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TESTING FOR MONITORING

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Introduction

This paper reports the results of a cross-sectional study designed to determine when adult ESL learners involved in a semi-intensive language program were monitoring their second language speech. The subjects were ten students ranging in age from 18-30. They were from diverse linguistic backgrounds representing six languages. They were given three separate tests: first, an oral interview; secondly, a written test based on the oral interview; and thirdly, a discrete-point test.

Background

As we know, the general theoretical model in second language acquisition is that adult second language performers use the target language in two ways: first, through subconscious language acquisition; and secondly, through conscious language learning. In addition to this important model, Krashen has pointed out (1977) that conscious learning is really only available to the performer as a Monitor. In other words, second language utterances are initiated by the acquired system or through subconscious language acquisition. Conscious language learning is used to alter that speech. This monitoring does not refer to corrections made on the basis of a "feel" for grammaticality (rather than knowing the grammar rule and practicing it). Most second language performers can cite instances wherein they have made corrections in their second language speech simply because it felt right. These corrections are usually more sporadic rather than systematic. Monitoring, on the other hand, is the alteration of second language utterances based on the conscious application of formal linguistic principles. These corrections or modifications are usually more systematic than sporadic. This phenomenon has been substantiated by recent research in second language acquisition with morpheme studies.

The study of grammatical morphemes (Table 1) has been important in understanding the mechanisms involved in second language acquisition by adults. These studies have been able to tell us in what order these structures have been acquired. They have also been of value in revealing when performers are appealing to their conscious learning or "monitoring" and when they are not.

The test used to elicit the speech responses for the oral interview portion of this study was used in two previous morpheme studies (Christison 1977, 1978). An analysis of the speech responses from these studies demonstrated a natural order for the morphemes. These orders appear in Tables 2, 3, 4, and 5. They corresponded significantly with the natural orders from the Burt and Dulay study (1975) and the Bailey, Madden

and Krashen study (1974). It was therefore an assumption of this study that the test would again be successful in producing a natural order which was evident in the two previous studies.

Testing: The Oral Interview

All of the data were collected using an original test designed to measure the acquisition sequence of the grammatical morphemes which appear in Table 1. The test contains 24 color cartoon-type pictures and 44 questions. The administrative technique of the test was designed to elicit natural responses, somewhat like two adults chatting about some pleasant pictures. There were no correct answers. Many different answers were expected.

All of the interviews were tape recorded; then the responses were written down. The transcribed version was later cross-referenced with the recorded version to assure an accurate representation of the interview.

The Written Test

In this test students were given another version of the test used in the oral interview with color cartoon type pictures and a set of questions. Different pictures were used, but the same grammatical morphemes were tested. Instead of responding orally to the questions, students were asked to write their responses. No time limit was imposed. Students were given as much time as they needed to answer each question.

The Discrete-Point Test

The third test, the discrete-point, was used because of an interesting hypothesis that it takes a discrete-point test to bring out conscious learning (at least for subjects who have had a chance to do a meaningful amount of natural acquisition): This test was based on actual language samples from the two previous tests. In many cases, the performer was simply asked to supply the correct inflection.

Example: Q: What did she wash?
A: She _____ (wash) her hair.

The focus was on the form of the language.

The Scoring Procedure

The methods of data analysis used in this study coincide with those developed by Dulay & Burt for cross-sectional studies of second language speech in children.

The two concepts from Brown's first language research (1973) were also adopted for the analysis of the present study. They are (1) obligatory occasion and (2) the scoring of each response as a test item.

Obligatory occasion creates utterances where certain morphemes (functors) are required. For example, in the sentence "She is writing" a mature native speaker of English would never omit the functor -ing, because it is obligatory that -ing be attached to any verb in English when expressing a present progressive action.

Adults learning a second language have three possibilities with regard to obligatory occasion. First, they may create the occasion for the functor and furnish the required form. Secondly, they may create the occasion, but may not furnish the required form as in sentences like He read books where the 3rd person marker is missing on the verb. The third choice is when the learner supplies something, but it is wrong. (e.g. *They do sleepy).

Each obligatory context can be regarded as a kind of test item wherein the learner passes by supplying the correct form or fails by supplying the incorrect one. Assuming that each obligatory occasion for a given grammatical structure is treated as a test item, the items are scored in the following manner.

no functor supplies	=0	(she's write)
misformed functor supplied	=1	(she's writes)
correct functor supplies	=2	(she's writing)

Using this method the adults receive one single score for each grammatical morpheme. Adults who had less than three obligatory occasions for a particular morpheme in question were eliminated from the sample on which a functor score for that morpheme was computing a ratio whose denominator is the sum of the obligatory occasions and the numerator is the sum of the scores for each obligatory occasion of that morpheme across all subjects.

Coefficient of Correlation

The sequences of acquisition obtained from the written test and the discrete-point test had to be correlated with the oral interview. The statistical procedure known as the Coefficient of Correlation was used for this purpose. It is actually a simple version of the Pearson "product-moment" formula and is quite adequate when the numbers of scores are rather small as is the case of this study. The following procedure was used to calculate the correlation between the sequences of acquisition obtained from the three different tests.

1. A sequence of acquisition was obtained for the three tests.
2. The difference (D) was found between each pair or ranks.
3. The differences were squared (D²).
4. The sum (Σ) of the D² column was found.
5. The result of step 4 (ΣD^2), together with N, the number of functors, is put into the following rank difference formula.

$$P = 1 - \frac{6 \times \Sigma D^2}{N(N^2 - 1)}$$

Table 7, and 8 show the sequences obtained from the written test and the discrete-point test. Tables 9 and 10 show the correlation with the oral interview.

*indicates non-syntactical constructions

Results

As expected, the first test, the oral interview, was again successful in producing a natural order. This order is evidenced in Table 6. The second test, the free-writing task, produced more of an unnatural order. These results appear in Table 7. As with the oral interview, students were not given a time limit. They were given as much time as needed to complete the tests. The third test, the discrete-point, also produced an unnatural order. Table 8 shows the sequence.

Conclusions

The interpretation of the results from the oral interview was that the subjects were most likely concerned with "communication" rather than the form of the language. Corrections made in speech were normally a result of their "feel" for grammaticality. There was not time for a conscious application of language rules. Even though there was no formal constraint on time, it seemed to be self-imposed.

The second test, the free-writing task produced some interesting results. The unnatural order is evidence of the contribution from the conscious grammar. This most likely accounts for the rise in 3rd person singular and long plural in the sequence of acquisition. This was not the expected result. In a similar study, (Krashen, Birnbaum and Robertson, in press), ESL students were asked to complete free-composition writing assignments. There was only a small evidence of contribution from the conscious grammar in these cases. Perhaps the significant difference in these two studies can be attributed to the fact that the test with the color cartoon-type pictures and questions was designed to elicit certain speech responses (e.g., What is he doing?); whereas, the free-composition task merely asked them to edit their own work. Whether the unnatural order is an artifact of the modality or whether it is indeed a result of time, remains to be answered in future research. Although time constraints were not placed in either the oral interview or the free-writing tasks, students clearly took more time in the free-writing portion. Time is a self-imposed constraint in the oral interview.

The third test, the discrete point, also produced an unnatural order. There is, however, a difference in this sequence produced by the free-writing task (Table 7). Possibly monitoring was occurring to a greater degree with the discrete-point test.

The differences exhibited between the sequences of acquisition for the oral interview and the free-writing task are contrary to previous research involving similar testing procedures Janet Fuller's dissertation (1978) administered the SLOPE test in written and oral form. She found no significant rank order differences between the oral and written form.

Larsen-Freeman, however, found a significant difference in her testing. Krashen accounts for the difference in the following test items.

SLOPE

Here is a ball.

Here are two _____.

In this test item, the student contributes the entire item. With the Larsen-Freeman test previously mentioned, the student supplied only the inflection. This may contribute to the differences in the sequences of acquisition for the writing testing and the discrete-point test. The writing supplied the whole item while the discrete-point did not.

Although the correlation between the rank order for the written test and the oral interview was .91 it was considerably less than correlations from the other studies - (.98 and .97). However, this was higher than the .74 correlation for the discrete-point and the oral interview. Certainly evidence of more influence from the conscious grammar.

Before firm conclusions can be reached concerning the conditions under which adults monitor their second language speech, additional analysis will need to be done. On the basis of this preliminary work it appears that the subjects involved in this study were monitoring not only in the discrete-point test as was predicted, but also to a certain degree in the written test.

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Appendices

TABLE 1.--The 11 functors

Functors	Examples
Pronoun case	He <u>doesn't</u> like <u>him</u>
Article	in <u>the</u> tall man's hand
Singular copula	He <u>'s</u> fat
-ing	(He's) <u>eating</u>
Plural	windows <u></u>
Singular auxiliary	She <u>'s</u> eating
Past regular	He <u>closed</u> it
Past irregular	He <u>ate</u> it
Long plural	horses <u></u>
Possessive	the man <u>'s</u>
3rd person singular	he <u>eats</u> too much

Adapted from Burt and Dulay (1975)

Table 2. -- Sequence of acquisition for adults involved in formal environments (group score)

Group Score Rank Order
1. Copula
2. Pronoun case
3. Singular auxiliary
4. -ing
5. Article
6. Plural
7. Past regular
8. Past irregular
9. Long plural
10. Possessive
11. 3rd person singular

Table 3. -- Sequence of acquisition for adults involved in formal environments (group mean score)

Group Mean Score Rank Order
1. Copula
2. Pronoun case
3. Singular auxiliary
4. Article
5. -ing
6. Plural
7. Past regular
8. Past irregular
9. Long plural
10. Possessive
11. 3rd person singular

Table 4. -- Sequence of acquisition for adults in informal environments using the Group Score

Group Score Rank Order
1. Pronoun case
2. Copula
3. Article
4. -ing
5. Singular auxiliary
6. Short plural
7. Past regular
8. Past irregular
9. Possessive
10. Long plural
11. 3rd person singular

Table 5. -- Sequence of acquisition for adults in informal environments using the Group Mean Score

Group Mean Rank Order
1. Pronoun case
2. Copula
3. Article
4. Singular auxiliary
5. -ing
6. Short plural
7. Past regular
8. Past irregular
9. Possessive
10. Long plural
11. 3rd person singular

Table 6. -- The sequence of acquisition for the oral interview in the present study.

Rank Order for the Oral Interview

1. Pronoun case
2. Copula
3. Article
4. -ing
5. Singular auxiliary
6. Short plural
7. Past regular
8. Past irregular
9. Possessive
10. Long plural
11. 3rd person singular

Table 7. -- The sequence of acquisition for the written test in the present study

Rank Order for the Written Test

1. Pronoun case
2. Copula
3. Article
4. -ing
5. Short plural
6. Singular auxiliary
7. Past regular
8. Long plural
9. 3rd person singular
10. Possessive
11. Past irregular

Table 8. -- The sequence of acquisition for the discrete-point test in the present study

Rank Order for the Discrete-Point Test	
1.	Pronoun case
2.	Copula
3.	-ing
4.	Article
5.	Possessive
6.	Short plural
7.	Long plural
8.	Singular auxiliary
9.	3rd person singular
10.	Past regular
11.	Past irregular

Table 9. -- The calculation of the correlation between the oral interview and the written test for the present study.

Order for Oral Interview	Order for Written Test	Difference in rank orders (D ²)	
1. Pronoun case	1. Pronoun case	0	0
2. Copula	2. Copula	0	0
3. Article	3. Article	0	0
4. -ing	4. -ing	0	0
5. Singular auxiliary	5. Short plural	1.0	1.0
6. Short plural	6. Singular aux.	1.0	1.0
7. Past regular	7. Past regular	0	0
8. Past irregular	8. Long plural	2.0	4.0
9. Possessive	9. 3rd person singular	2.0	4.0
10. Long plural	10. Possessive	1.0	1.0
11. 3rd person singular	11. Past irregular	3.0	9.0
			<u>20.0</u>

$$r = 1 - \frac{6 \times \sum D^2}{N(N^2-1)} = 1 - \frac{6 \times 20}{11(11^2-1)} = 1 - \frac{120}{1320} = .91$$

Table 10 -- The calculation of correlation between the oral interview and the discrete-point test for the present study.

Order for Oral Interview	Order for Discrete-point	Difference in rank orders (D ²)	
1. Pronoun case	1. Pronoun case	0	0
2. Copula	2. Copula	0	0
3. Article	3. -ing	1.0	1.0
4. -ing	4. Article	1.0	1.0
5. Singular auxiliary	5. Possessive	3.0	9.0
6. Short plural	6. Short plural	0	0
7. Past regular	7. Long plural	3.0	9.0
8. Past irregular	8. Singular	3.0	9.0
9. Possessive	9. 3rd person singular	4.0	16.0
10. Long plural	10. Past regular	3.0	9.0
11. 3rd person singular	11. Past irregular	2.0	4.0
			58

$$p = 1 - \frac{6 \times \sum D^2}{N(N^2-1)} = 1 - \frac{6 \times 58}{11(11^2-1)} = 1 - \frac{348}{1320} = .74$$