The Processes Involved in the Formation of Interlanguage

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Introduction

There has been a great deal of interest in *interlanguage* (IL) since Selinker used the term to describe the linguistic system that exists between a learner's first language (L1) and the target language (TL). This paper will attempt to define interlanguage and examine the processes involved in interlanguage development. It is not within the scope of this paper to examine all the areas of SLA, but rather, the intention is to more narrowly focus on the five processes influencing IL formation as outlined by Selinker (1972). Following this, the second language acquisition states concerning the acquisition of negative and interrogative structures will be examined to illustrate that a natural sequence of acquisition is involved in the formation of ILs.

1. Interlanguage: A Definition

In a discussion of the utterances students make when attempting to say the sentences of a TL, Selinker (1972: 35) states:

> This set of utterances for most learners of a second language is not identical to the hypothesized corresponding set of utterances which would have been produced by the native speaker of the TL had he attempted to express the same meaning as the learner. Since we can observe that these two sets of utterances are not identical··· one would be completely justified in hypothesizing···the existence of a separate linguistic system··· This linguistic system we will call 'interlanguage' (IL)

Ellis (1985: 49) maintains that the evolving views concerning interlanguage followed a mentalist notion of language acquisition (LA) and that it contrasted with the behaviourist view of learning in that there was an:

> ··· emphasis on hypothesis - testing and internal processes, together with the insistence on the notion of a continuum of learning involving successive restructuring of an internal system

It seems that each individual's interlanguage develops at its own pace as learners formulate and reformulate hypotheses about how the second language (L2) works.

Selinker's theory of interlanguage provided a theoretical base for viewing SLA as a

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mentalistic process and further it was a base for a great deal of research into the interlanguage of learners. With this somewhat limited description of interlanguage, it is perhaps appropriate at this time to examine the processes that underlie interlanguage behaviour so that the features of ILs can be more effectively illustrated.

2. Processes Involved in Interlanguage Formation

Selinker identifies five major processes that underlie IL behaviour. He identifies these as: language transfer, strategies of second language communication, transfer of training, strategies of second language learning, and finally over-generalisation of the TL linguistic material (Selinker, 1972). He maintains that each of these processes:

> ···forces fossilizable material upon surface IL utterances, controlling to a very
> large extent the surface structures of these utterances.

(Ibid: 37)

Although there is debate as to whether these processes are separate or not or even (for some applied linguists) whether each process can be considered a real process, they will be dealt with separately in this paper for ease and clarity of discussion[1].

2.1 Language Transfer

Odlin (1989: 27) offers a succinct description of language transfer with the following:

> Transfer is the influence resulting from similarities and differences between the
> target language and any other language that has been previously (and perhaps
> imperfectly) acquired.

This process of IL formation does not negate the mentalistic notion of hypothesis - testing but rather it recognises that language 'interference' or transfer may also play a part in the formation of interlanguage. How important and how many errors are caused by language transfer is debatable since researchers often can not agree on which grammatical utterances are due to language transfer and which are due to developmental errors (refer to appendix A)[2]. One can see both positive and negative examples of language transfer when learners with different L1s are compared.

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1) There will be some overlap in this paper where samples of learner language might be seen as being affected by two or more processes or some processes might be seen as being affected by other processes. I do not see this as a problem. I have put these processes in separate categories only for clarity and ease of discussion.
2) The Dulay and Burt study suggests that a very small proportion of errors are due to language transfer 'interference' but this might be due to the trend at that time to downplay the importance of language transfer.

2.1.1 Positive Transfer

Similarities between the L1 and TL often result in positive transfer. Cross-linguistic similarities in vocabulary, vowel systems, writing systems and syntactic structures can reduce the time needed to facilitate acquisition (Odlin, 1989)[3]. It seems sensible to assume that a learner with French as his/her L1 might have a head start in reading English (because of similar writing systems and vocabularies) as opposed to a Japanese student who must not only learn an entirely new alphabet but also deal with a wide array of new and unfamiliar vocabulary. It could also be said that the syntax of French and English being much more similar than that of Japanese and English might enable the learners with French as their L1 to have less difficulty with articles, word order and relative clauses. Again, this is not to suggest that language 'interference' does not occur frequently between an L1 and TL that are similar.

2.1.2 Negative Transfer

Negative transfer resulting in an IL which is deviant in regards to the TL norms can be seen in the following types of errors: underproduction, over production and production errors.

2.1.2(a) Underproduction

It could be stated that if a structure is used more infrequently than what is seen in the language of native speakers (NSs) there is a clear divergence from TL norms. This underproduction might occur as learners avoid structures in the TL that might be very different from those in the NL. Schachter (1974 as cited in Odlin, 1989) discovered that Japanese and Chinese ESL students tended to use fewer relative clauses than learners whose NLs had similar relative clause structures to English[4].

Kuno (1974 as discussed in Odlin, 1989) examined the tendency in SOV languages such as Japanese for relative clauses to precede the noun they modify (left branching direction 'LBD') whereas in SVO languages like English the tendency is for the relative clauses to follow the noun (right branching direction 'RBD'). This can be seen in the following table:

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3) Ellis maintains that empirical evidence has shown that interference is more likely to take place when there is some similarity between the first and second language items than when there is total difference (Ellis, 1985: 33). Ellis cites the example of Spanish learners who take longer to develop beyond the early stages of negation because of the similarity of the external negation stage to negation in Spanish. I do not believe this minimises the importance of positive transfer.

4) This was interesting because Schachter demonstrated that the reason Japanese and Chinese learners made fewer errors (compared to Spanish and Persian learners) with English relative clauses was because they avoided producing relative clauses since they knew they would be problematic. This became to be seen as an important criticism of error analysis in that EA fails to account for all the areas of the SL in which learners have difficulty (Larsen Freeman and Long, 1991: 61)

Table 1.

English	Japanese
The cheese that the rat ate was rotten	*Nezumi ga tabeta cheese wa kusatte ita* (Rat ate cheese rotten was)

(Ibid: 97)

If a relative clause is then used to modify rat in the English sentence above the result is a very complex sentence while the Japanese equivalent is quite comprehensible as can be seen in the table below:

Table 2.

English	Japanese
The cheese that the rat that the cat chased ate was rotten	*Neko ga oikaketa nezumi ga tabeta cheese wa* (Cat chased rat ate cheese *Kusatte ita* rotten was)

(Ibid: 98)

At other times Japanese structures do not accommodate the syntactic complexity of a SVO language like English as can be seen in the following table:

Table 3.

English	Japanese
John read the letter that Mary wrote to the boy that Jane was in love with.	*John ga Mary ga Jane ga aishite iru syoonen* Loving is boy *ni kaita tegami o yonda.* to wrote letter read

(Ibid: 98)

In addition Flynn and Espinal (1985) have demonstrated that LBD predominant languages like Japanese make the acquisition of RBD patterns in English more difficult and therefore the underproduction or avoidance of these structures as witnessed in the IL behaviour of Japanese learners is not all that surprising.

2.1.2(b) Overproduction

Overproduction of one form may be the direct result of underproduction of another structure. Odlin (1989) suggests that there may be an overproduction of simple sentences from Japanese learners as an effort to avoid using relative clauses. Overproduction of

certain forms may also be the result of 'transfer of training' as will be discussed later.

2.1.2(c) Production Errors

Odlin (1989) identifies two common types of production errors (substitutions and calques) that are likely to arise from language transfer. Substitutions include the use of NL forms in the TL. In an analysis of classroom discourse (Lavoie, 2002: 63), a second year Japanese college student is seen using the words "*Iya da! Iya Da!* (Disgusting! Disgusting!) *I can't kiss my father*" in her conversation about kissing parents. Later in the class, another student says, "*Because they don't have a good relationship···nan ka (what is it)···they don't have···*"

(Ibid: 65).

Calques are errors that closely resemble a NL structure. A very common pattern that can be seen in reading comprehension tests in the EFL classroom with Japanese NL learners is as follows:

1. Question: Who shot John F. Kennedy?

2. Student's response: Lee Harvey Oswald is *(Lee Harvey Oswald desu)*.

The use of *desu* (is) in Japanese seems to adversely affect the production in English.

Another clear example of a calque is in Lavoie (2002: 64):

> T: Do you think the mother asked the daughters to apologise to him?
> S3: Uhh···I don't know so well but I think yes because the mother ···

The student's response '*I don't know so well*' seems awkward in English but it appears to closely resemble the Japanese phrase '*Yoku shiranai kedo*' (*I don't know so well*) which would be an appropriate response in Japanese.

2.2 Strategies of Communication

These strategies underlying IL behaviour are used by learners when they are faced with production problems in the TL.[5] Faerch and Kasper (1980 as discussed in Ellis, 1985: 181) characterise communication strategies as being 'potentially conscious' acts while at the same time acknowledging that it might be empirically difficult to decide whether a strategy is conscious or not.

Since there are problems defining communication strategies clearly, a number of different typologies have been proposed. A summary of the typology of communication strategies

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5) Of course many of the communication strategies that will be proposed to underlie IL formation are also used by native speakers when using their NL.

discussed by Tarone (1977 as cited in Larsen-Freeman and Long, 1991: 127) is included in appendix B along with examples for each strategy.

Empirical studies (Bialystok, 1983b) (Ellis, 1983) and (Tarone, 1977) have found that learners of limited proficiency preferred strategies like topic avoidance, message abandonment, literal translation and language switching while the IL of more advanced learners included strategies such as: circumlocution, word coinage and approximation.

The learner's personality and the situation of use are also deemed to have an important affect on the learner's choice of strategies (Tarone, 1977 as discussed in Larsen-Freeman and Long, 1991: 186). Piranian (1979 as discussed in Ellis, 1985) found that American university students learning Russian in the classroom relied more on avoidance while naturalistic learners used paraphrases in addition to avoidance strategies. This effect seems to also be evident in the IL of Japanese students because the EFL classroom in Japan usually focuses on 'correct' L2 usage rather than on effective communication.

2.3 Transfer of Training

Selinker (1972: 37) states:

> ···if these fossilizable items, rules and subsystems [which occur in IL performance] are a result of identifiable items in training procedures, then we are dealing with the process known as transfer of training.

In an area where English is taught as a foreign language in a formal setting (Japan is one example), transfer of training may have more of an affect upon the IL of learners than in areas where where English is a viable second language (Richards, 1972). Richards asserts:

> In a foreign language setting, where the major source of the input for English is the teaching manual and the teacher, the concept of transfer of training may be a basic analytic approach, since many of the errors observable are directly traceable to the manner of presentation of the language features in the school course.

(Ibid: 89)

Richards illustrates this phenomenon by referring to the difficulty of Serbo-Croatian learners to correctly distinguish between *he* and *she* even though there is a clear distinction in the NL. He suggests that the problem might be a transfer of training since the pronoun *he* is usually used in the classroom and in textbook drills.

In Japan, yakudoku (a largely discredited grammar translation approach to learning English) is still commonly used in the high schools. English passages are painstakingly translated into Japanese and students appear to focus most of their attention on the Japanese translations of English text as opposed to the English text itself (Gorsuch, 1998).

Two very common errors seen in the Japanese EFL classroom 'I went to shopping' and 'I came back to home' may be a result of this *yakudoku* (transfer of training) as can be seen in the following table:

Table 4

English	Japanese
I went to Surrey	*Surrey ni Ikimashita* Surrey to went
I went to school	*Gakko ni ikimashita* School to went
I went shopping	*Kaimono ni ikimashita* Shopping to went
I went home	*Uchi ni kaerimashita* Home to came back

Since *ni* roughly translates as 'to' in English and so much importance and attention is placed on the Japanese translation in yakudoku, it is not at all surprising that students see the need for 'to' and 'came back' in the phrases 'I went to shopping' and 'I came back to home'. Of course other processes might be involved here, but transfer of training (the translation exercises and the learners excessive focus on Japanese) seems to clearly affect the IL formation of many Japanese EFL learners.

2.4 Strategies of Second Language Learning

Selinker states that the process of 'strategies of second language learning' is occurring if the structures and rules which are exhibited in an individual's IL result from an identifiable approach by the learner to the TL (Selinker, 1972). It is not within the scope of this paper to detail all the possible learning strategies involved in SLA nor will this paper discuss the strategies involved in early SLA of formulaic speech.

Some possible strategies involved in the establishment of IL rules might include hypothesis formation (including two basic strategies: simplification and inferencing) and hypothesis testing (Ellis, 1985).

Simplification, as indicated by Ellis, consists of:

> ⋯attempts by the learner to control the range of hypotheses he attempts to build
> at any single stage in his development by restricting hypothesis formation to those
> hypotheses which are relatively easy to form and will facilitate communication.

(Ellis, 1985: 171)

This can be seen in the following example that this author and perhaps many learners of Japanese can identify with when first learning the language:

A. Why do you like that sushi shop?
B. *Oishii desu kara.*
   Delicious because

C. Why do you like that sushi shop?
D. *Naze nara oishii desu.*
   Because   delicious

Response D (*naze nara* rather than *(desu) kara*) is usually much easier to learn for an English speaker and thus this form is often used as a sole basis for hypothesis formation in early SLA of Japanese.

Inferencing occurs when a learner forms hypotheses by attending to the input. Ellis points out the example of a Spanish speaker who would not be able to acquire the rule for negative sentences by simplification. Rather the learner would have to attend to the TL input and form a suitable hypothesis (Ibid: 172). The learner might also use meaning as a clue to language to make hypotheses about the input (Ibid, 1985).

Once a learner has formed a hypothesis, he or she might test this hypothesis in a number of ways as can be seen in the table below:

Table 5.
Hypothesis Testing

Type of Test	Method of Testing
Receptive	Learners compare hypotheses to second language input.
Productive	Learners use a hypothesis to generate language and assess the feedback.
Metalingual	Learners consult a native speaker or text etc.
Interactional	Learners make an intentional error to elicit a repair from a native speaker.

(O'Malley and Chamot, 1990: 33)

This learning strategy of hypothesis formation and hypothesis testing leads to the constant modification of interlanguage rules.

2.5 Over-Generalisation

Jacobvits (1969: 55 as discussed in Richards 1971: 174) defines generalisation as:

> ···the use of previously available strategies in new situations···In second language learning···some of these strategies will prove helpful in organising the facts about the second language, but others, perhaps due to superficial similarities, will be misleading and inapplicable.

Over-generalisation results in IL features which deviate from the TL, but, it is often the learner's experience with other structures in the TL which has influenced the learner's use or creation of these deviant features in the first place (Richards, 1971). As an example, one might see such IL features as 'she can plays' (the 's' being added because of the presence of the pronoun 'she') or 'we are wish' ('are' being used because of the pronoun 'we').

Also, over-generalisation has been linked to simplification in that it may be a method for learners to reduce the linguistic burden. Therefore, the omission of the third person '-s' (She *like* sushi) removes the necessity for concord and consequently relieves the linguistic burden for the learner (Ibid, 1971)

Over-generalisation may also be seen to be associated with the cutback of 'redundant forms' in that it may occur:

> ···with items which are contrasted in the grammar of the language but which do not carry significant and obvious contrast for the learners.

(Ibid: 175)

The '-ed' marker is an often-cited example of a structure which often seems meaningless in that *pastness* is often lexically denoted such as in - '*Last week I play* ice hockey with my friends.'

3. Interlanguage: Common Acquisition Orders and Developmental Sequences.

3.1 Common Acquisition Orders: Early Morpheme Studies

A majority of the early morpheme studies used the Bilingual Syntax Measure (BSM).[6] Various grammatical items were chosen for investigation and then these items were scored according to whether they were used correctly or not in an obligatory occasion. Consequently, researchers were able to rank items according to their accuracy with the most accurate items thought to be the earliest acquired.

Dulay and Burt (1975) proposed a set of developmental stages reflecting the morphemes that would be acquired at roughly the same time as can be seen in the following table (The

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6) The BSM consisted of a series of pictures that the learners were asked to describe. The authors claimed that the corpus they collected in this way reflected natural speech (Ellis, 1985: 55).

grammatical features appearing at one stage would, supposedly, be acquired at roughly the same time):

Table 6.

Grammatical Features Acquired

Stage 1	Case Nominative/accusative	Word order
Stage 2	Singular Copula ('s/is) Plural Aux. (are)	Singular Aux. ('s/is) Progressive (-ing)
Stage 3	Past irregular Possessive ('s) 3rd Person singular (-s)	Would Long Plural (-es)
Stage 4	Have	-en

(Adapted from Dulay and Burt, 1975 as discussed in Ellis, 1985: 56)

These early morpheme studies have been criticised vigorously. It has been argued that accuracy does not provide evidence for the order of acquisition. Often learners use forms correctly and then revert back to incorrect forms at a later date. Also, they may learn some unanalysed chunks of language and on the surface appear to show knowledge of the structures, but, when required to creatively use the language in other situations, errors occur. Another serious criticism is that the studies made claims of common orders of acquisition based on very small samples of English grammar.

On the other hand, the very large number of morpheme studies undertaken, including those that did not use the BSM but rather more sophisticated analysis procedures such as target like use (TLU)[7] analysis, seem to provide some evidence of common accuracy orders (refer to appendix C).

3.2 Developmental sequences

There appears to be systematic developmental sequences of some structures within the ILs of learners coming from a wide array of L1 backgrounds, ages and learning contexts. Larsen-Freeman and Long (1991: 92) state:

> The sequences consist of ordered series of IL structures, approximations to a target
> construction, each reflecting an underlying stage of development. Stages in a
> sequence are not discrete, but overlap, and are traditionally identified by
> ascertaining the most frequently used, not the only, IL structure(s) at a given point
> in time.

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7) TLU analysis is an analysis procedure whereby the learners performance in supplying morphemes in non-obligatory contexts in addition to SOC is examined (Lightbown, 1983).

To be considered a real 'stage', the stages must be ordered (with respect to the other stages in the sequence) and they also must be obligatory (Meisel, Clahsen and Pienemann, 1981 as cited in Larsen-Freeman and Long, 1991: 92; Johnston, 1985). Studies have been done on, primarily, the acquisition of interrogatives and negation and it has been argued that both proceed along a natural sequence of acquisition.

3.2.1 Interrogatives

The researchers in the Harvard Project (Cazden, Cancino, Rosansky and Schumann, 1975 as discussed in Larsen-Freeman and Long, 1991: 92) examined six Spanish speakers (two children, two adolescents and two adults) who were learning English naturalistically over a ten-month period. One important discovery from this study was that interrogatives in ESL appeared to emerge in a predictable sequence as can be seen from the table below:

Table 7.

Stage	*Sample Utterance*
1. Rising intonation	He work today?
2. Uninverted WH (+/- aux.)	What he (is) saying?
3. 'Overinversion'	Do you know where is it?
4. Differentiation	Does she like where she lives?

(Ibid: 93)

Since all of the learners were Spanish speakers the generalisability of this study might be somewhat limited. Ravem (1970), however, found quite similar sequences for two Norwegian children.

3.2.2 Negation

As far as negation, Learners coming from a wide variety of L1 backgrounds, have been observed to pass through four major stages: *no* + X, *no/don't* V, aux-neg, and analysed *don't* (Larsen-Freeman and Long, 1991: 94). These stages can be seen in the following table:

Table 8.

Stage	Sample Utterance
1. External	No this one/ No you playing here.
2. Internal, pre-verbal	Juana no/don't have job.

| 3. Aux. + neg. | I can't play the guitar. |
| 4. Analysed don't | She doesn't drink alcohol. |

<div align="right">(Ibid: 94)</div>

Interestingly enough, the pre-verbal negation seen in stages one and two is evident even in the ILs of Japanese learners, even though, Japanese exhibits post-verbal negation. The following example is from a study with a seven-year-old Japanese boy (Ken) learning Hawaiian English. Although negation in Japanese is a bound morpheme, always attached to the right of the verb stem (eg. I will go to Surrey. Surrey ni iku. / I will not go to Surrey. Surrey ni ik*anai.*), Ken clearly demonstrated pre-verbal negation as can be seen in the following table:

Table 9.

	Ken
	Stage 1
Stage 1	S → no/not + nucleus # Not me. #Not dog. #Not cold.
Stage 2	S → Nominal + Aux^{neg} + Pred. Aux^{neg} → {neg^{neg} V Neg → no, not, no more V^{neg} → no can, don't Don't tell teacher OK? # I no queen. # I not give you candy. # I no more five.

<div align="right">(Adapted from Dulay and Burt, 1974: 112)</div>

These longitudinal studies appear to provide convincing evidence for the idea of a natural developmental route in SLA. There appears to be strong similarities in the way that negation and interrogatives develop in learners with very different L1s. However, at the same time, it must be acknowledged that both a learners L1 and individual preferences (some learners

concentrate more on accuracy as opposed to fluency and vice versa) affect this developmental route to some degree (Ellis, 1985).

Ellis suggests that we ought to make a distinction between sequences of development and orders of development. There is a universal sequence of development but because of L1 transfer or other processes, learners may acquire things more quickly, or in more steps or in fewer steps. For example, Spanish learners seem to take longer to develop beyond the external negation stage (refer to Table 8.) because of this stage's similarity to negation in Spanish (Schumann, 1982 as discussed in Skelton et al, 1994). Ellis concludes:

> ···learners take the same road but they do not necessarily drive along it the same way.

(Op. cit.: 64)

4. Conclusion

In addition to defining the term 'interlanguage', this paper has attempted to provide clear examples illustrating the possible second language acquisition states and processes at play in the formation of an interlanguage. It has been shown that the five main processes, as outlined in Selinker's paper (Selinker, 1972) concerning interlanguage formation, are still relevant and can be used to *help* explain how interlanguages are formed. Further, the studies concerning interrogatives and negation have clearly shown that there is a natural sequence of acquisition for both of these structures.

Finally, this understanding of interlanguage ought to be of interest to, not only applied linguists, but also to teachers. Rather than viewing errors as evidence of non-learning, 'errors' *might help* to indicate the stage of acquisition a language learner is at and how that learner is creating and testing hypothesis about the L2. There seems to be a need for more research into how teachers might utilise this knowledge about the learners' evolving interlanguage systems to help facilitate acquisition.

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Appendix A

Percentage of interference errors reported by various studies of L2 English grammar

Study	% of interference errors	Type of learner
Grauberg (1971)	36%	First language German-adult, advanced
George (1972)	33% (approx.)	Mixed first languages-adult, graduate
Dulay and Burt (1973)	3%	First language Spanish-children, mixed level
Tran-Chi-Chau (1974)	51%	First language Chinese-adult, mixed level
Mukattash (1977)	23%	First language Arabic- adult
Flick (1980)	31%	First language Spanish-adult, mixed level
Lott (1983)	50% (approx.)	First language Italian-adult, university

(Ellis, Rod. 1985: 29)

Appendix B

Strategy	Definition	Example
1. Paraphrase		
Approximation	Using a single TL vocabulary item, which the learner knows is incorrect, but can be used to deliver a message.	'pipe' for 'waterpipe'
Word coinage	Learner makes up a new word to solve a communication problem	'pocket-phone' for 'cellular (mobile) phone'
Circumlocution	The learner describes the characteristics of an object or action instead of providing the correct TL structure	'They sit like···uh···like they're on a Japanese style toilet.' [First year Japanese student describing how a *Bosozoku* (street gang member) sits instead of using the term 'squat']
2. Transfer		
Literal translation	The learner translates word for word from the NL.	*yoku shiranai kedo* translated into English as 'I don't know so well'; *suki desu ka* translated as 'Do you like?' leaving out the pronoun 'it'
Language switch	Learner uses a NL term in place of the appropriate TL term.	*'mamachari'* for 'bicycle' (*She used her mother's mamachari*
Appeal for assistance	Learner asks for assistance to alleviate the communication problem.	'What is this?' or ' What is *ojiisan* in English?'
3. Avoidance		
Topic avoidance	Learner avoids concepts for which the appropriate vocabulary is not known.	Topics avoided by particular students probably depends on their past experiences. Topics requiring specialised terminology are commonly avoided.
Message abandonment	Learner stops in mid-utterance due to a lack of meaning structure.	Prime Minister Koizumi belongs to···(can't communicate LDP Party and stops mid-utterance)···he is a good leader.

This table is based upon 'A Typology of Communication Strategies' (Tarone, 1977 as discussed in Larsen-Freeman and Long, 1991: 127)

Appendix C

A Study of Key Morpheme Studies

Study	Subjects	Data Collection	Results
Dulay and Burt (1973)	3 separate groups of 6-8 yr. old Spanish-speaking children; total 151	Oral data from Bilingual Syntax Measure	1. 85% of errors were developmental. 2. The 'acquisition orders' for the three groups were strikingly similar, but different from L1 order. 8 morphemes investigated
Dulay and Burt (1974b)	60 Spanish-speaking children; 55 Chinese-speaking children; both groups 6-8 yrs. old.	Oral data from Bilingual Syntax Measure	1. The 'acquisition orders' for both groups of children were basically the same. 11 morphemes investigated 2. The orders obtained by different scoring methods were the same.
Bailey, Madden and Krashen (1974)	73 adults aged 17-55 yrs. old; classified as Spanish and non-Spanish speaking members of 8 ESL classes	Oral data from Bilingual Syntax Measure	1. The 'acquisition orders' for both Spanish and non-Spanish groups were very similar. 2. The adult orders of this study were very similar to those reported for all but one of Dulay and Burt's (1973) groups. 3. The adult orders were different from L1 order
Larsen-Freeman (1975a)	24 adults (L1s = Arabic, Japanese, Persian, Spanish); learning English at University of Michigan	Battery of 5 different tests of reading, writing, listening, speaking, and imitating	1. L1 did not have a significant effect on the way adults learn English morphemes. 2. Differences in morpheme orders occurred on different tasks but orders on production tasks (speech and imitation) agreed with Dulay and Burt's order. 3. Accuracy orders correlate with frequency orders for production of morphemes.
Krashen, Butler, Birnbaum, and Robertson (1978)	70 adult students from 4 language backgrounds at University of Southern California.	Free compositions, with (1) time limit; (2) no time limit and chance for self-correction.	1. The 'acquisition' order for the 'fast' writing was the same as that for the 'careful'. 2. The orders obtained in both written tasks were very similar to those reported for adults in the Bailey, Madden, and Krashen study.

(Ellis, 1985: 57)