

# English Language Skills of Minority Language Children in a French Immersion Program

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## Introduction

This paper presents the study of English language skills of "minority language" (MIN.L.) children enrolled in an early total French Immersion program within the Vancouver area. (MIN.L. children are defined as those children whose first language or home language is different from the language of the wider community, here *other than English*.)

Several research studies have documented the success of French Immersion programs for "majority language" (MAJ.L.) children. (MAJ.L. children are defined as those children whose first language is the language spoken by the majority of the people in the community, here in Vancouver, *English*.) These children become proficient in French, and although they initially lag behind their English monolingual counterparts in certain English language skills, they eventually catch up and end up outperforming the English monolinguals (Genesee, 1983; Lambert & Tucker, 1972). Several studies have also shown that the French Immersion children enjoy the advantages of increased cognitive and metalinguistic skills (Ben-Zeev, 1977; Cummins, 1976, 1978, 1981).

Whether or not French Immersion is a successful means of educating MIN.L. children is still an open question. Studies of children with trilingual backgrounds in French Immersion have been sparse, and generally, inconclusive. Most of the studies looking at MIN.L. children as learners of more than one language have focused on these children's performance in all English programs, and not in French Immersion programs. Results of these studies have shown that these MIN.L. children often do poorly in English and also begin to lose competency in their first language skills (Bruck, 1982).

Some researchers have attributed the MIN.L. children's failure to social-psychological factors (Bruck, 1982; Lambert, 1980; Met, 1984). These researchers advocate that positive attitudes towards maintaining the native language and culture are necessary to achieve competency in both the first and second languages. This is the case for MAJ.L. children in French Immersion because their native language (*English*) is accepted in the program and by the community at large. However, this is

often not the case for MIN.L. children. English is often seen as being the more prestigious language. Learning a more prestigious language can pose a threat to the MIN.L. children's cultural identity. They therefore lose competency in their native language in attempts to master the prestigious language. The development of the second language (i.e. English) may also be impeded.

Other researchers have attributed the MIN.L. children's loss of competency in their first language and their poor development of the second language to linguistic factors, rather than social-psychological factors (Cummins, 1981; Swain, 1980). They propose that if a child's first language skills are poorly developed, intensive exposure to a second language will impede the development of the first language. They state that MIN.L. children often have not acquired competency in their first language upon entry into the English program. These researchers claim that English children in French Immersion succeed in adding a second language to their linguistic repertoire without detriment to their English skills because they have well developed first language skills prior to entering the second language program. However, research has shown that language-impaired English children who are placed in French Immersion do not suffer from further weakening of their English skills (Bruck, 1980). Bruck suggests that the language-impaired children are able to succeed in French Immersion because their first language is the language of the majority culture (i.e. positive attitudes exist towards their first language and culture). It appears then that social-psychological factors, rather than linguistic factors are the major factors determining the success of MIN.L. children and MAJ.L. children in educational programs where their first language is not the medium of instruction.

As for the performance of the MIN.L. children in French Immersion, Stern (1982) and Skutnabb-Kangas & Toukomaa (1977) postulate that these children would do well in a French Immersion program, not only because they already have experience with two languages (English and the minority language), but also because they would initially be at the same level in French as their English speaking peers, thus eliminating any feelings of inferiority which could inhibit language learning. The English children in French Immersion would perhaps be more accepting of the MIN.L. children's first language, as they themselves are learning another language. Such positive attitudes towards the MIN.L. children's native culture and language would help the MIN.L. children in French Immersion add another language to their linguistic repertoire, without

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detriment to their other languages (i.e. English or the minority language).

On the basis of this information, two hypotheses were made regarding the performance of MIN.L. children in French Immersion:

- 1) Min. L. children in French Immersion would demonstrate English language skills equal to or better than those of English children in French Immersion, providing the minority language and culture were positively valued and maintained.
- 2) MIN.L. children in French Immersion would demonstrate English language skills equal to or better than those of similar MIN.L. children in a regular English language program.

These children's English language skills were assessed because these children must ultimately function in the majority culture and language (in Vancouver, English).

## **Method**

### **Subjects**

Three groups of grade one children participated in this study:

- 1) *Experimental group* — minority language children in early total French Immersion.
- 2) *English controls* — English children in early total French Immersion.
- 3) *Minority controls* — minority language children in an all English program (i.e. not in French Immersion).

There were ten children in each group. They were assigned to one of these groups based on their parents' responses to questionnaires regarding frequency of usage

of languages in the home and in the community. See Table 1 for number of subjects and schools from which they were selected.

Children comprising the *experimental group* were all considered by their parents to have learned a language other than French or English before they were three years old. All of these children were using this language at home before they started school and were using it at the time this study was undertaken, although to a lesser extent for some of them. The minority language was estimated to be spoken in the home at least 50% of the time by at least one of the parents. Table 2 shows the languages spoken in the home by these MIN.L. children. All of these children were also enrolled in an early total French Immersion program since kindergarten.

The children in the *minority control group* met the same criteria as the experimental group, but were enrolled in a regular English program. Table 2 shows the languages spoken in these children's homes.

The children in the *English control group* were native speakers of English whose parents spoke only English in the home. Like the children in the experimental group, these children were all enrolled in an early total French Immersion program since kindergarten.

The *French Immersion programs* were similar in all four schools from which the experimental and English control subjects were selected: French was the language of instruction for 100% of the time throughout kindergarten and grade one. Participation in these French Immersion programs was voluntary.

Each experimental subject was matched as closely as possible to a subject in the English control group and to a

Table 1. Number of subjects and schools from which they were selected<sup>a</sup>

Group	School			
	Sir James Douglies	L'école bilingue	William Cook	William Bridge
Experimental (n = 10)	2 Ss. #1A #2A	4 Ss. #3A #4A #5A #6A	2 Ss. #7A #8A	2 Ss. #9A #10A
English control (n = 10)	2 Ss. #7B #9B	5 Ss. #2B #3B #4B #5B #6B	3 Ss. #1B #8B #10B	0
Minority control (n = 10)	7 Ss. #1C #2C #3C #4C #7C #8C #9C	0	3 Ss. #5C #6C #10C	0

<sup>a</sup> Ss. # refers to the subject numbers presented in the results section.

Table 2. Descriptive data on subjects \*

	Mean Age (mo.)	Academic Performance			S.E.S.		Language(s) Used at Home	Sex	
		High	Average	Low	High	Low		Males	Females
Experimental	82.5	6	1	3	10	0	Chinese — 5 Persian — 2 German — 1 Czech — 1 Spanish — 1 Gujarati — 1	3	7
English control	82.3	5	2	3	9	1	English	4	6
Minority control	83.1	6	3	1	6	4	Chinese — 5 Punjabe — 2 Korean — 1 Italian — 1 Greek — 1	3	7

\* numbers to the right of the foreign language refer to the number of subjects that speak that language.

subject in the minority control group according to age (in months), sex, academic performance, and socioeconomic status (SES). Academic performance was rated by the child's teacher as being high, average, or below average. An index of SES was based on the parent's answers on the questionnaire regarding their occupation and education.

### Procedure

At the end of grade one, the children in all three groups were administered a battery of tests to measure their comprehension and production of English, as well as their metalinguistic abilities in English. The tests were administered in two sessions and were all administered in the same order for all subjects. The following tests were administered:

- 1) *English comprehension tests*: Peabody Picture Vocabulary Test (Dunn & Dunn, 1981) and the Token Test for Children (DiSimoni, 1978).
- 2) *English production tests*: Clark-Madison Test of Oral Language (Clark & Madison, 1980) and a 15-20 minute language sample.
- 3) *Metalinguistic tasks*: two tasks used by Pratt, Tunmer & Bowey (1984) which were designed to test the ability of children to correct sentences containing grammatical rule violations<sup>1</sup>:

**Metalinguistic Task 1a: Morpheme Correction Condition.** — This task required the children to correct simple sentences, each having a morpheme deleted or changed. These sentences and the morphemes manipulated to produce them are presented in Table 3 (methodological details for these tasks are available in the original manuscript).

Table 3. Test Items for Metalinguistic Task 1a — Morpheme Correction Condition (Pratt, Tunmer & Bowey, 1984)

Item	Morpheme Change
<i>Practice Items:</i>	
1. It is Jim book.	Possessive -s deleted
2. Bruce saw cat.	Article omitted
<i>Test Items:</i>	
1. Andrew drink juice every day.	Third person singular
2. Sally make mud pies.	-s omitted
3. Sandra is paint a picture.	Present progressive -ing omitted
4. Susan are sucking a lolly.	is - are
5. Yesterday John bump his head.	Regular past tense -ed
6. Yesterday Sue cook a chicken.	Deleted
7. It is Jack bike.	Possessive -s deleted
8. Mary dog was lost.	
9. Gir! painted a picture.	Article omitted
10. The boy kicked ball.	Article omitted
11. Six girl ran a race.	Plural -s omitted
12. Tom has two kitten.	

*Metalinguistic task 1b: Word Order Condition.* — This task required the children to correct sentences which violated the grammatical rules governing word order in English. These sentences are shown in Table 4.

Table 4. Test Items For Metalinguistic Task 1b —Word Order Condition (Pratt, Tunmer & Bowey, 1984)

<b>Item</b>	<b>Word Order Change</b>
<i>Practice Items:</i>	
1. Ate the biscuit Sally.	SVO → VOS
2. Lady the sang a song.	art. + N → N + art.
<i>Test Items:</i>	
1. Patted Bill the dog.	SVO → VSO
2. Wrote Peter his name.	
3. Susan the bike rode.	SVO → SOV
4. Tim the juice drank.	
5. Kicked his ball Stephen.	SVO → VOS
6. Chased the cat Jim.	
7. Teacher the read a story.	Subject      art.+N→N+art.
8. The cat chased bird the.	Object
9. His dad has a car blue.	Object      adj.+N→N+adj.
10. A lady pretty lives next door.	Subject
11. Dad driving is the car.	
12. Susan baking is some cakes.	Verb Aux.+V→V+Aux.

The order of presentation of these two tasks was balanced across all of the subjects in each of the three groups of subjects: half of the subjects within each group received the Morpheme Correction Condition first, and half received the Word Order Condition first. Within each task condition the test items were arranged in a quasi-random order and the order was counterbalanced across the children in each group. Both conditions were presented consecutively within the same session.

**Scoring** — Responses for both tasks were counted as correct under a strict and lenient criterion. For the Morpheme Correction Condition, responses were counted as correct under the strict criterion if the sentence was returned grammatical by adding or changing morphemes only where required. No addition of words was allowed other than those morphemes used to return the sentence to grammatical status. No substitution or deletion of words was allowed. Responses which involved a major change in semantics or syntax, but which were grammatical were scored as incorrect under both criteria (e.g. It is

Jack bike Jack is riding a bike). All other responses were counted as correct under the lenient criterion.

For the Word Order Condition, responses were counted as correct under the strict criterion only if the words rearranged to make the sentence grammatical were the exact same words as given in the test item. The lenient criterion was the same as the strict criterion with the following exceptions: an indefinite article could be substituted for proper names, and "the" could be omitted before the word "teacher" (in item #7).

Before any of these tests were administered to the MIN.L. children, a short interview (adapted from Orpwood, 1980) was conducted with each of the children at the beginning of the first session of testing (see Appendix A). This interview was designed to assess the MIN.L. children's language background and attitudes toward the minority language.

The attitudes of the MIN.L. children's teachers and parents toward the minority language and culture were assessed using a questionnaire, adapted from Lambert & Tucker (1972) and Orpwood (1980) (see Appendices B and C).

## Results

A 3 (group)  $\times$  2 (SES) analysis of variance was performed on the scores of each of the language tests. SES was used as one of the independent variables to determine whether any differences between groups could be due to initially not matching the children perfectly on SES. There were no significant interactions or main effects for SES for each of the language tests, showing that SES was not a contributing factor to the differences between groups. Scheffé post-hoc comparison tests were used to determine which groups were significantly different. Where differences between groups are noted, levels of significance reported in the text refer to those of the Scheffé tests, and not to those of the ANOVA.

### 1) English comprehension

**Peabody Picture Vocabulary Test (PPVT)** — results indicated that the minority controls scored significantly lower than the English controls ( $p < .10$ ). No other group differences were significant.

*Token Test for Children* — results indicated that the experimentals scored as well as the English controls on all five subtests of the Token Test, whereas the minority controls scored significantly lower than the English controls on subtest III and on the overall score of this test ( $p < .10$ ). On the subtest containing the longest and most complex commands (subtest V) the minority controls scored significantly lower than both groups: the English controls and the experimentals ( $p < .10$ ). The means, standard deviations and probability levels for the three groups of children, for the Token Test and the VT, are presented in Table 5.

Table 5. Mean Scores and Standard Deviations for the English Comprehension Tests<sup>a</sup>

Group	Vocabulary Test				Token Test				Overall Score	
	P.P.V.T.		Subtest III		Subtest V					
	M	S.D.	M	S.D.	M	S.D.	M	S.D.		
Experimental	98.2	17.7	499.2	6.2	497.9	4.1	497.9	4.6		
English Control	109.7	6.3	502.5	2.7	500.8	4.4	500.8	3.4		
Minority Control	89.9*	10.4	493.3**	8.8	493.6***	3.2	493.9+	5.5		

a Scores represent standardized scores which have been derived by way of age norms; they are shown untransformed. Significance levels were calculated using transformed scores.

\* Significant at the p .01 level (relative to the English control group).

\*\* Significant at the p .005 level (relative to the English control group).

\*\*\* Significant at the p .003 level (relative to the experimental group and the English control group).

+ Significant at the p .007 level (relative to the English control group).

## 2) English speaking skills

*Clark-Madison Test of Oral Language* — results showed that the minority controls scored significantly lower on this test than both of the other two groups—the English controls and the experimentals ( $p < .10$ ). No other group comparisons were statistically different. See Table 6.

Table 6. Mean Scores and Standard Deviations for the test of English Oral Language (total = 97)

Clark-Madison Test of Oral Language		
Group	Mean score	Standard deviation
Experimental	81.0	7.45
English Control	83.6	6.08
Minority Control	72.9*	7.87

\* Significant at the  $p < .01$  level (relative to the English control group and the experimental group).

*Language samples* — an analysis of the language samples indicated that the three groups did not appear to differ in terms of their syntactic abilities (as measured by percentage of complex sentences) or in their vocabulary diversity (as measured by type-token ratio). However, both groups of minority language children tended to produce more morphological and syntactic errors than the English controls. See Appendix D.

## 3) Metalinguistic skills

*Metalinguistic Task 1a: Morpheme Correction Condition* — the minority controls' scores on this task proved to be significantly lower than those of the

English controls ( $p < .10$ ) when the responses were scored according to the strict criterion. The differences between the groups failed to reach significance when the responses were scored according to the lenient criterion ( $p < .08$ ). See Table 7.

Table 7. Mean Number of Correct Responses (total=12) for Each Group for the Morpheme Correction Condition<sup>a</sup>

Group	Morpheme Correction Condition	
	Mean score	Standard deviation
Experimental	8.9 (10.0)	2.3 (2.3)
English Control	10.1 (11.0)	1.5 (1.1)
Minority Control	6.8* (8.2)	3.1 (3.1)

<sup>a</sup> The means and standard deviations for the lenient criterion (total correct) are in parentheses.

\* Significant at the  $p < .10$  level (relative to the English control group only).

*Metalinguistic Task 1b: Word Order Condition* — there were no significant differences between the groups on this task when scored according to the strict criterion ( $p < .18$ ) or when scored according to the lenient criterion ( $p < .28$ ).

## 4) Questionnaire results

Overall, the responses on the questionnaires indicated that the families of both groups of minority language children were making an effort to maintain and promote the minority language and culture in the home. The minority language and culture appeared to be positively valued by both the experimental and the minority control groups. This was supported by the answers given by the parents, by the teachers,

and by the children themselves. One difference between the two groups of MIN.L. children was the parents' assessment of their own level of competence in English: more of the parents of the children in the experimental group considered themselves to be good speakers of English than the parents of the children in the minority control group.

## Conclusion

The results of this study demonstrated that MIN.L. children function like English monolingual children in French Immersion, in terms of the English comprehension, production, and metalinguistic abilities. Results also showed that the MIN.L. children in French Immersion performed significantly better than the control MIN.L. children on tests of English production and comprehension of complex commands. These results support our hypotheses.

It appears from this study that positively valuing the first language is not the only factor determining one's competency in the majority language (i.e. English). The experimental children were able to learn English to the same level of competency as the English speaking children, whereas the minority controls were not, and yet both groups of MIN.L. children were shown to value their native language to the same extent. Other factors such as competency achieved in the first language, and

the quality and quantity of the first and second language exposure are most likely also important for learning the majority language.

In the cases where the minority controls scored significantly lower than both groups of children in the French Immersion programs, characteristics of the French Immersion programs themselves may be the cause. The differences between the two language programs may be responsible for the minority controls scoring significantly poorer than the other two groups of children. Further research might indicate whether some of the educational characteristics of the French Immersion programs should be incorporated into the regular English programs in order to improve the English skills of minority language children.

It can be concluded from this study that French Immersion is an appropriate method for teaching second (or third) language skills to both majority and minority language children, where the native language and culture are positively valued and maintained. Therefore, it is recommended that parents of minority language children not hesitate to enrol their children in French Immersion. These minority language children's English skills do not appear to suffer. These children also have the advantage over minority language children not in French Immersion, of having acquired a third language.

## APPENDIX A

### INTERVIEW FOR MINORITY LANGUAGE CHILDREN

1. Which language does your mother speak most to you?
2. Which language does your father speak most to you?
3. Which language do you speak most to your mother?
4. Which language do you speak most to your father?
5. Which language do you speak to your: (1) brothers, (2) sisters, (3) out of school friends, (4) friends at school, and (5) others (grandma, etc.)?
6. How much do you enjoy speaking these languages?
7. Do you like speaking English better than the other languages?
8. When you grow up, would you like your children to learn and use the language(s) that you speak at home?

## APPENDIX B

### QUESTIONNAIRE FOR TEACHERS

1. Do you speak the native language of this child?
2. Do you study things in class related to the culture of this child?
3. Do you celebrate the holidays pertaining to the culture of this child? (inside or outside of the class).
4. Do you allow the child to speak his native language in the class (with you or with his other classmates)?
5. Does this child have the opportunity to speak his native language at school during recess or lunch?
6. Do you know what the child's parents do for a living? If so, please state.

## APPENDIX C

### QUESTIONNAIRE FOR PARENTS

Thank you for taking the time to fill out this questionnaire. Please fill in the blanks or check one as required. If you have any questions, you may contact either Susan Davies (at 732-9483, after 5 pm) or Carolyn Johnson (at 228-5696 or 228-5591, 9-5 pm, Monday to Friday). The answers to these questions will remain confidential.

#### Family Background

1. Name of child \_\_\_\_\_
2. Sex of child \_\_\_\_\_
3. Child's country of birth \_\_\_\_\_
  - a) If other than Canada, how long did your child live in this other country? \_\_\_\_\_
  - b) When did your child move to Canada, or to some other English speaking country? \_\_\_\_\_
  - c) How long has your child lived in an English speaking country? \_\_\_\_\_
4. Father's country of birth \_\_\_\_\_
5. Mother's country of birth \_\_\_\_\_
6. Please check one:  
Mother: Do you Not at all A little Fairly well Fluent  
a) speak English  
b) read English  
c) understand English
7. Please check one:  
Father: Do you Not at all A little Fairly well Fluent  
a) speak English  
b) read English  
c) understand English
8. What is your occupation? (if you immigrated to Canada, please state your present occupation as well as your occupation before coming to Canada).  
Mother \_\_\_\_\_  
Father \_\_\_\_\_
9. Did this occupation require any special training?  
Please list if so.  
Mother \_\_\_\_\_  
Father \_\_\_\_\_
10. Would you like to change your job or are you happy with his job?  
Mother \_\_\_\_\_  
Father \_\_\_\_\_
11. What educational level did you reach? Please check.  
\_\_\_\_ Less than primary school completed  
\_\_\_\_ Finished primary school

- \_\_\_\_ Some high school  
\_\_\_\_ Finished high school  
\_\_\_\_ High school plus college (or other)  
\_\_\_\_ University degree  
\_\_\_\_ Higher degree level

12. Do you read to your child? If so, how often? Please check.  
Mother      Father  
\_\_\_\_ No reading to child  
\_\_\_\_ Not very often (less than once a week)  
\_\_\_\_ About once a week  
\_\_\_\_ Nearly every day (3-5 times a week)

In what language do you read to your child?

- Mother \_\_\_\_\_  
Father \_\_\_\_\_

13. When your child was small before he or she started school, did you read to him/her? If so, how often? Please check.  
Mother      Father  
\_\_\_\_ No reading to child  
\_\_\_\_ Not very often (less than once a week)  
\_\_\_\_ About once a week  
\_\_\_\_ Nearly every day (3-5 times a week)

In what language do you read to your child?

- Mother \_\_\_\_\_  
Father \_\_\_\_\_

14. What would you consider to be your child's first language(s)? (i.e. what language(s) did he learn before he or she was three years old?)  
\_\_\_\_\_

If languages other than English are used in the home, please answer these questions:

1. Please list languages regularly used in your home. If there is more than one, please list, starting with the one that is used most.  
Mother      Father  
\_\_\_\_ Always  
\_\_\_\_ Very often  
\_\_\_\_ Sometimes  
\_\_\_\_ Rarely
2. Please give an approximate percentage figure of how often the above languages are used in your home and family.  
Mother \_\_\_\_\_  
Father \_\_\_\_\_

3. Is one or more of these languages used for special and distinct purposes? (e.g. religion, family gatherings, cultural groups, etc.). If so, please list these languages.

4. Does your child attend social and leisure functions with other individuals from the same cultural background as yours? If yes, how often? Please check one.

Always \_\_\_\_\_  
 Very often \_\_\_\_\_  
 Sometimes \_\_\_\_\_  
 Rarely \_\_\_\_\_

5. Do you and your family celebrate the holidays of your homeland?

6. Do family members, other than the father, mother, and children live in your home? If so, please list them and the languages they speak most often in your home.

7. Who took care of your child during the daytime before he or she started attending school? What language did this person speak to the child?

8. How important is it to you that your language be maintained in the family and that your child speak it fluently?

Please check one.

Mother \_\_\_\_\_ Father \_\_\_\_\_

Extremely important  
 Important  
 Not really important  
 Don't care

9. Do you wish that your child be more fluent in English than in your dominant language?

Mother \_\_\_\_\_  
 Father \_\_\_\_\_

10. Please write in the languages in the blank spaces provided, if they apply to your child.

My child spoke nothing but \_\_\_\_\_  
 in the home

My child speaks nothing but \_\_\_\_\_  
 in the home

My child speaks mostly \_\_\_\_\_  
 in the home

11. Does your child attend special language classes outside regular school? If so, list these languages.

12. Does your child read or write any languages other than the language used at school? If yes, please list these languages.

## APPENDIX D

### RESULTS OF LANGUAGE SAMPLE ANALYSES

Group	Total # utterances	% Complex sentences	Type-Token Ratio	Omitted bound morphemes <sup>a</sup> expressed in % of obligatory context	% utterances with both syntactic & semantic errors <sup>b</sup>	Clark-Madison Oral Language Scores (total = 97)
Experimental:						
1a	45	28.9	.40	—	22.1	76
2a <sup>c</sup>	—	—	—	—	—	89
3a	33	48.5	.45	—	6.1	84
4a	17	52.9	.50	—	17.6	91
5a	49	42.9	.25	/s = 12; /z = 27	20.4	77
6a	54	16.7	.43	/z = 17	7.3	68
7a	70	424.6	.33	—	14.2	78
8a	66	6.0	.47	/ed = 17; /s = 11	6.0	79
9a	66	3.5	.35	/3s = 50; /ed = 9; /s = 44	33.3	75
10a	58	24.1	/s = 8	1.7	91 x = 14.3	x = 81.0
English Control:						
1b	29	41.3	.47	/'s = 14	6.8	86
2b	51	17.7	.45	—	1.9	89
3b	45	44.4	.37	—	2.2	69
4b	50	34.0	.45	—	10.0	87
5b	18	16.7	.67	—	11.0	84
6b	26	11.5	.56	—	11.4	77
7b	17	35.3	.59	—	11.8	85
8b	33	45.5	.48	—	17.1	85
9b	64	29.7	.42	—	3.1	86
10b	37	29.7	.47	—	5.4	88
					x = 8.1	x = 83.6

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**Minority Control:**

1c	28	25.0	.37	/s = 17	17.9	77
2c	16	25.0	.56	—	6.3	59
3c	27	29.6	.52	/3s = 17; /ed = 50	14.8	72
4c	20	15.0	.54	/ed = 33	10.0	73
5c	40	22.5	.43	/s = 10	23.0	74
6c	38	26.3	.43	/3s = 37	18.4	76
7c	49	30.6	.38	—	8.1	83
8c	29	34.5	.44	—	34.5	65
9c	31	9.7	.50	/ing = 17; /s = 17	3.2	66
10c	62	27.4	.40	.3s = 6	22.6	84
				x = 16.1	x = 72.9	

<sup>a</sup> /s = plural; /z = possessive; /'s = auxiliary; /3s = third person singular.

<sup>b</sup> semantic errors include word finding problems; syntactic errors include those such as incorrect tenses, articles, prepositions; and pronouns; omitted articles; lack of subject-verb agreement.

<sup>c</sup> data for this subject are missing due to the poor quality of the tape recording.

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## Footnotes

<sup>1</sup> Note that a third meta-linguistic task was administered in this study, but only the most important tasks are described here due to space limitations.

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