ABSTRACT
        This article focuses on the incidence of lexical
transfer as a communication/learning strategy in the written English
of 32 beginning Hispanic, disadvantaged students learning English as
a Second Language at Bayamon University Technical College in Puerto
Rico. Subjects were asked to write a detailed description in English
of a simple ink drawing of a restaurant kitchen. A second, similar
picture was presented for written description with the goal being the
specific notation of the eight differences between the two pictures.
Students could also list Spanish words that they wanted to use in the
description for which they did not know the English equivalent. These
descriptions were then analyzed for communication strategy use and
transfer. Audio recordings of the student describing these
difficulties were also made. Results confirm the usefulness of
Poulisse's 1993 classification of communication strategies and
demonstrated the correlation that exists between metalinguistic
awareness of transfer's role in second language learning and the
production and frequent use of transfer in production, suggesting
that first language transfer has a role in second language
acquisition. One ink drawing and one figure are attached. (NAV)

He Use a Square Shirt:

First Language Transfer in the Writing of Hispanic ESL Learners

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He Use a Square Shirt: First Language Transfer
in the Writing of Hispanic ESL Learners

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Learners of a second language are bound to find themselves in situations in which they don't have adequate vocabulary for their communicative needs. This is particularly true of beginners, although learners at all levels encounter such problems. What do learners do when faced with the need to communicate but lack the lexical resources to communicate their intended meaning? What usually happens, if they don't abandon the attempt all together, is that they use one of a number of communication strategies. Such strategies are defined by Zhang (1990) as

> a strategy that consciously or subconsciously draws on the learner's previous linguistic knowledge, which includes not only the knowledge of his/her native language but also the existing knowledge of other languages, whatever little knowledge he/she has acquired of the target language (be it accurate or inaccurate), and his/her expectations about the target language. (pp. 3-4)

Thus learners muster all their linguistic resources to try to solve communication problems. Additionally, they may make appeals for assistance or resort to none linguistics means such as the use of mime.

The study reported on here focuses on incidences of lexical transfer as a communication/learning strategy in the written English of beginning Hispanic ESL learners. Transfer has been defined by Faerch and Kasper (1987) as "an IL [interlanguage] plan containing an L1 [first language] subplan" (p. 115). That

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is to say that it is a plan for communication using interlanguage knowledge which includes an element or elements inspired by L1 information. Adjémian (1983) defines transfer as "the use of past experience in the acquisition of a new task" (p. 251). Thus transfer can be understood not only as a communication strategy, but also as a learning strategy. As Zhang (1990) has stated, "language transfer is ultimately motivated by the learner's need, sometimes very urgent need indeed, to learn and to communicate" (p. 9).

We might note that the term "transfer" evokes the idea of movement. Yet as Coleman (1988) points out, nothing goes any-where during activation of L1 knowledge, nothing is physically *transferred* between L1 and IL knowledge systems. All that happens is that a knowledge source other than that of the L2 (second or target language) is accessed to solve a communication problem. That knowledge source may be the L1 or other languages the learner may know. Corder (1983) refers to transfer in this ad hoc sense as *borrowing*, to be distinguished from *structural transfer* which occurs only when successive and communicatively successful borrowings become incorporated into IL grammar.

Many other attempts have been made to categorize types of first language transfer. Some of these (Faerch & Kasper 1983; Bialystok 1984, 1990) have focused on the transfer product, while others (Poulisse 1993) have focused on the transfer process in communication strategy use. Later in this paper Poulisse's (1993) paradigm for categorizing communication strategies will be

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explained in detail. As we will see, two of the three types of communication strategies she defines are based largely on transfer.

The Study

Thirty-two ESL learners from the Educational Services Basic English program (i.e., disadvantaged first year students) at the Bayamon University Technical College in Puerto Rico were asked to write detailed descriptions of a simple ink drawing of a restaurant kitchen (See Appendix A). This picture was one of a pair of pictures in which the second picture has eight points of difference from the first. Participants were asked to describe the picture in sufficient detail so that someone looking at the second picture could recognize the differences. They were given 30 minutes to complete this task. These descriptions then became the corpus which was analyzed for incidences of communication strategy use and transfer. Learners were also asked to underline lexical items which they had had problems in producing. They were also requested to list in Spanish words they needed in their descriptions but for which they could not think of an English equivalent. Learner's retrospections about the problems they had had with the underlined words and the cases of transfer they produced were tape recorded and anaylzed. In this way data was gathered which permitted the researcher to analyze transfer use and study the relationship between metalinguistic awareness and first language transfer.

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72% of the sample were women. In the first year class, approximately 52% of the students are women. 29 out of the 32 participants or 90.6% attended a public high school. Here we have over representation as only about 54.5% of the first year class had gone to public school. This is an indicator of the relatively disadvantaged academic backgound of these Educational Services students. Another indicator is the College Board score in English that they submitted when they applied for admission to the university system. The average for the 32 participants was 452 while the average for the first year class in general was approximately 521. Thus this primarily female sample of public school graduates was weak in English when they initiated their first year English program. This study was conducted at the end of their first year of university English studies.

These participants were just completing the Educational Services Basic English program. This theme-based program has a strong communicative focus, engaging students from the start in meaningful and authentic language use. A great deal of emphasis is given to writing. Students do frequent free writing, write letters to their teacher, do a four part sequenced writing project, and produce a written final report. Thus these students were ready to write, perhaps more so than students from the conventional Basic English sections. Most, by the end of the year, are able to produce writing which communicates clearly although numerous grammatic and lexical anomalies are present in their written production.

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Communication Strategies and Transfer

In defining her process-based paradigm of communication strategies, Poulisse relies heavily on Levelt's (1989) model of language production. This model, originally postulated to explain L1 production, can be adapted to also explain L2 production. According to Levelt, language production consists of four steps: message generation, grammatical encoding, phonological encoding, and articulation. Levelt further defines three mental processing components: the conceptualizer, the formulator, and the speech-comprehension system (see Figure 1). Each component involves a number of procedures. These make up the learner's procedural knowledge, which in turn allows him or her to operate on the declarative knowledge that emerges during the encoding process.

[place Figure 1 about here]

The conceptualizer is where the content and form of the preverbal message are generated. The preverbal message is formulated in lexical chunks which may, for example, specify [+ human], [+ male], [+ child], [+ noun] and [+ English (the language of encoding)]. Such a specification would activate the lexical item BOY plus related items such as MAN, GIRL and their L1 translation equivalents. Since BOY is the only item which exactly matches the specification, it receives the highest degree of activation (Poulisse 1993). If, however, the word BOY were not available to the language user for access, he may substitute another related term which was activated and which shares a

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number of the specifications. The conceptualizer also contains a monitor which permits repair in the conceptualization process.

The formulator is responsible for grammatical and phonological encoding. To achieve this, it must have access to a mental lexicon, a second source of linguistic declarative knowledge. The semantic and syntactic information found in the lexicon are referred to as the lemma. The morphological and phonological information define the form of a lexical item to be used. When lexical information (the lemma) is activated, a surface grammatical structure is generated which is further processed by the phonological encoder (the form). The speech-comprehension system reviews both internal and overt speech for comprehensibility. The outcome of this review is fed into the monitoring device of the conceptualizer, thus giving the learner another opportunity to evaluate and repair the message.

This model helps explain why L1 or L1-influenced lexical items can and do appear in L2 production. L1 and their equivalent L2 items share all the same specifications in the preverbal message chunk except the language of encoding. Thus highly frequent lexical items may be activated in the L1 before they are activated in the L2. As Poulisse (1993) states, "frequent L1 lexical items may occasionally reach the activation level required for lexical access before the corresponding new and therefore infrequent L2 lexical item" (p. 177). In the case of low frequency items, no L2 equivalent may be available in the learner's lexicon, thus the learner has only three recourses

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available: message abandonment, invention based on the form of the L1 item, or some kind of L2 substitution or paraphrasing.

Poulisse (1993) has defined three distinct communication strategies. These are (1) substitution strategies, (2) substitution-plus strategies, and (3) reconceptualization strategies. When a learner uses a *substitution* strategy, the intended lexical item is substituted by another word, either from the L2 or the L1. In many cases the learner knows an L2 word which can somehow or other be related to the target concept and replace the more appropriate target item. In this case, the substitution word is used instead of the more suitable or correct L2 word or phrase. When he or she uses a *substitution-plus* stragegy, an L1 substitution word is somehow reworked, applying L2 morphological or phonological encoding procedures to L1 forms. This strategy is also referred to as "foreignizing." In both these cases, the lexical choice is made in the conceptualizer as, first of all, the message for which the original lexical search failed to produce a lexical item is fed back to the monitor in the conceptualizer for reworking or substitution. Secondly, the lexical choice made is influenced by the speaker's knowledge of the preceding discourse, the situation, and the world--all knowledge found in the conceptualizer. In the case of foreignizing, the conceptualizer choses an L1 word rather that L2 and reworks it on the basis of linguistic knowledge of the principles of L2 word construction. This is more demanding from a processing point of view than simple substitution.

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In the case of *reconceptualization*, the most demanding strategy, the speaker does not come up with a single word solution to the lexical problem. In place of a word, he or she employs some kind of explanation or paraphrasing or adding of background information to get the idea across. This may include listing the properties of the target item or inventing some kind of descriptive compound such as "cook table" for stove.

In an earlier research project conducted by this researcher (Schweers, 1993) participants were asked to do a similar task but in this case their descriptions were oral rather than written. In that study 1.05% of the total words produced showed the influence of L1 transfer. In the current study, where descriptions were written, the incidence of transfer was found to be much higher. In this study 5.22% of the total words produced were influenced by transfer. Variation in task can thus produce differences in the incidence of transfer in a learner's production.

In Poulisse's (1993) definition of substitution strategies, L2 substitution words unrelated to L1 would be considered for classification. In this study, however, it was found that almost all the L2 substitution words used could be related in someway to the L1 and thereby represented cases of L1 transfer. Cases of foreignization are obviously all cases involving L1 transfer. Both these communication strategies are treated here as transfer strategies, in Zhang's (1990) sense.

In this study, it was found that by far the most commonly

used strategy was substitution. 206 out of 323 cases of strategy use were examples of this procedure. This represented 63.4% of all cases. There were 82 cases, or 25.5%, of substitution-plus and 37 or 11.4% of reconceptualization.

Poulisse (1993), based on her studies of communication strategies in oral expression, predicts that in picture description tasks, the reconceptualization stragegy will be strongly represented. She found that "when referring to photographs or pictures for which they did not know the English names, none of the participants--regardless of their proficiency level--used more than a few Transfer Strategies" (p. 184) Further, she discovered that

> When the demands were high (i.e., when the subjects were required to solve all of the communication problems, as in the photograph description task), the speakers would go for comprehensibility and almost invariably used lengthy and informative Reconceptualization Strategies. (p. 185)

Throughout her writings Pouslisse (1993) emphasizes that the greater or lesser use of transfer or transfer type in production is highly task dependent. In our written tasks, however, we did not find frequent use of reconceptualization strategies to be the case. As stated above, only 11.4% of the strategies analyzed were cases of reconceptualization. One might surmise that when speaking, words are cheap and that explanatory or illustrative comments trip lightly off the tongue. We might speculate that in writing, however, words become dearer as the author searches for the exact word or turn of phrase to express his or her idea.

Let us now look at examples of communication and transfer

strategies produced by the participants in this study.

Substitution Strategies

The following are examples of the substitution strategy which were found in the written data produced by this study's participants. After the presentation of the examples, they will be explained and discussed.

In these examples that follow we will see the common practice of assuming that words with common formal properties (cognates) or that words which are commonly used translation equivalents will always share the same meaning. This assumption sometimes works, but not always as we will see in these examples.

1. the pants of the **chief** have **lines**

2. he circule a **notice**

3. I can **appreciate** two men

4. in the door of the kitchen is an **announcement**

5. the coffee **losing** on the stove

6. the water **key** is **open**, the **"pen"** is **open**

7. a **sueter** of big **squares**

8. and two **cristal** in the middle

9. he **solicited** work in this place

10. long **hand** shirt with solid color

Discussion

1. Although it is true that a *jefe* can be a **chief of the Indians**, the meaning here is different. A more appropriate

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translation for *jefe* would be **boss**. Perhaps the participant chose this substitute because of the formal similarity of the shared **f**s. Or perhaps this was simply the only translation equivalent he had encountered. The use of **lines** for *rayas* or *lineas* was the most common substitution found in our data. As **lines** and *lineas* are such obvious cognates, it is simply assumed that they are also identical semantically.

2. In this case the participant assumed that **notice** is the semantic equivalant of its Spanish cognate, *noticia*. In fact, a more appropriate translation would be **news item**.

3. *Appreciar* in Spanish can mean to **see** or **observe**. The participant wrongly assumed that the English **appreciate** is its semantic equivalent. It would have been more natural in English to simply say **I can see two men**. **Appreciate** and *apreciar* are semi-cognates which share some uses but not all.

4. The paper on the door can be called an *annuncio* in Spanish. In certain cases **announcement** would be an appropriate translation, but in this case the word an English speaker would use is **sign**.

5. In Spanish, the coffee *se estaba perdiendo*. In many acceptations, **lose** does indeed translate *perder*, Here, however, an English speaker would use the idiom **boil over**.

6. Here we have cases of literal translation. *La llave estaba abierta*. In everyday translation, **key** is *llave* and **open** is *abierta*, However, an English speaker would say more idiomatically **the faucet is on**. In the second example the

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participant translated *pluma* using the most common and well known translation equivalent, **pen**.

7.   Puerto Rican Spanish speakers use the Anglicism **sueter** to refer to most any shirt and not specifically to a knit wool overgarment. This Spanish meaning was inappropriately projected onto English semantics. An English speaker would simply have said **shirt**. *Cuadritos* in Spanish refers to checks. A well known translation equivalent for *cuadro* among beginning learners is **square**, thus the assumption that **square** can be used here to translate *cuadritos*.

8.   Glass windows in Spanish can be referred to as *cristales*. Thus the participant assumed that **crystal** in English would cover the same semantic field. In this case it does not and an English speaker would more appropriately use the term **windows**,

9.   To apply for a job in Spanish is *solicitar*. The participant here use the English word **solicite** correctly in the past tense, but was unaware that **solicite** has another meaning unrelated to job applications. They are such obvious cognates that the participant simply assumed a common meaning.

10.   Here, the participant wanted to refer to a long **sleeved** shirt. As this term was obviously not in his or her lexicon, the participant decided to substitute with a common word, **hand**, which was at least located in the proximity of a sleeve. He might also have seen a relationship between *manga* (sleeve) and *mano* (hand).

Carroll (1992) has defined cognates as being "any pair of words which are treated by the learner as belonging to distinct

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linguistic systems but are also treated as "the same thing" within those systems (p. 114). Her definition is based purely on shared phonetic or graphic similarities between L1 and L2 words. Traditionally, definitions of cognates have included notions of a common etiology or common meaning. Carroll eliminated these aspects from her definition and only recognizes words as cognate pairs when they share sufficient formal characteristics to be identified as apparently the same word. In this study the term cognate is being used in Carroll's restricted sense.

Substitution-Plus Strategies

Now let us look at examples of the substitution-plus strategies where participants, in addition to making a simple substitution, also rework an L1 word to make it more L2-like.

1. in the **stuff** (estufa/stove) the liquid in the pot

2. go out by the **plume** (pluma/faucet)

3. there is another **gavinet** (gabinete/cabinet)

4. his pants are **cuadriculate** (cuadriculado/checked)

5. and a **recipient** (recipiente/container) with **espum** (espuma/foam)

6. two men make on the **gat** (gorra/hat)

7. he is very **sorpresive** (sorpresivo/surprised)

8. and white pants with black **lists** (listas/stripes)

9. put his finger in **periodic** (periódico/newspaper)

10. the soup was **deramed** (deramada/over flowing)

Discussion

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1. In this example, the term **stuff** was coined by dropping the initial **e** and the final **a** of *estufa*. An extra **f** was added to Anglicize this invention. **Stuff** is close enough to **stove** to have the potential to communicate to an English speaker.

2. Here, the participant formed **plume** by dropping the final **a** of *pluma* and by adding the English orthographic convention of a final **e**. This would probably not communicate the idea of **faucet** to an English speaker.

3. The creation of **ga .net** from *gabinete* involved deleting the final **e** and changing the **b** to **v**. Perhaps the participant thought the use of **v** made the word more English-like or perhaps this simply indicates a problem the participant has with Spanish orthography. **Gavinet** appears close enough to **cabinet** to probably be understandable by an English speaker.

4. Here the participant created the word **cuadriculate** from the Spanish *cuadriculado*. The participant Anglicized this word by using the common English suffix **-ate**. This invention would probably not communicate to an English speaker although he or she might figure the meaning out from the prefix **cuad/quad**.

5. In this case the participant created new English-like words, **recipient** and **espume**, by eliminating the final vowel from the Spanish spelling. Most probably neither of these creations would be comprehensible to an English speaker.

6. In this very interesting case, the participant seems to have combined the Spanish *gorra* with the English **hat** to form **gat**. An English speaker could perhaps surmise that the intended word

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was **hat**.

7. Here the participant transformed the Spanish *sorpresivo* to **sorpresive**, using the English-like ending **e**. The similarity of this form to **surprised** could lead to comprehension by an English speaker.

8. The participant converted the Spanish *listas* into the Anglicized **lists**, eliminating the final **a** and using an English plural. This form would most probably not be comprehensible.

9. *Periódico* has been converted to **periodic** through the elimination of the final **o**. Although the most appropriate English translation would be **newspaper**, an English speaker might understand by relating the participant's form to **periodical**.

10. The participant wanted to say that the soup was **boiling over** but did not know the English translation. He or she invented **deramed** on the basis of *deramar* using the appropriate English past ending. This invention would not be comprehensible for an English speaker.

The above examples of substitution and substitution-plus stategies should give the reader a good feel for the types of forms participants accessed or produced when they could not retreive the appropriate L2 form. Either through seeing sometimes unexpected relationships between known L2 forms and the target concept or through inventing foreignized forms on an L1 base, participants were able to find more or less effective solutions when faced with the problem of ignorance of the appropriate L2 forms to communicate their intended message.

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As mentioned above, the most commonly used substitution was the word **lines** (46 cases of use). The second most common form was **squares** (37 cases). In spite of their frequent use, only five participants identified **rayas** or **lineas** as words they needed but did not know and ten mentioned **cuadrado** as a needed form. Participants seemed to assume automatically that **lines** and **squares** were the appropriate translations for these Spanish terms. From this observation, we can perhaps extract a principle of first language transfer: *When the second language contains a high frequency and widely known cognate or translation equivalent which apparently translates the L1 form, this form, manifesting first language transfer, will be selected to substitute the appropriate target form.* When L2 solutions are not as high frequency or well known, the participant's responses are far less predictable and original solutions to lexical problems.

In discussing word production and the bilingual lexicon, de Bot and Schreuder (1993) make two pertinent points:

1)   Nonproficient speakers of a language must find a balance between the selection criteria for a given lexical element and the availability of this element. Quite often a "second best" solution will be chosen involving an element that does not meet all of the necessary constraints of the preverbal message.

2)   Lexical elements from different languages may compete for lexicalization. Levels of activation between languages may differ to the extent that one language will win out most of the time. (p. 203)

The data presented in this study amply illustrate both the use of "second best" solutions and the competition between languages for lexicalization. Often the "second best" solution is an L2 item

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somehow related to the target concept and which has frequently been suggested by L1 forms or meanings. Also quite frequently, the "second best" choice is an invented form struggling somewhere between L1 and L2. In those cases where the L1 wins the competition for lexicalization, the participant uses an L1 form with no modification. We have seen abundant examples of all of these in the written production of this study's participants. The important point is that although these lexical choices are "second best," they often get the point across and get the participant through communication episodes for which his L2 lexicon is deficient.

The tasks these participants were requested to carry out was written. That is to say, they attempted to communicate without immediate corrective feedback. As Pica (1988, 1991) and Pica and Doughty (1987) have pointed out, acquisition is greatly facilitated when learners engage in negotiated interaction. This is a dialogue in which interlocutors attempt to explain and clarify meaning as a conversation progresses. It is a two way street.

Schweers (1995) has conducted a study in which he analyzed the negotiated interaction of pairs of interlocutors of various L1 backgrounds and of the same level of preficiency (except when the interlocutor was an English speaker). He discovered three possible outcomes: correct learning, incorrect learning (such as two Spanish speakers convincing themselves that **calb** is the English version of *calvo* or **bald**), or no learning at all in spite

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of interaction. In the examples Schweers cites, lexical learning most often occurred when one of the interlocutors was a native speaker of English. In one case with an English-speaking interlocutor, however, no learning occurred. This is perhaps because the participant did not immediately practice the corrected form provided by the English speaker. When the interlocutors were L1 speakers of other languages, incorrect learning was frequent. Although the sample was small, these findings suggest that pair work is most productive of learning when one of the participants is a native speaker of English or at least a non-native speaker who is much more proficient than his or her partner. In present classroom practice pair work is almost invariably done between non-native speakers of approximately the same proficiency level.

When completing their written tasks, the first two or three participants to participate almost invariably just substituted a Spanish word when they didn't know the English equivalent. Upon noting this, the researcher changed the instructions and requested that participants not use Spanish and try to express themselves in English however possible. In spite of this request, the participants continued to occassionally use Spanish. They would underline the word or write it in quotation marks to indicate they weren't using English. This would be an example of the strategy known by some researchers as borrowing or code switching, a type of substitution strategy in which the L1 is used in an L2 communication. In this study these cases were not

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counted for analysis.

Reconceptualization Strategies

When participants use a reconceptualization strategy, basically they talk or write about the target concept rather than giving it a name. They explain what they see or paraphrase what is happening. They may even add background information to aid the interlocutor in interpreting the message they are trying to convey. Let us see some examples of this strategy.

The action in the picture which elicited the greatest use of reconceptualization was a pot on the stove which was boiling over. In Spanish this would be expressed by the verb deramar. Not one of the participants knew the appropriate translation for this term, so they used a variety of strategies to get the idea across.

1. liquid of the pot are coming out
2. one food in the pot is very hot
3. one pot where the soap go out the pot (soap/sopa)
4. the pot have a lot of soup
5. and saw the coffee losing on the stove
6. the soap is falling out of the stove
7. there is a caserole with hot water geting out and going down by the stove
8. the pot content go up and it is all top of stove
9. the food that is out of the bowl
10. the stuff doesn't clean because the soap put on this

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11. something that is taking off of this envase

12. the water on the food of the recipient is up and is down for the "estufa"

14. the stove have a bowl that the food is up

Although the English used in these examples may not be the most elegant, most of these attempts do manage to communicate the intended message.

Other concepts also elicited reconceptualization as a communication strategy. To convery the concept of food one participant used the following paraphrase:

the fried pan have something to eat

To communicate the idea of a pot, one participant wrote:

in the center is a big something like a pan, but isn't a pan

To say a sink to wash dishes in, two participants used:

the wash dishes sink

the place where the dishes are washed

To refer to a stove, one participant used:

the cook table (estufa) have a oven

To communicate the idea that a man was wearing an apron, one participant used the following reconceptualization:

this man cover dress

or to communicate the idea of a chef's hat:

and a cooking hat

or that the man was bald:

a fat and old man who have no hair in the top of his head

or that another man had a beard:

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in the down side of the head he has on it the black hair

Once more, the English was not perfect but most of these attempts did indeed communicate.

Message Abandonment

Another coping strategy participants could opt for would be to simply abandon the intended message. To measure the extent of message abandonment in our participants we asked them to list in Spanish the words needed for use in their descriptions but for which they were not sure of the appropriate English translation. We could then compare these lists with the communication events the participants attempted to see how often they made an effort to communicate a concept for which they didn't have an L2 word. The results reported here represent the results for 30 of the participants (two participants did not provide lists). It was found that in 36.7% of the cases participants made some attempt to communicate the concept for which they didn't have an exact word. In 63.3% of the cases they abandoned any attempt to communicate the concept. Thus simply abandoning the potential message to be communicated was a quite common strategy used by this study's participants.

Table 1 presents a list of the 22 words most commonly needed but for which participant's felt they could not retrieve the appropriate English translation. In large measure this list is a function of the salience of the objects and actions portrayed in the picture to be described and the relative frequency of the

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needed word in a beginning learner's vocabulary.

Table 1

Words Most Commonly Needed, the Number of Participants
Needing Them, and the Percent of Abandonment

Needed Word	Number of Participants	% of Abandonment
delantal	23	34.8
olla, cacerola	19	47.4
pluma, grifo	13	69.3
espuma	13	100.0
derramar	11	63.6
sarten	11	63.6
cuadros, cuadricualado	10	60.0
señalar, apuntar	9	66.7
fregadero	8	75.0
barba, barbú	7	57.2
bigote	6	57.2
estufa	6	50.0
lineas, rayas	5	66.7
anuncio, letrero	5	0.0
escurridor	5	80.0
hornilla	5	80.0
bolsillo	4	25.0
correa	4	100.0
hervir	4	100.0
espalda (estar de espalda)	3	100.0
manga	3	66.7
sucio	3	66.7

The most frequently needed words where those which referred
to objects or actions which were particularly salient in the
picture to be described. The abandonment rate for these words
was not high as it was important to communicate the concept one
way or another. For example, three of the four men in the
picture were wearing aprons and communication of the concept was
only abandoned 34.8% of the time. It was also important to

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describe those features which could vary between the 'given
picture and the one in which changes had been made. The obvious
actions to be described were the pot which was boiling over, the
faucet which was running, and man who was pointing at the pot.
The men's clothes could be distinguished by whether or not they
were striped or checked so it was important to find someway to
communicate these facts. The less commonly needed terms tended
to be more readily abandoned, except in the case of common words
like *bolsillo* (25% abandonment) which participants felt they
could find someway to communicate.

Table 2 presents the types of strategies participants
used when they felt they did not know an adequate translation for
a needed Spanish term.

Table 2

Strategies Used When Uncertain of Translation
and a Few Examples

Strategy	No. of Cases	Percent
Substitution	23	29.9%
olla/bowl **bolsillo/compartments**		
Correct translation	22	28.6%
sorprendido/stunned **sarten/fried pan (frying pan)**		
Foreignization	14	18.2%
estufa/stuff **deramar/deramed**		

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Table 2 continued

First Language	10	13.0%

delantal/delantar
olla/envase

Reconceptualization	5	6.5%

deramar/the food is blown out
se sube de la olla/ something that is taking
off of his envase

Invented L2 Substitution	2	2.6%

delantar/dresser
mante/mantel

Left Blank	1	1.3%

As is to be expected from other results reported elsewhere in
this study, the most common strategy type was substitution or the
use of an inappropriate replacement L2 word. Close behind, the
second most common type was to use a correct translation. In
spite of the fact participants felt they weren't sure of the
correct translation equivalent, they were often able to recall it
correctly. In third place came foreignization, another strategy
we have seen that learners often use. Next came the use of the
word in the first language with no attempt to modify it. This
code-switching has also been shown to be a common strategy
throughout this study. Reconceptualization continues here to be
an infrequently used strategy. In two cases, participants
invented an inappropriate and nonexistent L2 word and in one case
the participant drew in a blank for the word. So we see that
even when learners believe they do not know a lexical form, they

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often mus_er their resources and come up with a more or less adequate solution to a lexical problem.

Metalinguistic Awareness

In an earlier study conducted by this researcher (Schweers, 1993) a significant relationship was found between metalinguistic awareness of transfer in second language production and the frequency of transfer use in oral production. This study was realized with a small sample of only 10 participants. The above finding, which was secondary to the main focus of that investigation, was a factor in motivating the current study. The researcher wanted, among other objectives, to investigate in greater detail and with a larger sample the observation of a possible correlation between metalinguistic awareness and transfer use. Table 3 reports some of the findings of this earlier research.

Table 3

Means and Standard Deviations for Transfer Frequency by Groupings
Based on Responsiveness to Crosslinguistic Influence

	Interlocutor's L1				
Responsiveness	S	R	E	J	Means/S.D.
High S01 S02 S06 S10	13.16	15.40	15.61	10.72	13.7/3.45
Medium S03 S04 S08 S09	11.69	09.22	08.43	07.08	09.1/3.19

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Table 3 continued

Low S05 S07	08.87	05.03	05.70	06.72	06.6/2.00

Note. In this table, S = Spanish, R = Romance,
E = English, and J = Japanese first language.

This study was investigating differences in the use of first language transfer motivated by differences in an interlocutors' first language. It might be noted here that the incidence of transfer for participants from all three groups of metalinguistic awareness was lowest when interacting with a Japanese speaker. This may be due to the marked degree of difference between the participants' first language, Spanish, and Japanese. Such difference may predispose participants to assume that lexicon based on Spanish may not be comprehensible to a speaker of so different a language. If we look at the means for transfer use, we observe that they were the highest for highly responsive participants and decreased as the participants' responsiveness decreased. The statistical significance of the between-group differences was confirmed using SPSS/PC Oneway ANOVA and Scheffé tests.

At this point perhaps a more specific definition of metalinguistic awareness should be given. In general it is a conscious awareness of how the L1 can influence IL production. In this study four criteria of metalinquistic awareness were used.

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These are:

1) Participant is able to describe the metacognitive
    process employed in lexical decision making.

2) Participant is able to establish a connection, where
    one exists, between previous linguistic knowledge and a
    given lexical decision.

3) Participant gives evidence of awareness of the
    systematic functioning of language, i.e., recognition
    of patterns or interrelationships.

4) Participant gives evidence of some kind of linguistic
    analysis, i.e., mentions linguistic subsystems or
    subcategories.

These criteria were used to rate each of the participants.
Participants participated in a taped retrospective interview in
which they commented on the words which had given them trouble
and also the examples of transfer identified by the researcher.
The content of these retrospections was then evaluated in terms
of the above four criteria. Participants were ranked on a scale
from 0 to 3 for each criterion, 3 being the highest possible
score. These were totalled, with the maximum score being 12, to
provide a measure of metalinguistic awareness which would
subsequently be correlated to the participants' frequency of
transfer use in their writings.

The participants in this sample did not demonstrate a high
level of metalinguistic awareness. In the earlier study
mentioned above a number of the participants where very

articulate in describing the how and why of first language influence on their IL production. The group in the current study, however, was far less articulate. Only three participants could overtly state that what they were doing was to start with a Spanish word and modify it to be more English-like. The highest score of metalinguistic awareness received was seven on a scale of 12. Three participants obtained this score. One participant received 6, nine received 5, five received 4, twelve received 3 and two received 2. It is hard to find a definitive explanation for their general low level of metalinguistic awareness. A partial explanation might be found in these students' educational background. Almost all participants come from a public school background. Public education in Puerto Rico is based largely on rote learning. Students are given little opportunity to analyze knowledge and only recently has the public school system begun to work with developing critical thinking skills. Thus these students come to the university with little predisposition to analyze intellectual material and with little awareness of the thinking skills they employ to solve problems. Additionally, the students who participated in this study came from the Educational Services Program, a program for the most disadvantaged and needy learners in the University of Puerto Rico system. In sum, these participants have had little practice in thinking about thinking. This could explain in part their low level of demonstrated metalinguistic awareness.

Each of the 32 participants in this study was assigned two

numerical descriptors: the first represented the participant's
level of metalinguistic awareness on the scale described above
and the second was the number of cases of first language transfer
the participant produced in the writing sample. These values are
reported in Table 4. These data were subjected to a Pearson's
Product Moment Correlation analysis and a significant moderate
correlation of $r = 0.432$ was found at the 0.01 level of
significance. These findings thus confirm the hypothesis
suggested by the earlier study (Schweers, 1993): higher levels
of metalinguistic awareness lead to more frequent use of the
transfer strategy. That is to say that participants who are
better able to analyze and articulate the role of L1 knowledge in
their IL production also tend to be more frequent users of
lexical forms influenced by the L1. Implications of this finding
will be discussed later.

Table 4

Scores for Metalinguistic Awareness and Transfer Use

	MLA	Transfer
Subject 1	3	4
Subject 2	4	13
Subject 3	3	5
Subject 4	3	5
Subject 5	3	6
Subject 6	3	4
Subject 7	2	21
Subject 8	4	3
Subject 9	2	5
Subject 10	3	12
Subject 11	7	24
Subject 12	5	5

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Table 4 continued

Subject 13	5	8
Subject 14	5	9
Subject 15	3	8
Subject 16	3	12
Subject 17	5	6
Subject 18	3	5
Subject 19	4	10
Subject 20	4	6
Subject 21	5	15
Subject 22	3	7
Subject 23	3	9
Subject 24	4	13
Subject 25	7	15
Subject 26	7	12
Subject 27	5	7
Subject 28	3	3
Subject 29	5	9
Subject 30	6	12
Subject 31	5	12
Subject 32	5	11

As can be seen in Table 3, not all participants demonstrated the hypothesized correlation between metalinguistic awareness and transfer use. Participants 7, 10 and 16 were given low ratings on metalinguistic awareness yet they produced a high rate of transfer use. So we can not assume an absolute one to one relationship, but rather presume a tendency in favor of high metalinguistic awareness correlating with high transfer use.

Classroom Implications

At various times in the history of second language acquisition theory transfer has been seen as something negative, as interference, as something to be avoided. Our contemporary view of trasfer has changed, however. It is now being seen as a useful strategy for communication and learning. As Zhang (1990)

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has observed, "language transfer is a developmentally healthy and positive phenomenon. [A high rate] of occurence of language transfer...should be viewed as a sign of the learners' strong will and urgent need to learn and to communicate in the target language" (p. 21). Transfer helps learning and communication in the following ways: 1) if the learner's ear is attuned to recognizing cognates, this will enhance word recognition and listening comprehension, 2) if the learner engages in the risk-taking behaviors of trying to invent L2 words on the basis of L1 forms or of substituting related L2 forms, this has the potential of expanding his or her productive vocabulary, and finally 3) when the learner encounters the need to say something when confronted with unknown vocabulary, transfer often provides a "stop-gay" or "bridge" which allows communication to keep flowing rather than stopping cold when faced with unknown lexicon.

The correlation we have demonstrated between metalinguistic awareness and transfer use suggests a role for purposefully instructing students in metacognition about the relationship between the L1 and the L2, particularly when these are closely related as in the case of Spanish and English. Teachers can teach their students to apply linguistic analysis to both the L1 and L2 and help them develop an awareness of the systematic interrelationship between the two languages. Teachers can also help students develop an understanding and appreciation of the process involved in making lexical decisions and to see connections between their previous linguistic knowledge and the

new knowledge they are acquiring.

Additional classroom work can be done with developing skills in cognate recognition and creation. Students must be made aware of the existence of full, semi- and false cognates and made sensitive to the type of cognate they are dealing with. Various teaching strategies are available to work with cognate pairing. For practical suggestions, see Schweers, 1995.

Conclusion

This study has revealed the numerous communication/transfer strategies learners will employ to solve problems of lexical ignorance when communicating in a second language. We have seen the usefulness of Poulisse's (1993) classification of communication strategies: substitution, substitution-plus and reconceptualization strategies. This classification reflects the psycholinguistic reality of how lexical forms are retrieved or produced. Learners, when lacking a needed lexical item have several alternatives which we will reiterate: (1) use an L2 replacement word to substitute the target item, (2) use an L1 word, (3) use an invented or foreignized form based on an L1 word but incorporating L2 morphological and/or phonological principles, or (4) simply abandon the message.

The study reported on here also demonstrated the correlation that exists between metalinguistic awareness of transfer's role in L2 learning and production and the frequent use of transfer in production. If transfer is seen as a useful communication/

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learning strategy then its use can be augmented by directly
teaching learners to apply metalinguistic (and metacognitive)
analysis and skills to the language learning process.

The only previous linguistic knowledge second language
learners have is their knowledge of their first language or
perhaps another second language. It is natural that this
knowledge be exploited whenever possible to facilitate the second
language learning process. As the second language system
develops an independent existence of its own, the role of L1
transfer will diminish but never entirely disappear. Ijaz
(1986), for example, has demonstrated how L1 semantics continue
to influence the L2 semantics of even advanced learners.

Thus we conclude that first language transfer has a role in
second language acquisition. It is a strategy which learners
often use naturally without need for instruction. Additionally,
this study suggests that helping learners develop metalinguistic
awareness of the L1's role in L2 learning will also stimulate
more frequent use of transfer strategies. This, in turn, will
lead to more efficient second language communication and
learning.

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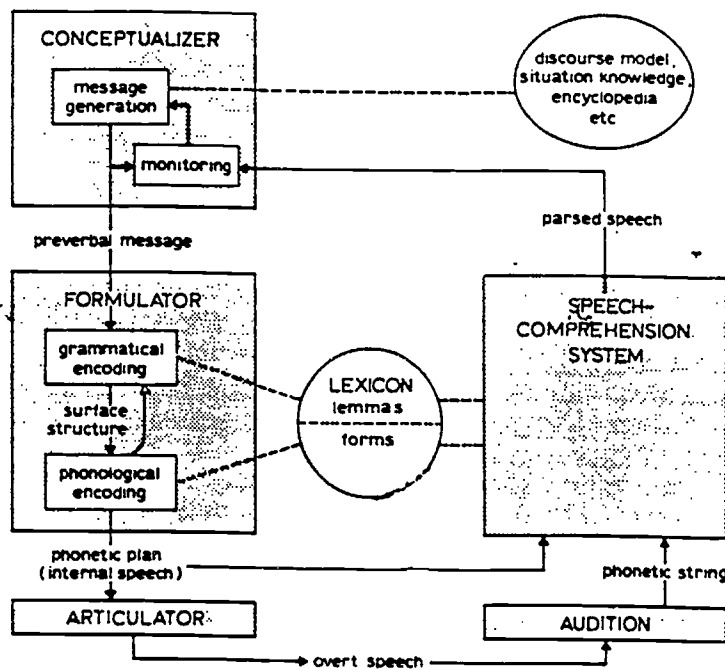Bialystok, E. (1984). Strategies in interlanguage learning and

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Figure 1. A model of speech production (from Levelt 1989: 9)