, to 51% in a Chinese/English study. These numbers hardly seem trivial, but the thinking in SLA by the early 1980s tended to discount "interference", or the less hostile term "language transfer", as a factor in acquisition. That attitude is still prevalent in materials intended to train language teachers: in a recent edition of Omaggio Hadley's influential text on language teaching, the idea is barely mentioned as one item on a list of matters to be considered (53).

The corollary to minimizing the influence of L1 in producing errors in L2 is to attribute errors to something else. Dulay, Burt, and Krashen (172) called most non-interlingual errors "developmental", that is, "errors similar to those made by children learning the target language as their first language" (165). They also included a third category of "other errors" to cover those that seem to be exclusively the domain of second-language learners yet are not attributable to transfer. In summarizing the relative effects of the two primary kinds of errors, those authors state: "Although precise proportions differ from study to study, all the investigations conducted to date have reached the same general conclusion: the majority of errors made by second language learners are not interlingual, but developmental" (173).

Nonetheless, there has been a notable reaction to "throwing out the baby with the bath water": that is, neglect of the possible effects that possession of an L1 has upon acquisition of L2. After the work of Dulay, Burt and Krashen had attracted a great deal of attention, a number of other works appeared in support of the role of language transfer. In the introduction to their edited work *Language Transfer in Language*

Learning, Gass and Selinker say, "There is now 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" (7). Odlin published an insightful monograph on the topic, as did Ringbom, and another collection of articles was edited by Kellerman and Smith, followed by another edited by Dechert and Raupach.

In the first article in Gass and Selinker's collection, S. Pit Corder sees the influence of L1 primarily as a source of borrowing, not unlike that which occurs in other cases of language contact, in which L1 supplies linguistic material not yet available in L2 to aid the communication process. Much of that borrowing may be successful, and results in error only where inappropriate, although communication needs may nevertheless have been served. The distance between the two languages has much to do with the success or not of borrowing as a learner strategy: where the languages are quite distant, borrowing may not be possible; where they are close, borrowing will be possible and largely successful. He says, "it is precisely where the languages are only moderately similar that we get the heaviest incidence of borrowing errors. Learners are prepared to borrow but are less likely to be successful in avoiding error" (27).

The major thrust of work involving language transfer involves genuine second-language acquisition (SLA), that is, a new language acquired by monolingual speakers of L1. There is, however, a small but blooming field of work in the area of third-language acquisition, led off by Ringbom's monograph of 1987 on Swedish students of English, both monolinguals and bilingual speakers of Finnish, and more recently in the collection of articles edited by Cenoz, Hufeisen, and Jessner in 2001. These studies find that third-language acquisition (TLA) shows some special characteristics that distinguish it from SLA, both because the students are probably already experienced language learners, and because the presence of a second language system complicates the process of acquisition. Research effort has taken two basic directions: it looks at the many factors that affect TLA, such as age, language distance, status of the prior languages and acquisition methods or conditions; and then examines the linguistic and learning effects of the presence of two prior languages, particularly the kinds of transfer that takes place.

Within the general context of SLA, Corder mentions the situation of two prior languages in relation to his concept of borrowing as the primary effect of language transfer:

Any other languages known to the learner are also a source of forms when he is casting around to supplement his interlanguage. Studies have shown (Khaldi 1981 [an unpublished paper unavailable for

consultation]) that where one of these other second languages is formally more closely related to the target language, borrowing is preferred from that language rather than from the mother tongue. It sometimes appears that there is a positive preference for borrowing from other second languages, and often the less well known they are to the learner the more they prove a source of borrowing. (27)

Cenoz ("The Effect," 16-17) shows experimentally the two factors implied by Corder, above, which favor borrowing from one prior language over another in TLA: status as L2, and linguistic approximation to L3. In research on Basque/Spanish bilinguals studying English, that author found that Basque L1 bilinguals borrowed more heavily from Spanish than from Basque, with both factors favorable for Spanish. Spanish L1 bilinguals, however, with one factor favoring Basque (L2 status) and another favoring Spanish (language distance from English), also borrowed more heavily from Spanish, but showed more borrowing from Basque than did the Basque L1 subjects.

Helmut Zobl published an article in 1994 dealing with differences between monolingual and bilingual learners in the acquisition of a new language. He was looking at the openness to new forms that the two categories of learners would exhibit (effect of the markedness value and the "initial state" on the assumption that interlanguage starts with a greatly simplified basic or universal grammar and is added to with more marked forms as acquisition proceeds – a topic he also visits in his 1989 article). He concluded that multilingual learners have "broader" grammars and are willing to accept as correct a wider range of interlanguage structures, than are monolingual learners. Sometimes this wider acceptance leads to correct interpretation, sometimes to erroneous interpretation, and, presumably, production, though his work was limited to interpretation of correctness.

The reality of teaching Portuguese in the United States, and probably other English-speaking countries or even third-language countries, is that we rarely encounter a pure SLA situation. The student who comes into Portuguese without knowing at least some Spanish is rare, even if that Spanish exposure occurred for one year in grade school. Truly native Spanish, that is at the level of L1, is not at all unusual, either, especially in areas with significant Hispanic populations. Thus, students bring with them potentially two sources of exogenous influence, both Spanish and English, which already occupy L1 and L2, thus presenting a genuine TLA teaching situation.

In addition to the fact that Portuguese students are in a TLA position, one of the prior languages, Spanish, is exceedingly close, linguistically,

to the TL. This closeness and the transfer it implies, both positive and negative, is important for any teaching of Portuguese to Spanish speakers. It makes it possible, for example, to take advantage of positive transfer by offering classes in an accelerated or intensive mode without expanding contact hours, or introducing reading real literature in the first year, and employing Portuguese as the exclusive language of instruction from the first day, knowing that students will have a high degree of comprehension. At the same time, Portuguese instructors may struggle against difficulties directly attributable to Spanish throughout the learning experience of Spanish speakers. Interesting work has been done by Åkerberg concerning Portuguese classroom acquisition in Mexico by monolingual Spanish speakers. The analogous situation occurs in Brazil when Spanish is taught as a second language: progress can be quite rapid, but there are certain pervasive difficulties that are clearly attributable to differences in L1 and L2. This proximity occasionally leads specialists to study the degree of separation and even to address the question, linguistic but not geopolitical, of whether the two varieties are dialects of each other. In one study by Jensen it was shown that mutual comprehensibility hovers between 40 and 60 per cent for native speakers who have no study of each other's language, interesting because mutual comprehensibility has been one of the traditionally-applied tests of language distance or separateness.

The present study looks at the TLA situation of bilingual learners of Portuguese in order to investigate the effects of the students' two prior languages on writing errors, one of the languages closely related to the TL. I have formulated two research questions: 1) To what degree is there a measurable amount of influence on the TL from L1 and L2, and which language has greater effect and in what ways? 2) What differences occur as a function of the different kinds of learners? Answers to these questions may lead to more effective approaches to our learners, either helping them with specific points of difficulty, or better using the time for communicative activities or passive exposure to the language.

1. The Research

A corpus was analyzed consisting of 67 one-page unrevised compositions written in Portuguese by university students in their second year of Portuguese (intensive mode – intermediate), from a composition and grammar class that is the first upper-division course for potential majors and minors. The compositions are designated as "unrevised" because an essential activity of the course is a revision of the original submissions by the students themselves under instructor guidance, so

that at least two versions exist of every assignment. The compositions were all written by different students and were collected over several semesters.

All errors were counted and classified on a twelve-cell matrix in two dimensions. The first dimension considers the type of error in a simple linguistic taxonomy by language component affected: syntax, morphology, spelling (graphology), and vocabulary (lexicon). This simple classification was the same one used originally in scoring the compositions, and while it does not present the sophistication of more advanced systems, such as those described by James (90-128) or by Dulay, Burt, and Krashen (138-199), it does present the advantage of grouping the tokens into broad enough categories that interesting conclusions may be drawn. I recognize that it is possible, and perhaps desirable, to make finer distinctions and consider such factors as omission, addition, misformation, misordering, etc., as suggested by James, but such devices are better left for further studies, since this one is already dealing with two other multi-value dimensions in this investigation. I make observations regarding some of the problems in applying this four-way classification below, in consideration of the results.

The second dimension in the matrix of error classification is the evident source of the error in three categories: Spanish transfer, English transfer, or non-transfer (without reference to a second language). Errors were so categorized intuitively by the researcher, who knows all three languages well, and is accustomed to dealing with Portuguese learners of Spanish and English background. Some errors presented problems in classification: Is *da*, 'gives' without an accent, a result of Spanish influence or just ignorance of Portuguese irregular verbs or spelling? Is a failure to make adjective-noun agreement a relic of English processes, or incomplete Portuguese acquisition? In general, a "conservative" approach was adopted: if a given error could just as likely have been committed by a hypothetical Chinese learner of Portuguese, even though it happens to coincide with some English or Spanish feature, it was classified it as 'non-transfer.' On the other hand, something with a clear genealogy from Spanish – *vam a mudar* for *vão mudar* (<Sp. *ir a* + infinitive) – or English – *depois de acordando*, (<Eng. *after awakening*) – such that that Chinese speaker probably would not have come up with it, is attributed to the respective L1. I believe that a more "liberal" stance, one more ready to see a Spanish or English source, could have resulted in inflated attribution of L1 influence.

A third dimension of error classification deals with the students, classifying them into three types: "Hispanic" (with naturally acquired Spanish), "Anglo"

(with school-learned Spanish) or "Brazilian", who were students from Brazilian or Portuguese families with some Portuguese as a heritage language. Virtually all of them had been exposed to Spanish, either through limited SL training or through informal contacts in the community.

In this research there was no distinction made between Spanish speakers whose dominant language is Spanish (e.g., immigrants educated abroad) and those dominant in English for whom Spanish is a heritage language, primarily because the students were no longer available to provide that information. A further iteration of the work might make such a distinction. Nonetheless, in the area where the research was conducted, South Florida, the community itself is highly bilingual, such that Spanish is used extensively outside the home by virtually all Spanish speakers, and very few Hispanics are limited to domestic styles in speaking. For this reason, there is likely a fairly smooth continuum between the most highly competent (native) Spanish speakers and the least competent, and a classification dividing them would be arbitrary and perhaps of limited usefulness.

Table I illustrates samples taken from the corpus of actual errors encountered and their subsequent classification. Even with a limited number of categories, there are some gray areas for classification: Is an error of *crase* (use of the grave accent to indicate contraction of contiguous *a + a*) syntactic, morphological, or orthographic? In fact, it could be any of these, depending on how or why the error was committed, but I called it syntactic, in that a word would be omitted from or added to the syntax in case of an error. Is an apparent misspelled word just a misspelling, or can it be use of the wrong word or tense, or both, such as *morram* ('they die' present subjunctive) for *moram* ('they dwell' present indicative)? As a rule, I used my best judgment as a linguist and experienced teacher, and tried to be consistent, normally accepting the simplest or least marked category. In the case given, *morram* would therefore be counted as a misspelling. All problems of verb tense/mood/aspect/conjugation were grouped with concordance errors as morphological, although a good argument could be made for a syntactical classification of some verb errors. A look at the table will suggest some of the other classification challenges encountered.

2. Results

Table II provides the overall results of the classification of error by type and evident source. Reading across the bottom, it is clear that the non-transfer errors, at 864 overall (63%), are the most frequent, compared to Spanish transfer at 385 (28.3%) and English transfer at 110 (8.1%). A glance at the far right column shows that spelling errors were the most

frequent, at 545 (40.1%), followed by morphology at 303 (22.2%), syntax at 284 (20.8%) and vocabulary at 227 (16.7%). The internal cells break down each error type by transfer type.

Table III gives the third data variable, student type, plotted against transfer type, but combines error types for simplicity. Numbers are fairly close down each column (transfer type) for Hispanic and Anglo students, but Brazilian students show much less Spanish transfer than the others, 7.4% compared to the average for all subjects of 28.3%, but somewhat more English transfer, at 11.7% versus the average of 8.1%.

Graphs I through IV express the research results by all three variables, graphing first all students combined (Graph I) and then each of the three student groups separately.

Graph I shows the same data as Table II in a more readable but less detailed format. In Graph II it is evident that for Hispanic students English influence is quite low, with English at only 5.3% overall, virtually all of that in syntax and vocabulary. Spanish influence for this group is at 35.2% overall, split mostly between spelling and vocabulary.

Graph III shows the results for the Anglo students, and is rather similar to the Spanish student graph. Even for them, English reaches only 8.0% overall, again mostly syntax and vocabulary. Their errors from Spanish, however, their second language, stand at 26% overall, primarily in spelling and vocabulary, as for the Hispanic students.

Graph IV shows the students with Portuguese as a heritage language. They exhibit the highest level of English influence, evidently because Spanish was much less of an issue for them. It would seem that although they may know some Spanish, it was probably much weaker than their heritage Portuguese, the TL, such that it really did not exercise much influence.

3. Statistical Analysis

The raw data were processed through the *Statistical Package for the Social Sciences* (SPSS) computer program, version 7.0 for Windows, in order to identify statistically significant trends correlating the student groups with sources of error. After several trial runs it was determined that the Brazilian group was too small to produce meaningful results, so it was combined with the Anglo group, thus creating a Hispanic and Non-Hispanic two-way division.

Correlations procedures were selected for analysis, yielding several measures of significance of correlation, perhaps the most suitable being Kendall tau_b for nominal data (SPSS, 164-65). When the four types of errors were combined into "Spanish transfer", "English transfer" and "non-transfer" categories, there was found to be a significant relationship

only between Hispanic students and "Spanish transfer", at a correlation of about .23 with a level of significance at $<.05$. When considering the error types separately, morphological errors were the type that proved the most highly correlated with Hispanic student group, while spelling showed no significant correlation. That does not mean, however, that there was little Spanish influence on spelling, just that it affected both Hispanic and non-Hispanic groups indistinctively. See Table IV.

4. Discussion

The first research question asks: *To what degree is there a measurable amount of influence on the TL from L1 and L2, and which language has greater effect and in what ways?* The second asks: *What differences occur as a function of the different kinds of learners?* The answers are intertwined, and they will be answered together.

The data have shown, perhaps not surprisingly, considering current thinking in the field of SLA research and the anecdotal experience of Portuguese instructors, that there is a measurable amount of influence in the form of negative transfer causing errors, from both of the previously acquired languages in the case of Hispanic and Anglo students. However, the difference between Spanish transfer and English transfer is notable. In the case of English influence on Portuguese acquisition, the data point to a confirmation of the Dulay, Burt, and Krashen position, seeing relatively little transfer. Overall, English seems to be responsible for only 8.1% of error, reaching a maximum of 20% for syntax, well within the parameters of data presented for other languages by Dulay, Burt, and Krashen.

Spanish, on the other hand, accounts for 28.3% of error overall, and reaches almost 50% in the category of vocabulary. The fact that it affects both Anglo and Hispanic students confirms the Cenoz finding, as well as Corder's statement, both cited above, that linguistic proximity and L2 status favor borrowing, since for the Anglo students both factors are in effect.

If L2 status brings about greater transfer, it is not evident for the Hispanic students in the study, who did not show any increase of English influence over the Anglo subjects, unlike the L1 Spanish speakers with L2 Basque in the Cenoz study. Two possible explanations are likely: first, the actual relative status of Spanish and English for the Hispanic subjects is unknown, as was pointed out above, since the group includes both Spanish-dominant foreign-educated students and local Spanish heritage speakers. Secondly, the proximity of Spanish and Portuguese is so great that the proximity factor is very likely to be so heavy that it could obscure any effects of the L2 favoring factor.

In terms of the kinds of effect observed, the negative influence of Spanish is particularly strong in spelling and vocabulary, as words are either borrowed whole from Spanish, or spelled like them, when essentially the same word exists in Portuguese. Where the spelling happens to be the same in the two languages, positive transfer takes place and is not noticed. Because syntax is often very similar between Spanish and Portuguese, transfer effects would be mostly positive, and, again, invisible in error analysis. English influence, such as it is, is limited primarily to syntax and vocabulary. Syntax is probably a result of borrowing of structures from L1 to supply a means to express something that would require an unknown structure in the TL. Most of the vocabulary problems come about from "false cognates", the inappropriate use of an otherwise legitimate word. Morphology is hardly ever a recipient of borrowing from either language, because Portuguese presents morphological patterns that are not really vulnerable to borrowing from English, although morphology transfer from Spanish is certainly possible, and would often be positive.

Finally, the largest category of errors consists of the "non-transfer" types, responsible for 63.3% of overall error, and 78.5% of morphological problems. This finding also supports the position of Dulay, Burt and Krashen regarding "developmental" and "other" errors, not attributable to interlanguage, that "the majority of errors made by second language learners are not interlingual, but developmental" (173). It is possible to speculate, of course, that the investigator's decision to take a "conservative" position in assigning errors to a transfer category could have skewed the data away from a stronger view of transfer effects.

Finally, a comment on the "Brazilian" students: they seem to exhibit the characteristics of learners of their first language, struggling with the specific peculiarities of Portuguese structure and relatively unencumbered by English, the dominant language of all of them, and with only occasional incursions from Spanish. The fact that Portuguese was their first language, although now weaker, apparently gives it special status in terms of having some immunity to negative transfer effects.

5. Conclusions

In considering this research and its possible applications, it is interesting to seek some kind of pedagogical guidance. The reality of Spanish as a source of both positive reinforcement and negative transfer must be recognized in students of Portuguese who have Spanish as a first or second language. In this regard, it seems to support the position taken by those following Corder's (and many others) that L1 does matter.

If L1 does matter, our classroom work might well benefit from some sort of Contrastive Analysis (CA), or at least some attention given to those features that either reinforce learning the L2 or that may cause difficulty. This was the basis of the whole CA movement of the 1950s and 1960s (see above), but now devoid of its prior connection to the Audio-Lingual Method and behavioral learning theory, its concepts may be applied more objectively. Some interesting recent work has been done in exploiting Contrastive Analysis in teaching, such as that of Sheen who compares experimentally the effects of teaching specific aspects of structure based on a contrastive understanding of the two languages in contrast. In the case of Spanish and Portuguese, Åkerberg's work, mentioned above, has looked at both specific learning features (graphemics and nasals) and overall questions of transfer and language attitudes. Perhaps pedagogical affinities can be found in programs designed to teach second closely-related languages or dialects around the world, as in the Scandinavian languages.

A way in which one might approach the Portuguese teaching situation where Spanish plays an important role is through a process of *awareness*, or calling the attention to our students of linguistic matters of importance. The notion of awareness or noticing in second-language instruction has received much attention over the past decade or so, starting with Schmidt, and has evolved into the concept of 3 input processing³ in which authentic input is subject to some specific instruction on salient points to be 3 noticed³ by the students, as suggested in Gass and Selinker (*Second Language*), and in many individual studies, such as that of Lowe.

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Table I. Samples of types of errors classified

	Non-Transfer	Spanish Transfer	English Transfer
Syntax	porque ajuda-me gosta a nova precisam tempo até último momento	proteger nos jovens me gosta vam a mudar porque sim se sentem	pagar por depois de acordando acho devu antes de eu estrevu
Morfology	existe pessoas uma idioma meu tete poda dizerá	devolver-la a sangue quisem	quando sou (=for)
Vocabulary	a policial (=policia) ceir (= saber? <seir?) besteiras estragamento	ama de casa miedo logar ademais perdonar interes	pretender (=frigit) reflexão avantages
Spelling	também socines incinar mais/mas excitaram sejão	con necesidade esocial enemigo novidade	responsabilidade Brasil Outubro característica

Table II. Error counts by type and by source of error, all students
c: column percentage; r: row percentage; No. of papers = 67

	Non-Transfer	Spanish Transfer	English Transfer	TOTALS
Syntax	168 c 19.4% r 59.1%	60 c 15.6% r 21.1%	56 c 50.9% r 19.7%	284 c 20.8% r 100%
Morphology	238 c 27.5% r 78.5%	62 c 16.1% r 20.4%	3 c 2.7% r 1.0%	303 c 22.2% r 100%
Vocabulary	80 c 9.2% r 35.2%	108 c 28.0% r 47.6%	39 c 35.5% r 17.2%	227 c 16.7% r 100%
Spelling	378 c 43.8% r 68.4%	155 c 40.3% r 28.4%	12 c 10.9% r 2.2%	545 c 40.1% r 100%
TOTALS	864 c 100% r 63.3%	385 c 100% r 28.3%	110 c 100% r 8.1%	1,359 c 100% r 100%

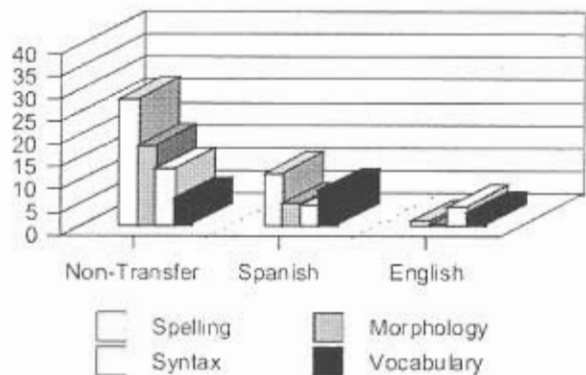
Table III. Errors attributable to three influences by groups of students

	Non-Transfer	Spanish Transfer	English Transfer
All students	63.3%	28.3%	8.1%
Hispanic students	59.5%	35.2%	5.3%
Anglo students	65.6%	26.3%	8.1%
Braz. students	80.8%	7.4%	11.7%

Graph I. N° of pages = 67 N° of errors = 1,359

Errors by Type and Source

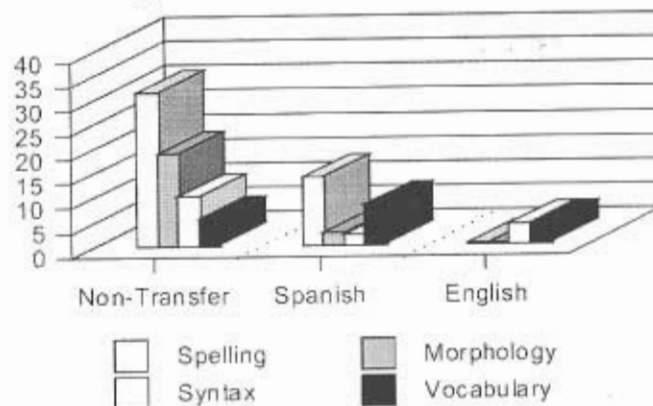
All Students -- % of All Errors



Graph III. N° of pages = 28 N° of errors = 291

Errors by Type and Source

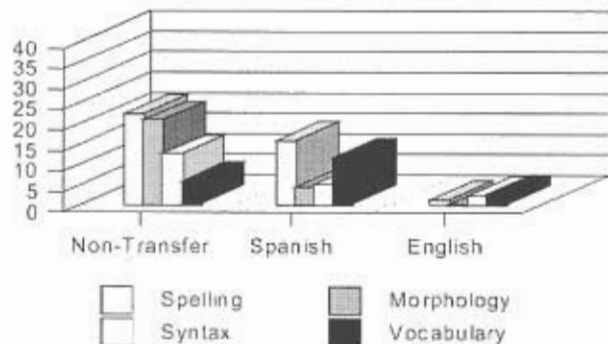
Anglo Students -- % of Their Errors



Graph II. N° of pages = 26 N° of errors = 585

Errors by Type and Source

Hispanic Students -- % of Their Errors



Graph IV. N° of pages = 8 N° of errors = 162

Errors by Type and Source

Brazilian Students -- % of Their Errors

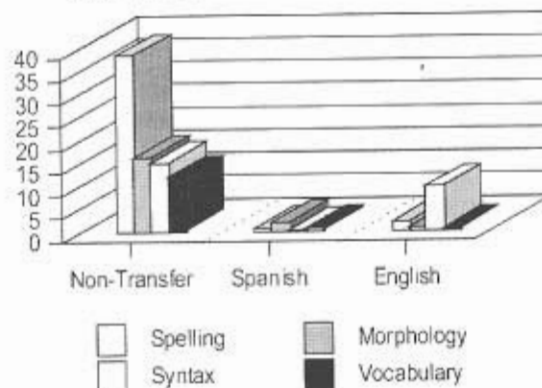


Table IV Statistical Correlation Between Group "Hispanic" and Errors Attributable to Spanish

Student Group by	Correlation value (Kendall tau _b)
Spanish Influence all types	.232*
Syntax/Spanish errors	.230*
Morphology/Spanish errors	.274*
Vocabulary/Spanish errors	.217*
Spelling/Spanish errors	.099

* Significant to the <.05 level. Otherwise, not significant