Communicational Effectiveness of English Children in French Schools

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Cette étude se propose de faire l'évaluation de la maîtrise de la langue maternelle qu'ont les jeunes anglophones de l'élémentaire qui sont inscrits dans trois différents programmes. Tous ces jeunes anglophones, de la maternelle à la deuxième année, sont soumis à un exercice commun de communication (referential communication task). Un premier groupe fréquentait l'école anglaise; un deuxième groupe, l'école française, et un troisième groupe, l'école anglaise — les enseignants y étant francophones. Malgré la diversité des expériences scolaires des enfants de ces trois groupes, tous ont réussi à communiquer de façon efficace et à se mettre à l'écoute de leurs interlocuteurs. Les résultats de l'étude démontrent que chez les enfants plus âgés, la communication est plus efficace que chez les plus jeunes. De là, on en a conclu que la maîtrise et le perfectionnement de la langue maternelle, à l'oral, ne sont pas touchés par la fréquentation d'un établissement scolaire qui n'est pas de la langue maternelle des enfants. On a par la suite tenté de créer un modèle multi-variable d'intercommunication au niveau verbal.

An earlier study by the authors (Genesee, Tucker, & Lambert, 1975) found that on a task requiring verbal explanation, English-speaking primary school children who had been educated exclusively in a second language (French) demonstrated greater differential sensitivity to listeners with different needs than did children from traditional first-language schools. We suggested in that study that the differences observed among the groups of school children could be accounted for by differences in role-taking skills. In particular, we argued that children who had been educated in a second language had developed better role-taking skills than the children educated in their first language because the former group had experienced communication difficulties in school. Consequently, when communicating with other children who were experiencing communicational difficulties, the second-language school group tried, at least, to be more differentially informative to their listeners than did the children from the first-language schools.

The design of that particular study did not permit an evaluation of the effectiveness of interpersonal communication. Thus, we did not know whether the children from the second-language schools had actually conveyed more useful information to their listeners than had the children from the first-language schools. A child who is sensitive to the needs of his

listener may not have the linguistic skills necessary to formulate a message that will adequately meet the listener's needs. What we are suggesting here is that the communication process is probably multidimensional, involving linguistic as well as social–perceptual skills.

Other theorists have also argued for a multidimensional approach to the study of communication skills. For example, Krauss and Glucksberg (Note 1) have hypothesized that in a referential communication task an effective speaker must possess an adequate conceptual repertoire and must also have the ability to select from that repertoire concepts that are, at least potentially, socially meaningful. Rosenberg (1972) distinguishes between a sampling and a comparison component in referential communication. Sampling occurs in the communication process when a name or description of a referent is randomly selected from the speaker's repertoire of concepts associated with the referent. Comparison occurs when the relative associative or descriptive strength of the sampled response to the referent and to non-referent stimuli is assessed, and this in turn determines the probability with which the speaker will emit the sampled response. Finally, Flavell et al. (1968) distinguish between a role-taking component and an application component. Role-taking skills are important in order that the speaker assess the needs and characteristics of his listener. Application skills are needed in order that the speaker formulate a verbal message that reflects the listener's needs and characteristics. Theoretically at least, the development of distinctive skills in the communication process, as postulated by these theorists, may be mutually independent, and, furthermore, may depend upon different factors, be they environmental or maturational.

There was evidence from our earlier study of differences in role-taking skills among children educated in their first language versus children educated in a second language. The main purpose of the present study was to compare children from second-language schools to those in regular first-language schools in terms of another component of communication — effectiveness, or application as it is referred to by Flavell. Effectiveness was defined in behavioral terms to mean accuracy of referential communication in an interpersonal situation where accuracy depended upon the speaker verbally transmitting information to his listener.

There is a great deal of research on the development of first-language skills among English-Canadian children attending French *immersion* schools; that is, schools where all course material from kindergarten to grade 2, inclusive, is taught in French by native French-speaking teachers (see Lambert & Tucker, 1972; Swain, 1974; Polich, Note 2). Most of the children in these programs are English speaking.

In general, the results from this research indicate that the participating children acquire the same proficiency in their first language as do comparable children in regular English schools. At the same time, the immersion

children acquire skills in the French language that are considerably better than those of children in the regular English schools with courses in French as a second language.

On the other hand, there is very little research on those English-speaking children who attend French schools where most of the other students as well as all teachers are French-speaking (Macnamara, Svarc, & Horner, 1976). For that reason our experimental group included English-speaking Canadian children in *French immersion schools* and English-speaking Canadian children in *all-French schools*. Research from students in the immersion schools suggests that communication skills in the first language do not suffer if instruction during the primary grades is in a second language (Bruck, Lambert, & Tucker, 1977; Samuels, Reynolds, & Lambert, 1969; Edwards & Casserly, Note 3). We therefore did not expect that the communication skills of English children in all-French schools would differ from those of their peers in English schools.

Moreover, by studying the communicational effectiveness of the same groups of children who had previously shown different levels of skill in role taking, we hoped to demonstrate to what extent the development of these two skills is independent or interdependent. If they are interdependent, then the second-language school group which had previously demonstrated the greatest differential sensitivity to the listeners would be expected to be more effective in conveying information to listeners than the first-language school group, which previously demonstrated little differentiation between listeners with different needs. On the other hand, if the development of role-taking skills in verbal communication is independent of the development of communicational effectiveness, then the second-language and first-language school groups would be expected to be indistinguishable from one another in terms of effectiveness.

In summary, this study was carried out (1) to assess the effectiveness of primary school children from first- versus second-language schools in oral communication; and (2) to investigate the relationship between role-taking skills and communicational effectiveness by comparing the results of the current study with those of an earlier one.

METHOD

Subjects

Three groups of children participated in this study; all subjects were native speakers of English with native-English-speaking parents. The *Control* group consisted of children who attended English-language schools with English-speaking teachers and classmates. The *Immersion* group consisted of children who attended English-language schools; but their teachers were French-speaking, and consequently all of their course instruction was given in French. Most of the other children in the school were English speakers. The *French* group consisted of children who attended French-

language schools with French-speaking teachers and classmates; all course instruction was given in French.

Children from kindergarten, grade 1, and grade 2 were selected from each school group. The number of children in the nine samples varied from 10 to 15, with an average group size of 11. An approximately equal number of boys and girls were included in each group. These were the same *S*s who had participated in our earlier study (Genesee, Tucker, & Lambert, 1975), which had been carried out two weeks before the current one.

The groups (Control, Immersion, and French) at each grade level were equated in terms of age, performance on the *Peabody Picture Vocabulary Test (1959)*, and performance on *Raven's Progressive Matrices (1956)*. The latter two control measures were included to ensure equivalence of the groups in terms of verbal and non-verbal IQ, respectively. The average age of the pupils at each grade level was: kindergarten, 5.72 years; grade 1, 6.60 years; and grade 2, 7.55 years.

Four experimenters were employed in the experiment. All were students, between 21 and 25 years of age, from McGill University; three were female and one was male. An approximately equal number of children in each school group and grade were tested by each experimenter. Practice testing for the *E*s was provided to ensure standardization of test administration.

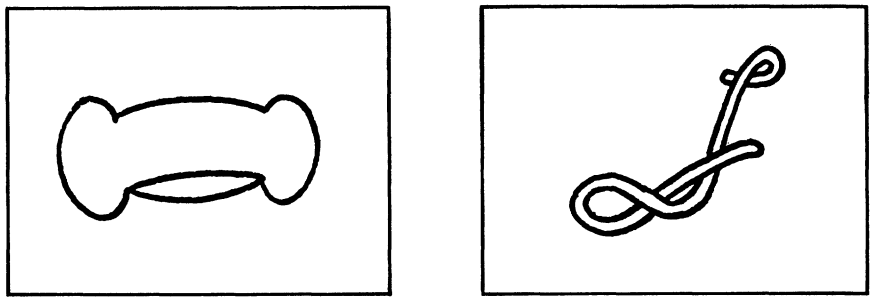
Procedure

Effectiveness of communication was assessed by use of a referential communication task (c.f. Glucksberg, Krauss, & Weisberg, 1966). In this task there is a speaker and a listener. The role of speaker was always taken by a child (*S*), and the role of listener was always taken by one of the experimenters (*E*). The *S* and *E* were separated from one another by an opaque cardboard screen. Neither the *S* nor *E* could see one another over the screen. Each person had an identical set of six blocks. Each block had a different geometric design on it (see figure 1 for the designs that were used) and a hole through its centre so that it could be stacked onto an 18-inch peg. The *S* was asked to select at random one block at a time, to place it on his peg and to describe the block's design so that *E* could select the identical block from his set and place it on his peg. The object of the game was to construct two identical stacks of blocks.

The verbal interchange was in English and always took the following form: the *E* would initiate the game by saying "What does your first block look like?"; after the *S*'s response to this question, the *E* would elicit more information by asking "Why does it look like that?" This sequence was repeated when *E* asked "What else does it look like?" When the *S* could give no more information about the block, he went on to the next one.

Because the *E* could see the top of the *S*'s peg over the top of the screen he could write down, for later scoring, the order in which the *S* actually

ABSTRACT PRACTICE DESIGNS



TEST DESIGNS

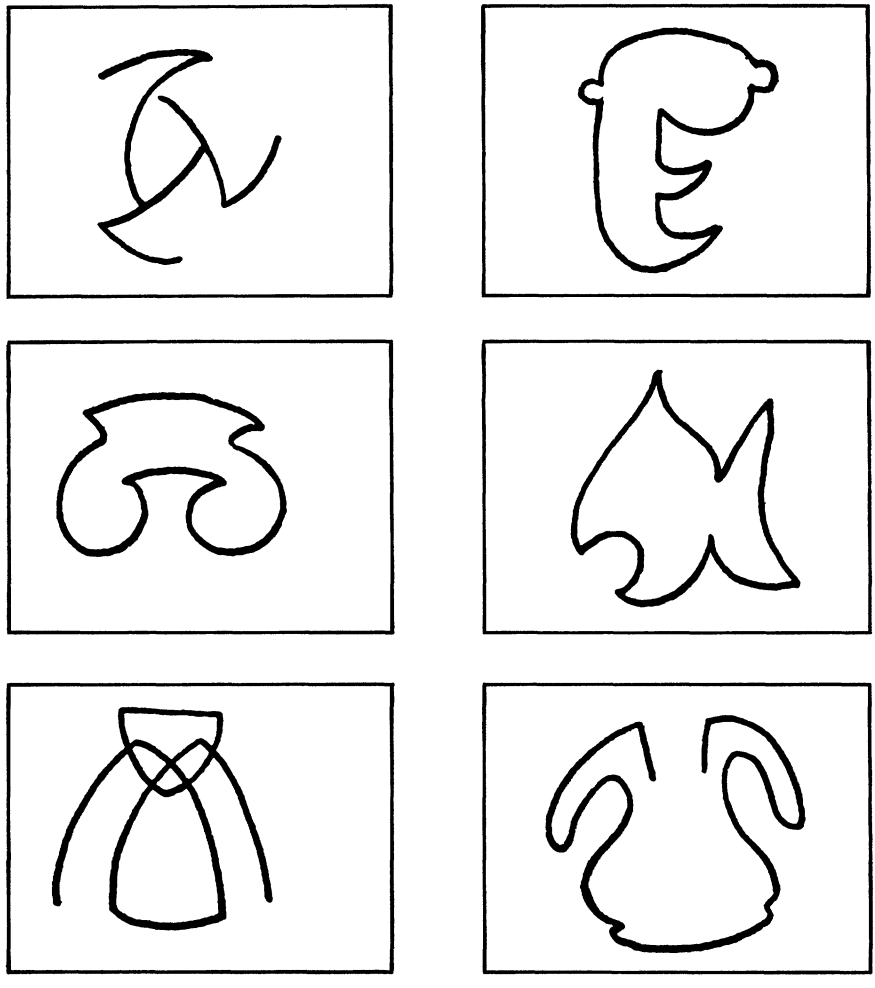


Figure 1

stacked his blocks. This also allowed the *E* to stack his blocks in the same order as *S*. The *S* did not know that *E* could see.

Training Trials. Before playing the game with the test blocks, *S* was given training with three practice blocks which had drawings of a dog, a car, and a man. The procedure with the practice blocks was the same as that for the test blocks. Virtually all of the children performed successfully on this part of the practice session. Then the *S* was given training with two abstract-form blocks. For this practice session, the *S* described the forms in complete view of *E*. This was done to give *S* practice in describing abstract designs with the help of *E*. The *E* offered an alternative for every description that *S* gave to demonstrate that each design could look like more than one thing. When *E* was satisfied that *S* understood the principles and object of the game completely, they proceeded to the test blocks.

All descriptions during the test session were tape-recorded for later analysis.

Method of Analysis

The children's verbal descriptions of all the abstract designs were transcribed by two people.

To obtain a measure of how effectively each child described the designs, a sample of his entire protocol for each block was typed on a sheet of paper. The sample consisted of the very first description and explanation that the child gave for each design; in other words, the sample protocol consisted of the child's responses to the *E*'s first two questions (see above). The first description was selected because it was felt that the child's first attempt at describing each block would contain the most information.

Each sample protocol was given to four different undergraduate psychology majors at McGill University, along with pictures of the designs. Each undergraduate received four sets of protocols. The students were told to read one description at a time and to indicate on their answer sheet the design which they felt went with the description. They were told that after they had made a selection for a particular description they could not return to that description, nor were they allowed to read later descriptions until they had finished with the preceding ones.

An *S* was given one point for each description that was matched correctly with its design by the rater. Thus, for each design there was a maximum effectiveness score of 4 and for each set of six blocks there was a maximum total *effectiveness score* of 24.

Using the *S*'s *entire* protocol a *feedback score* was calculated to assess the child's responsiveness to the experimenter's question, "What else does it look like?" The *S* was given credit every time he made a response to this question. A completely new response was given a credit of 2, and a modified version of a previous response was given a credit of 1. An average

feedback score was calculated by adding all credits and dividing by the number of blocks.

The scoring was done independently by two judges. Where there was disagreement over the scoring of an item, agreement was reached by discussion of that item.

RESULTS

Two separate two-way analyses of variance (unweighted means solution for unequal n) were performed on the date, one on the total effectiveness scores and one on the mean feedback scores. The bases of classification were school group (French, Immersion, Control) and grade (K, 1, 2).

Effectiveness

There were no significant differences among the school groups (F (2,89) = 2.89; $p > .05$) – all three groups were equally effective (see table 1 for a summary of the scores).

Table 1 / Mean Effectiveness and Feedback Scores

	Language Group			Grade		
	Control	Immersion	French	K	1	2
Effectiveness	18.78	17.91	17.83	16.81	18.91	19.52
Feedback	.97	1.13	1.27	.91	1.05	1.41

The grade effect was marginally significant (F (2,89) = 2.82; $p = .06$) – the older students were more effective than the younger students (see table 1 for a summary).

There were no significant interactions.

Feedback

There were *no* significant differences among the school groups in terms of feedback (F (2,89) = 1.48; $p > .05$) – all three groups were equally non-responsive to the requests of the E for more information (see table 1).

The grade effect was again significant (F (2,89) = 2.21; $p < .05$) – the older students were rated higher than the younger students.

There were no significant interactions.

DISCUSSION

The finding that there was no significant difference in effectiveness between the Immersion Group and the Control Group corroborates the results of previous studies with immersion pupils (Bruck et al., 1977; Samuels et al., 1969). At the same time, the failure to find any difference between the French Group and the Control Group extends the generality of previous

results to include English-speaking children in an all-French school. From an educational point of view, these results are very encouraging because they suggest that participation in a total second-language school program may not result in detrimental effects to the child's communication skills in the first language. This may be attributable to the fact that the students studying exclusively via a second language are still immersed in English at home and in their neighborhoods. The results of a questionnaire sent home with all the children indicated that the French Group came from neighborhoods which were as predominantly anglophone as those of the other two groups.

The discrepancy between the current behavioral measures of communicational effectiveness and the previous measures of communicational sensitivity (Genesee, Tucker, & Lambert, 1975) argues in favor of independent processes or components in interpersonal communication, as proposed earlier. Learning to be more sensitive to one's listener does not mean that one necessarily knows how to communicate more effectively with him. It follows that those factors or experiences which influence the development of one of these processes may not necessarily influence the development of the other. Thus, taken together, the results of these two studies suggest that the second-language schooling that these children have experienced appears to have enhanced the development of those skills related to sensitivity but not those related to the formulation of an overt verbal message.

Working from transcriptions of the children's speech samples, we divided each protocol into utterances, defined as minimum segments of meaningful speech which may or may not be grammatical. Each utterance was then categorized according to the following six types: (1) simple, (2) co-ordinate, (3) subordinate, and those containing (4) relative clauses, (5) adjectival clauses, or (6) predicate clauses (Shatz & Gelman, 1973). There were no statistically significant differences among any of the three groups in the average frequency of occurrence of any of these utterance types. This suggests again that all the children, despite rather radical differences in language experiences at school, were using their first language in essentially the same ways. These results are consistent with other studies of immersion children which have used linguistic measures of this sort (Koehn, 1974; Lambert & Tucker, 1972; Edwards & Casserly, Note 3).

The failure to find between-group differences on the *feedback* measure in the current study, whereas there had been between-group differences on the sensitivity measure from the earlier study, may reflect differences in the nature of the experimental tasks. The referential communication task in the present study places rather unusual demands on the child — the description of abstract shapes. When asked to supply more information about the shapes, the child may not have known what was appropriate or expected. In the previous study, the children were required to explain how

to play a game. All children are very familiar with playing games and, therefore, may have been more familiar with the concepts and the nature of the information involved. The fact that the children's classmates were used as interlocutors in the first study whereas adults were used in the present one may also have contributed to this discrepancy, insofar as children may be less at ease communicating with adult strangers than with classmates.

Overall, the children became more effective and responsive communicators with age. This result may reflect the normal development of both role-taking and linguistic skills. Others have also found age-related improvements in children's communication skills (Flavell et al., 1968; Krauss & Glucksberg, 1969).

In summary, the current findings taken along with our earlier findings support the notion of a multidimensional model of interpersonal verbal communication. It has been suggested that development of the different dimensions is independent and may be related to different social or environmental factors. Furthermore, it does not appear from these results that oral communication in the first language is adversely affected by attendance at a school where a second language is used as the exclusive language of instruction and communication.

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