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Influence of Mother Tongue Instruction on Minority Children's
Language Performance and a report of their Language Patterns

Lucy Fazio

A Thesis
in
The Department
of
Education

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Arts at
Concordia University
Montréal, Québec, Canada

March, 1992

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ISBN 0-315-73618-6

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ABSTRACT

Influence of Mother Tongue Instruction on Minority Children's
Language Performance and a report of their Language Patterns

Lucy Fazio

The purpose of this investigation was first, to examine the relationship between supplementary mother tongue instruction and the French oral comprehension and expression of minority children; secondly, to investigate these children's language patterns in particular social situations. One hundred and thirty-seven elementary level, first generation immigrant children, representing 18 different mother tongues and 36 different countries of birth, took part in the study.

A multivariate analysis, which examined the mother tongue instruction variable, the length of residence in the host country, self-esteem, schools, oral comprehension and oral expression, reveals that supplementary mother tongue instruction does not significantly predict language performance. Schools and length of residence are both positive predictors of comprehension and expression; self-esteem significantly predicts only expression. The findings on language patterns indicate that these children continue to use their mother tongue extensively in their ethnic communities; whether French or English becomes their dominant

language outside of school, is closely related to the school attended.

These results have implications for the classroom educators and school authorities who are overseeing the education of rapidly growing numbers of minority language children in the Montréal area.

Acknowledgements

I would like to thank my advisor, Dr. Florence Stevens, for her unfailing support, guidance and voice of encouragement throughout the course of this work. I also extend thanks to my committee members, Dr. Sandra Weber, for her insightful comments on the art of interviewing and Dr. Philip Abrami who provided extensive and invaluable expertise on quantitative methods. Thank you also to Mr. David Wells for his generous assistance with computer-related aspects of the study.

Special thanks to the school board officials who played vital roles in launching the project and to the school administrators who were most helpful with the logistics of data collection. To all the children whose cooperation and participation made this work possible, I also extend my sincere thanks.

To my children, Teena, Mark and Luke, thank you for sharing the computer with a fellow student and to my husband, Paul, deepest thanks and appreciation for the support and vote of confidence that were always there when I most needed them.

Finally, I acknowledge the courage and altruism of my father who, forty years ago, chose the uncertainty and hardship of immigrating to a new land in order to secure a better life for his family. I dedicate this work to him, in loving memory.

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CHAPTER 1

Traditionally Canada has been a generous host to peoples of other nations who, for a variety of reasons, have either wanted or needed to relocate in a new country. During the "first wave" immigration boom of the 1950's, Canada admitted approximately two million immigrants, mainly of European origin, who were escaping the aftermath of war. In October of 1990, Canadian generosity resurfaced as the Federal Minister of Immigration announced that within the next five years Canada would be admitting a total of 250,000 new immigrants annually (Moore, 1990).

Even before that official announcement from Ottawa, Montréal area schools were already reporting an increase in the registration of minority language students. According to school board officials, classes d'accueil consultants and administrators, the numbers are substantial and growing rapidly; they refer to the phenomenon as a "second wave" of incoming immigrants. The families of these new pupils have come predominantly from the Middle East and from Central America, two areas of the globe marked by war and social turmoil. Although they are relocating for entirely different reasons, large numbers of Chinese from the British dependency of Hong Kong are also immigrating to Montréal. It would appear that for them the impetus for movement and

resettlement is directly related to the uncertainty of life after 1997, at which time, Great Britain's 99-year lease on Hong Kong expires and political control reverts back to China.

These new arrivals increase the enrollment rosters to the point where, in some cases, they form the majority of the student population within a given school. Such a change in the overall make-up of a school represents a challenge for the classroom educators and school authorities entrusted with overseeing the formal education of minority language pupils who are, by definition, culturally and linguistically different. One thorny issue which has historically surrounded the education of immigrants is the question of what, if anything, should be done with respect to the children's mother tongue (i.e., first language spoken by the child). The question has been answered and continues to be answered by the implementation of diverse educational practices which either exclude the mother tongue (monolingual education) or include the mother tongue (bilingual education) in the formal education of minority children.

By definition, monolingual education provides total instruction in the majority language of the host country; in contrast, bilingual education provides instruction both in the majority language and in the child's mother tongue. Research conducted in numerous receiving countries has concentrated on investigating the relative effectiveness of the two methods by comparing groups of monolingually taught children with groups of

bilingually taught children. Linguistically and academically, results have generally favoured the bilingual approach with its inherent component of mother tongue instruction (e. g., Willig, 1985; McLaughlin, 1985; Cummins, 1981; Skutnabb-Kangas & Toukomaa, 1979; Bamgbose, 1984; Alford, 1987).

However, even as bilingual education was being endorsed in the literature, researchers were questioning the quality of the research being conducted in this area (Cummins, 1979; McLaughlin, 1985; Willig, 1985). Specifically, Willig (1985) pointed out that the studies she reviewed for her meta-analysis of bilingual education research in the United States reflected flaws in research design, in the analysis of the data, and particularly in the failure to match the experimental and control groups. She and others (Cummins, 1979; McLaughlin, 1985) maintain that it is virtually impossible to truly equate children from dual language environments on all of the factors that may constitute potential confounding variables in a study and they recommend therefore that subjects be randomly assigned to groups. While the completely random model would assure the internal validity critical to sound research (Campbell & Stanley, 1963), it would however create ethical problems since all children ought to be exposed to the better of any two educational programs. In addition, children are generally found in specific programs because either policy makers or parents have chosen

those programs for them, thereby eliminating any possibility of random assignment.

Accordingly, the first purpose of the present investigation is to examine the influence of mother tongue instruction on the language performance of minority language children using a multivariate approach. This methodology, rather than attempting to control for the diversity of the sample, takes into account the complex nature of phenomena and explains the variability in outcome measures using multiple regression analysis (Pedhazur, 1982). In such a context, mother tongue instruction can be looked upon as one of several predictor variables. The type of mother tongue instruction being examined in this study is supplementary or extra-curricular in nature; it is not a formally integrated component of the classroom curriculum.

Research into the area of bilingual education has not only reported on program effectiveness and inadequacy of research design, it has also highlighted the need to examine minority children's use of languages in different community contexts (Cziko & Troike, 1984; Willig, 1985; McLaughlin, 1985). This language usage is considered a potentially important mediating variable which might have a determining effect on research results in second language acquisition. To date, relatively little research has focused on language patterns. The work that has been carried out has concerned itself primarily with second generation immigrants representing a single linguistic

background (Smolicz & Harris, 1977; Bhatnagar, 1980; Smolicz, 1983; Taft & Cahill, 1989). Therefore, it is the second purpose of this investigation to extend the knowledge in the area of language patterns by studying the language usage of first generation immigrant children representing a variety of linguistic backgrounds. The study will also examine the use of language in community contexts not explored by previous investigations.

Survey of the Literature

The purpose of this investigation is first, to examine the influence of mother tongue instruction on the second language performance of first generation immigrant children and secondly, to explore the language patterns of these children. The review of the literature will be reported in three parts. Although they do so from different perspectives, both part one and part two focus on the mother tongue instruction variable which is central to the first objective of the study. Part one explores the nature and consequences of the absence of mother tongue instruction (in the education of immigrant children) by presenting the background and research findings relating to monolingual education, that educational approach characterized by exclusive instruction in the majority language of the host country. Part two is a more detailed review of bilingual education, defined by the presence of mother tongue instruction plus majority language instruction. A

concurrent aim of this portion of the review will be to isolate any additional variables which might influence minority children's second language performance.

Part three of the survey, which relates to the second objective of this investigation, is a review of the literature on the language patterns of minority children in particular social situations.

Monolingual Education

The objective of monolingual education for immigrant children is to teach them in a single language, the language of the host country. The pedagogical formula which accompanies this framework is one of placing these children in a classroom where they are submersed in the majority language. This monolingual approach was used almost exclusively in Canada, the United Kingdom, and other affluent nations when the schools in those receiving nations were overwhelmed by the arrival of the "first wave" of minority language students following the post-war immigration boom of the 1950's (Dirks, 1979). In England, the practice of monolingual education went by the label of "laissez-faire" (Bhatnagar, 1970) while in Canada the same practice was known as "total integration" (Ashworth, 1975). Two other often used phrases which aptly describe the process are "submersion" and "sink or swim". Irrespective of nomenclature, these measures are essentially one and the same. They all represent a reaction by

school authorities who were faced with substantial numbers of immigrant children but who had few effective programs to implement. The arriving children were mainstreamed into classrooms with native speakers so that they might learn through exposure to the majority language. To reinforce this monolingual strategy, various measures were gradually implemented which aimed to support minority language children in their acquisition of the majority language. These support measures (i.e., reception or welcoming classes, language centers, and withdrawal classes) all share the common objective of delivering more intense instruction in the new language.

Reception or welcoming classes are located within regular schools as separate classrooms and they are made up entirely of newly arrived immigrant students (Ashworth, 1975; Hawkes, 1966; McLeod, 1973; Bhatnagar, 1970). In some cases, instruction can go beyond the boundaries of language to include acculturation (Mowat, 1969). Total time spent in the welcoming classes can vary. Ashworth (1975) notes that in many provinces across Canada, minority language students in welcoming classes are gradually eased into participating in regular classrooms at a suitable grade level in subject areas such as physical education and art, activities which do not require high language proficiency skills. In contrast, the French-language welcoming classes (classes d'accueil) which have been implemented recently in the

province of Québec require that children attend for one entire school year before they enter the regular classroom.

An alternative to reception classes within regular schools is to transport children from many areas to a central location to receive second language (L2) training. While some centers channel their efforts almost exclusively into intensive language courses so that students can quickly enter the regular school system, others provide a wider educational experience which includes the teaching of diverse academic subjects, while still others are also concerned with introducing the culture of the receiving country. A Canadian example of a language center, which is committed to both language proficiency and acculturation, is Toronto's Main Street School, an institution devoted entirely to the teaching of several hundred immigrant students aged twelve years or older (Ashworth, 1975). Students attending a language center exit the program once second language proficiency is considered to be sufficiently adequate to enable them to function in the regular school system.

With or without benefit of welcoming classes or attendance at a language center, the immigrant children schooled within a monolingual paradigm eventually enter the mainstream classroom. When they do so, the children are further supported in their efforts to acquire the majority language. Support comes to them in the form of withdrawal classes. This pedagogical practice entails the removal of the mainstreamed child for a

portion of the day to attend classes with a second language acquisition specialist who may be either itinerant or school-based (Ashworth, 1975; Cropley, 1983; Burmark & Kim, 1978; Freudenstein, 1978). The logistics of withdrawal programs can vary substantially from school to school as can the total amount of time a student attends such classes. In Canada, Ashworth (1975) found that there was great variance in the amount of time per day devoted to withdrawal programs and, in fact, some programs could be as extensive as half-days. While this generous allotment of time proved to be desirable at the elementary level, it created problems at the secondary level where timetables are less flexible in nature. Cropley (1983) and Freudenstein (1978) indicate that far less time than a half a day is customarily devoted to withdrawal classes in other countries.

In summation, monolingual education is designed to deliver instruction solely in the majority language of the host country or province. It has been and continues to be one of two general approaches used in the formal schooling of minority language children. How effective has it been?

Monolingual Education/Research Findings

Several studies have reported on the academic and life outcomes of monolingual education for minority language children. Mowat's comprehensive interviews (1969) with Canadian adults who had immigrated as children revealed that they had

reacted to the process of submersion with awkwardness, fear, loneliness, stress, feelings of alienation, and loss of identity. Additional research on the adjustment of immigrant children in Canada took the form of a narrative review of the literature (Bhatnagar, 1976) which also suggested that monolingually taught children frequently suffered from feelings of inferiority, insecurity, loneliness and confusion. Similar findings were reported by Paulston (1977) with respect to Finnish children in monolingual classrooms in Sweden. These minority language students experienced identity conflicts, lack of self-esteem and shame about their home language and nationality.

It would appear that these unfavourable sentiments combined with other variables to culminate in negative school outcomes, in spite of the well-established fact that as a group, immigrant children are not cognitively or psychologically deficient (Aronowitz, 1984; Willig, 1985). Research findings indicate that minority language children recorded low academic achievement, exhibited poor knowledge of the majority language in which they had been submersed, and consequently were disproportionately assigned both to remedial classes (Hawkes, 1966; Persell, 1977; Cummins, 1987) and to the bottom streams of the school system (Bhatnagar, 1970; Paulston, 1977; Skutnabb-Kangas & Toukomaa, 1979). Ortiz and Yates (1983) have reported that, at one time, Hispanic students in Texas were overrepresented by 300% in the learning disabled category.

Ashworth's survey (1975) of the Canadian system revealed that monolingually taught minority language students quickly became equated with slow learners; they finished up in the bottom of the reading group; and they had high representation both in remedial classes and in the non-academic streams of secondary schools.

McLaughlin (1985) offers a less extreme view of the outcome of monolingual education for immigrants when he writes that not all of the minority children who received it experienced failure. He notes that those possessing a high level of motivation and a firm sense of self survived submersion, succeeded academically and went on to become well-adjusted adults who enjoyed social and economic mobility. However, as other authors (Paulston, 1977; Althena & Appel, 1982; Rotberg, 1984; Alford, 1987) have pointed out, the successful ones were not the norm and, in fact, the generally low academic achievement of minority children and ensuing lack of success in terms of life outcomes prompted educators and policy makers to look for an alternative to monolingual education. In several countries that alternative took the form of bilingual education.

Bilingual Education

The goal of bilingual education was to improve on the marginal academic achievement previously recorded by monolingually taught minority language students. As a policy, it acknowledges that immigrant children, newly arrived in their

host country, already have a culture and speak a language. Bilingual education attempts to take advantage of existing mother tongue skills by incorporating them into an educational strategy which deliver instruction to these children in some pre-determined combination of their mother tongue and the majority language of the host country. Programs in which the mother tongue (L1) has been used as a medium of instruction have been widely implemented and they are as variable as the children they serve (Cziko & Troike, 1984). But pedagogically, all programs which fall under the rubric of bilingual education are underpinned by the common assumption that building instruction on what minority language students already know will result in more effective learning of the majority language and academic subjects than would total instruction in a second language. While seemingly paradoxical and counter-intuitive in nature, this critical assumption with respect to the inclusion of mother tongue instruction (MTI) in the education of minority language children can be justified both on cultural/psychological grounds and on linguistic/cognitive grounds.

Cultural/Psychological Justification for MTI

To better understand the rationale behind mother tongue instruction and why it would be beneficial for immigrant children, it is important to realize that the immigrant child is literally transported from the familiar cultural setting of home,

school, friends and extended family to an environment which is, in many cases, totally new and unsupportive. The resulting culture shock is visible with respect to the external components of life, such as, differences in food, climate, clothing, life styles, and the physical properties of the schools they enter. For example, the majority of Caribbean children come from rural areas where life is relatively uncomplicated and the more complex, sophisticated American society they immigrate into has been found to be a source of bewilderment and frustration for them (Cummings, Lee & London, 1983). Similarly, Anthony (1980) has reported that new West Indian students were overwhelmed by the Canadian schools' over-saturation of audio-visual aids, unfamiliar equipment, noisy halls, clanging lockers and strange plumbing.

Depending on the country of origin, the new immigrant is also likely to encounter a differing degree of freedom accorded students. In North America, students are often permitted greater leeway to purposefully roam in the classroom, to take greater personal responsibility for their work, and to make some academic choices regarding assignments and course requirements (Mowat, 1969). However, for Caribbean children in American classrooms, this more liberal and democratic school atmosphere proved to be problematic because they had come from schools that emphasized strict discipline and were authoritarian in nature (Cummings et al., 1983). In Sweden too it was reported

that Finnish immigrant pupils misunderstood the more open and friendlier environment of their new school, became disoriented by it and could not understand why teachers were not more authoritarian in their approach (Stockfelt-Hoatson, 1977).

In addition to the concrete, external features of culture shock, there are also internal components, differences in motives, morals, beliefs etc. which determine to a large extent how individuals feel about themselves and how they internalize expectations and feedback. For example, demonstrating respect for the teacher's authority varies among cultures. Italian and Greek immigrants settling in Toronto were amazed that the other students in the class did not stop talking and stand up in order to show respect for a teacher entering a classroom (Mowat, 1969). In the case of West Indian students, their culture teaches them that one accords deference to a teacher by humbly looking at the ground when being addressed or scolded (James & Jeffcoate, 1981). In contrast, the North American culture construes this type of behaviour as a possible expression of guilt, lack of aptitude, poor manners or extreme shyness.

In light of the cultural dissonance experienced by minority language children, it is not surprising to find first, that these children have been reported to exhibit conduct disorders, and secondly, that those same conduct disorders were manifested almost exclusively at school and rarely at home (Aronowitz, 1984). Consequently, Aronowitz has recommended that because

the disorders are school related, the school is the most appropriate agency through which assistance might be provided for immigrant children and their families. Support for this position comes from Golub (1984) who has demonstrated, in his work with Puerto Rican and Indonesian children in the United States, the value of establishing a school-based monitoring center which offers guidance and services to these immigrant students, their parents and their teachers.

Culture conflict has not only been found to be the source of conduct disorders at school, it has also been found to be intrinsically problematic for the child trying to learn. Several researchers and educators (Cummins, 1979; Ramcharan, 1975; Grande, 1975) have argued that cultural variables can interact with educational treatments to produce negative outcomes. It has been reported by Anthony (1980) and Cummings et al. (1983) that West Indian immigrant students, as a result of their upbringing in a different culture, had great difficulty communicating with their teachers or giving opinions during open discussions, and were generally too shy to speak out in class. Similarly, Vietnamese students in the United States found it difficult to express their feelings and thoughts while in school because although the schools of that host country reward a vocal and active participation in the classroom, the Vietnamese students had been socialized in their culture to whisper, to be passive and to be subtle in their ways (Burmark & Kim, 1978).

Reporting on the Karaja minority of Brazil, Alford (1987) has shown that these children experienced difficulty both academically and socially because their culture emphasized group rather than individual performance whereas the majority language teachers who taught them placed greater value on competition, as opposed to cooperation, among students.

The disadvantage experienced by minority language children as a result of culture conflict can be partially overcome if they initially receive mother tongue instruction from a teacher who values, understands and shares their language and culture (Cummins, 1977). Use of the child's mother tongue also fosters a link between home and school which is otherwise almost non-existent when parents don't speak the majority language and consequently do not feel comfortable approaching the school and speaking to teachers should their children be experiencing difficulties (Ure, 1981). In his work with Hispanic children in the United States, Otheguy (1982) found that where bilingual programs existed for immigrants, parents were more likely to have contact with their children's schools and teachers.

In addition, it has also been suggested that bilingual education programs promote minority children's self-esteem because in a milieu which includes their mother tongue, these students feel that their culture and language is an important part of the school and there is greater acceptance of who they are (Hernandez-Chavez, 1984). It has been found that minority

language children in bilingual education classrooms, when compared to their counterparts in monolingual education classrooms, demonstrated a greater sense of self-confidence and self-esteem (Willig, 1985). In addition, research on affective measures by Cziko & Troike (1984) showed that bilingually taught minority students (elementary level) in Nigeria had higher social acceptability and were better adjusted than their counterparts in monolingual programs. Heightened levels of self-esteem were also observed in African children in the United States when the students' cultural and linguistic background was incorporated into the mathematics curriculum (Zaslavsky, 1988).

The extent to which self-esteem is specifically associated with second language learning has not been widely researched (Berryman, 1983). However, Brodkey and Shore (1976) and Gardner and Lambert (1972) did reveal that self-esteem appears to be an important variable in second language acquisition. More recent research with university students has shown that there is a positive and significant relationship between oral expression and self-esteem (Heyde, cited in Brown, 1987).

In sum, on cultural/psychological grounds, there has been fairly strong justification from the literature for the use of the mother tongue in the education of minority language children. It provides them with a sense of security insofar as home culture and language are legitimized at school; it allows them to understand and be understood; it cushions the culture shock

experienced by the majority of these children; it appears to be positively associated with self-esteem, a well-established variable of importance in the overall learning process (Coopersmith & Gilberts, 1982).

Linguistic/Cognitive Justification for MTI

Proponents of bilingual education claim that teaching minority children in their mother tongue is not only beneficial for these children in terms of their cultural and psychological adjustment, it actually leads to success in learning the majority language. Furthermore, they maintain that instruction in L1 will prevent students from falling behind in the academic subject matter during the time that they are learning L2. It is suggested that, in contrast to being in a monolingual situation where learning is interrupted and reduced substantially due to poor knowledge of L2, receiving instruction in the mother tongue permits ongoing cognitive and academic development. It is also suggested that once L2 proficiency is sufficiently developed that the student can enter the regular stream, the academic skills acquired through L1 will transfer to L2. What are the theoretical underpinnings that support this argument in favour of bilingual education?

Cummins (1988) writes that, to the extent that education involves social interaction, it requires its students to acquire cognitively undemanding/context-embedded conversational

proficiency. But the chief objective of formal education is not to promote face-to-face conversation. Rather, its aim is to progressively enhance the student's ability to manipulate and interpret cognitively-demanding/context reduced language in both oral and written form. While this objective holds true for all children, Cummins (1988) points out that actual schooling is a very different challenge for a minority language child as opposed to a majority language child. Majority language children arrive at school with communicative skills in the majority language and they will be taught in that majority language. For them, formal education is a linguistically uninterrupted process in which their accrued communicative skills are used to master the abstract symbols (i.e., reading and writing) which represent a language with which they are already familiar. In other words, schooling extends and develops what these pupils already know and does so in a context which is meaningful to them, using input which Krashen and Terrell (1983) would characterize as being comprehensible. The schooling of majority language children is in their mother tongue. Insofar as medium of instruction is concerned, the academic process is mapped for success.

In the case of minority language children, the task of learning in a majority language classroom is not so inherently simple. Their own language does not match the language they encounter at school and yet they are expected to learn the same academic material, to learn abstract symbols for words in a

context which is not linguistically meaningful for them, and while hearing language which is not always comprehensible. For these children there is no bridge from their mother tongue to the majority language symbols which they encounter at school. Schooling for them is marked by a language disruption and by an unfamiliar communicative context which fails to relate to their past experiences. Such an academic process has not been mapped for success. If the academic process is to be as favourable to minority language children as it is to majority language children, then they too might be better served by some initial instruction in their mother tongue. Such is the objective of bilingual education.

Bilingual education provides the continuity from native language to language encountered at school. What must be explored and substantiated is the impact such an academic process has on the minority language child's ability to acquire the majority language of the host country, the language on which will hinge academic achievement and empowerment for future life outcomes.

On a theoretical level it is Cummins' theory of interdependence (1979; 1981; 1988) which has shed light on how instruction in L1 can be a positive influence on the acquisition of L2. In his hypothesis, he distinguishes between two aspects of language--a surface feature and an underlying feature. By surface he means the communicative aspect of language which is,

with the exception of severely retarded and autistic children, universally acquired. Included among surface features are the visible, context-embedded, and quantifiable elements of language, for example, vocabulary, grammar, pronunciation, and fluency--in essence, all the prerequisites for conversational proficiency. In the case of a minority language child receiving bilingual education, the surface aspect of language will eventually be characterized by two modes, the mother tongue and the majority language of the host country. Beneath that surface duality is a less visible, less easily measured, more context-reduced unitary language dimension which is common to both L1 and L2 and which Cummins labels underlying proficiency. Characteristic of that common underlying proficiency are cognitive/academic type skills involving more formal operational thought processes, for example, comprehension, analysis, conceptual knowledge, subject matter knowledge, thinking skills, semantic complexities, verbal analogies, coding and decoding strategies--in effect, all those skills that form the foundation of academic, formal schooling.

Cummins depicts the relationship between the surface and underlying features of language as being one of interdependence, such that the bilingual child's experience with either of the surface features (mother tongue or majority language) will promote the development of the underlying proficiency which is common to both languages. And so, while minority language children in bilingual education programs are building on the

surface feature of their mother tongue, they are simultaneously developing the underlying/cognitive base of their language system. Thus the learning process is an uninterrupted one and theoretically, after a reasonable exposure time to instruction in the majority language, these children should not demonstrate delayed learning in L2 because the accrued underlying cognitive skills developed through mother tongue instruction will transfer to that second language. Providing that the student is motivated to learn and the instruction in the mother tongue has been effective in promoting cognitive academic language skills, these skills will manifest themselves in both the mother tongue and the majority language.

In practice, Cummins' theory of interdependence derives support from several empirical studies which indicate that positive transfer does occur between mother tongue and second language academic skills. In a classic work in which Modiano (1968) compared bilingual education (Indian/Spanish) and traditional monolingual education (Spanish only) of 1600 indigenous minority children in 26 schools and involving 42 teachers, she found that minority language children taught bilingually, with initial literacy in the mother tongue, did better in the Spanish language (2 measures of reading comprehension) by the end of grade 3 than indigenous children who had been taught monolingually in Spanish only. Thus, children in the bilingual group who had had less exposure and teaching time in Spanish did

better in the Spanish language than their counterparts in the comparison group who had been taught solely in Spanish. Similarly, bilingual programs in Sweden show that Finnish immigrants can be instructed almost exclusively in Finnish for the first three years of school and yet, by the end of grade six their performance in the Swedish language is comparable to that of native Swedes instructed in Swedish only for that six year period (Skutnabb-Kangas & Toukomaa, 1979). Such results and a review of nine other supporting research studies (cited in Cummins, 1979) offer convincing support for Cummins' premise that first and second language academic skills are manifestations of a common underlying proficiency, that they are indeed interdependent, because there is little relationship between the amount of instructional time in the majority language and academic achievement recorded in that language. That fact suggests that the bilingually taught children are able to transfer the cognitive/academic skills which they have acquired in their mother tongue to the majority language when it is introduced and learned.

In summation, the literature reveals substantial linguistic/cognitive justification for the use of the mother tongue in the education of minority language children. Without interruption, it allows them to continue their linguistic development in a context which is meaningful to them. Equally important, it has been shown that concepts and academic type

skills acquired through the mother tongue instruction are transferred to the newly developing literacy in the majority language. These positive features associated with mother tongue instruction have led to the implementation of bilingual education programs for minority children in several countries worldwide. A representative sampling of these applications and related research findings will now be reviewed.

Bilingual Education/Applications and Research Findings

United States. In the United States 4.5 million school-age children speak some language other than English at home (Rotberg, 1984). As a response to the educational problems faced by these children and others before them, the federal government became involved in bilingual education in 1968, when Congress enacted the Bilingual Education Act, a policy which encouraged the use of bilingual practices and methods for educating minority children. Two basic types of instructional models are in existence: transitional classes which aim to wean the children from their native language and move them into regular classrooms as quickly as possible; and maintenance classes where the objective is to continue to develop first language and culture long after the child is able to function in an English classroom. Of the two types, it is the transitional model which is more frequently implemented in American classrooms (Richard-Amato, 1988).

Since the early nineteen seventies, several research studies have investigated the relative efficacy of bilingual education programs throughout the United States involving numerous minority groups. Some findings are positive, some negative. Dulay & Burt (1978) reviewed 12 studies conducted in various American schools and they concluded that bilingual education was a success because it either improved or did not hinder academic achievement in school. Two landmark investigations have grouped relevant primary studies with the intention of providing a summative view of the effectiveness of bilingual education in the United States. The first is an extensive study carried out by Baker and de Kanter (1983) which took the form of a narrative review that examined 39 studies. Baker & de Kanter applied rigorous standards in their selection of the studies that qualified for inclusion and in the end they reported that in only 11 of the 39 studies was it revealed that students in bilingual programs performed better on English language tests than students in monolingual programs. Further, in 26 of the studies no significant difference could be found between the English skills of bilingual program and monolingual program students. The remaining studies revealed bilingual programs to be less effective than the non-bilingual programs. Baker & de Kanter concluded that the case in favour of transitional bilingual programs was a weak one.

Largely in response to the widely publicized 1983 findings of Baker and de Kanter, Willig (1985) conducted a meta-analysis of essentially the same body of literature as the previous authors, although five studies were excluded either on methodological grounds or because they had examined programs outside the United States. Her major findings were reported using the statistic of effect size, and in contrast to conclusions reached in Baker and de Kanter's narrative review, she found overall significant and positive effects for bilingual education programs both as they related to English and mother tongue skills.

The discrepancy in findings between the Baker & de Kanter review and Willig's replication of their work can be partially explained by their different methodologies. When compared to narrative review methods, the meta-analysis has far greater power to detect true differences among groups and has the added benefit of providing statistical control for methodological flaws across groups of studies (Secada, 1987).

In addition to reporting on the relative effectiveness of bilingual education, Willig's work also drew attention to the difficulties inherent in conducting internally valid bilingual language research. She notes that the investigative process has been generally plagued by the inability to randomly assign subjects to control and experimental groups; by inadequate test instruments; by the very term bilingual education which can vary

substantially from one location to another in terms of what is actually delivered to the students; and by plausible rival hypotheses, namely, aptitude and socioeconomic status. Similar concerns with respect to the methodological limitations of bilingual education research have also been expressed by Cummins (1979), McLaughlin (1985) and Zondag (1989) who have stated that major uncontrolled differences between experimental and control groups have resulted in contaminated research findings. In light of such critical remarks, it is nevertheless important to bear in mind that Willig's meta-analysis revealed that in all instances where major inequities between groups were not present, the results consistently favoured the bilingual program groups.

Sweden. Sweden is a country in which one eighth of its inhabitants are of immigrant background, and, of those, the vast majority have emigrated from the other Nordic countries, especially Finland (Stockfelt-Hoatson, 1977). The Swedish government has made a strong commitment to the bilingual education of its immigrant children. In 1975, an official law was passed which advocated and assured that immigrant children in Sweden could be educated bilingually. To tangibly support such a policy, funds were made available for the implementation of bilingual programs and monies were also allotted to the public library system for the acquisition of books in foreign languages

and for mother tongue supplemental programs (Marti & Schulte-Albert, 1982).

Two principal types of programs which use the mother tongue as the medium of instruction for school subjects have been established: language shelters and composite classes.

Willke (1975) describes the language shelter as a model in which immigrant children are grouped according to mother tongue and all instruction is in L1 up until grade 3, at which time Swedish is introduced as a bi-weekly oral lesson. There is a gradual increment in the amount of Swedish taught so that by the fifth grade instruction is half in Swedish and half in the mother tongue. By grade seven all instruction is in Swedish. Empirical research on the effectiveness of language shelters has not been voluminous but what has been published has been generally positive, particularly, when compared with the results which were being recorded under the monolingual programs. Cummins (1981) cites the work of several researchers who have found that Finnish immigrants who had been submersed in the Swedish system performed worse in the Swedish language than 90% of Swedish majority language children. In contrast, Finnish minority children who had participated in a language shelter program from grades 1 through 6 were found to do just as well in Finnish language tests as children in Finland; they also did just as well as Swedish children in tests of reading comprehension, oral production and listening in Swedish. They could write Swedish

almost at grade level, although there was some difficulty noted in spelling and punctuation; school achievement was at grade level (Skutnabb-Kangas & Toukomaa, 1979).

In contrast to the somewhat segregated language shelter, the composite classes integrate approximately equal numbers of native Swedish children and immigrant children who share a common language. Minority children in such a program receive about 60 percent of their instruction in the home language in grade 1, during which time they are separated from the Swedish students. In grade 2, the proportion of home language teaching is about 40 percent, at grade 3 it is about 30 percent, and in grades 4 to 6 there are about four or five hours of home language instruction in a week (McLaughlin, 1985). An extensive longitudinal study by Lofgren & Ouvinen-Birgerstam (1982) reported on a program which involved composite classes in Malmo, a residential area with a large immigrant population. Four groups of Finnish immigrant children were followed for a five-year period beginning from the time they were in preschool. Data collection was continuous and included results of Finnish and Swedish language tests, ability tests and teacher observation. The results were compared with corresponding proficiency levels of other relevant pupil groups. The authors found that at the end of the five-year span, the subjects in their study scored as well in Finnish language skills as Finnish immigrants who had attended language shelters in Sweden (it will be remembered that under

this instructional model all teaching is in L1 up until 3rd grade); they were one standard deviation below the norm in language skills when compared to Finnish children in Finland; they were no different in Swedish language proficiency when compared to Swedish majority language children; they scored no differently in mathematics achievement tests than Swedish children or other Finnish immigrants in Sweden schooled under different approaches.

Overall, mother tongue instruction, as delivered both through language shelters and composite classes, receives support from the literature. It is important to note however that in both of the major works cited above (Skutnabb-Kangas & Toukomaa, 1979; Lofgren & Ouvinen-Birgerstam, 1982) almost no detail is provided with respect to the formation of the control groups against which the experimental groups were compared on the various measures of proficiency.

Nigeria. Bamgbose (1984) describes an important experiment in Nigeria which has used the mother tongue as medium of instruction in this country where English is the official language. The Six-Year Primary Project (SYPP) was instituted in Western Nigeria where a large contingency of the population have Yoruba as their mother tongue. An anecdotal concern for the poor quality of the spoken and written English of the children led to a government survey which confirmed that

there was a serious problem with English language instruction/learning. The survey suggested that if meaningful results were to be obtained from primary education, the children's first language, Yoruba, would have to be given more serious consideration as the language of instruction. This recommendation germinated into the SYPP. The project was designed with several experimental groups (strong maintenance program wherein Yoruba would be the medium of instruction for all six grades of primary school and English would be taught as a subject) and several control groups (transitional program in which Yoruba would be the medium of instruction for grades 1-3 and English would be the medium for the remaining three years of elementary school). Children were randomly assigned to groups. Evaluation of the project was both systematic and comprehensive. It included batteries of language tests and subject matter assessments.

The global results indicate that on tests of English, Yoruba, science, social studies and mathematics, the experimental groups outperformed the control groups. Their superior performance could not be explained by teacher effect, curriculum materials or the individual differences among the subjects because these had been controlled for through random assignment to groups. The evaluators of the project concluded that it was the differential use of Yoruba in the control and experimental groups that

accounted for the linguistic and academic results recorded by the children in the various groups (Bamgbose, 1984).

The project makes a strong case for mother tongue maintenance programs. It is a rare example of bilingual education research in which the researcher was able to randomly assign the subjects to experimental and control groups, ostensibly because children in both groups would be receiving mother tongue instruction, albeit in different format and intensity.

Holland. The education of immigrant children in Holland has historically been oriented towards assimilation into the Dutch society with mother tongue and culture receiving only token attention. As has been witnessed in many other countries, negative experiences and academic results have accompanied such a policy. In 1977, in the city of Leyden, concern for the welfare of the substantial numbers of Turkish and Moroccan children in the Dutch school system led to the founding of an experimental, transitional school which the minority children could attend for two years. In the first year the children's respective mother tongues were used as the medium of instruction about 75% of the time; in the second year it was used for 40% of the time; in the third year the children attended a regular neighbourhood school. After three years of language proficiency testing both in the experimental school and the regular school, it was concluded that the time spent in mother tongue teaching in the transitional

school did not harm or hinder the L2 acquisition (Dutch) of the Moroccan and Turkish immigrant children (Altena & Appel, 1982). In fact, they were somewhat ahead in oral and written proficiency in Dutch when compared to children (matched on socioeconomic status and aptitude) who had been submersed exclusively in the Dutch language.

This experimental school indicates that even a short period of L1 instruction can prove to be beneficial.

Brazil. Portugese is the official language of Brazil and in the past, well-intentioned attempts to educate minority groups by submersing them in the national language had met with failure (Alford, 1987). Authorities had speculated that part of the reason for that failure was because the students had been asked to deal with a language and with concepts which were unfamiliar to them. With this concern in mind, a bilingual/bicultural pilot project was begun which aimed to better prepare the Karaja Amerindians (a minority group located in Central Brazil) for positive interaction with the Portugese language. Prospective teachers were selected from among bilingual candidates within the Karaja and they were trained in pedagogy through a three-year course which included both theory and practical teaching. The instructional approach retained the oral tradition of the Karaja people and specific reading materials were also prepared, which were culturally relevant and syntactically correct.

For the first two years of school the Karaja children were taught almost exclusively through the medium of their mother tongue. Introduction of Portuguese was gradual and did not occur until the third year of schooling, after the children had become literate in their mother tongue. At the end of the third year the children moved into the national language instruction and used the curriculum and books required by the state.

As yet, this program has not been subjected to any formal evaluation but it did receive the endorsement of the larger school system which absorbed the students once they completed their three years in the project. It has been noted that academically these Karaja children did as well as their national classmates, something that had not been true before the advent of the pilot project.

Canada. Although officially multicultural as of 1971, Canadian schools have offered sparse educational opportunities wherein mother tongue instruction has been integrated into the regular classroom to create a true program of bilingual education. Much more frequently, mother tongue instruction is encountered in this country as a supplementary or extra-curricular activity (Cummins, 1991; Rincker, 1991; Beyon & Tookey, 1991; Swain & Lapkin, 1991; McAndrew, 1991). However, the literature does reveal a few examples that feature the regular classroom

integration of instruction in both the mother tongue and the majority language.

The General Mercer Public School project was an experiment in bilingual education implemented in 1973 in the city of Toronto (Grande, 1975). It was born out of the initiative of a single public school teacher whose observations led him to conclude that immigrant children ought to be introduced to the formal education system through the medium of their mother tongue. The Italian Kindergarten children who took part in the project were taught in their native tongue for two years. Grande (1975) describes the transitional program as one which relied heavily on oral instruction, Italian books, films and records and one in which the Italian language was used as a bridge to the English language which the children would be formally expected to take on in Grade 2. Findings from a planned program evaluation which used the Peabody Picture Vocabulary Test to measure verbal learning indicated that despite the fact that the students were exposed to Italian for most of the time, they were also progressing at a satisfactory rate in the English language.

A second example of bilingual education in Canada is described by Cummins & Mulcahy (1978). They report that a Ukrainian-English bilingual program has existed in Edmonton, Alberta since 1972 and continues to be available to Ukrainian children throughout their elementary years beginning in Kindergarten. The paradigm calls for Ukrainian to be the medium

of instruction for 50% of the regular school day. Program evaluation by the school boards has been favourable, indicating no detrimental effects to children's English language skills or academic attainment.

In contrast to the two foregoing examples, in most Canadian cities, mother tongue instruction (MTI) is available but only as a supplementary or extra-curricular activity which is not integrated into the child's school day. In the province of Québec, this MTI goes by the acronym PELO (programme d'enseignement de langue d'origine), in the remaining provinces it is known as Heritage Language Program (McAndrew, 1991). PELO and Heritage Language programs, which were first made available by the various Ministries of Education about twenty years ago, are widespread (Danesi, 1991). Response to them has been generally favourable. Survey research which sought the opinions of Toronto teachers in whose schools the Heritage Language Program was offered (these teachers did not teach in the program however) indicated that the vast majority of teachers agreed that instruction in the mother tongue not only did not create problems for ethnic children but, if given enough time, it seemed to be beneficial for them (Danesi, 1991). A more extensive series of questionnaires by McAndrew & Gress-Azzam (1987) asked school principals, regular teachers, PELO teachers, parents of PELO students and PELO students in the greater Montréal area for their views on the PELO program. Findings across all five groups of

participants revealed a high level of satisfaction with respect to the services offered by the PELO programs. In particular, the students indicated a positive attitude towards attendance.

It may be concluded therefore that Canadian research lends support to the value of mother tongue instruction, particularly as it exists in supplementary rather than integrated programs.

Language Patterns

As noted in the introductory remarks of the literature survey, the present investigation has two primary objectives: the first aim (for which pertinent literature has already been reviewed) is to examine the influence of mother tongue instruction on the second language performance of minority language children; the second aim is to explore the language usage of these children in particular social situations. To date, research in the area of minority children's language usage in different community contexts has not been abundant even though several authors (Willig, 1985; McLaughlin, 1985; Cziko & Troike, 1984) have pointed out the importance of extra-curricular language use as a mediating variable which might have a determining effect on research results in second language acquisition.

Most of the research on language usage has been conducted in Canada and Australia but a single study was also carried out in Sweden by Skutnabb-Kangas & Toukomaa (1979). Within the

context of a larger study, they used informal interviews with adults to better understand which languages were being used at home by first generation Finnish immigrants living in Sweden. Results revealed that for most of them the home language was Finnish. The few adults who indicated that they spoke Swedish at home qualified their response by stating that they did so because Swedish teachers and medical doctors had told them that this was a means of helping their children to learn Swedish. However, these authors also noted that, increasingly, Finnish parents have questioned the advice of the so-called authorities and they have slowly reverted back to using their mother tongue at home.

An early study by Smolicz & Harris (1977) concentrated on the language use of second generation Polish students who were in secondary school and university in Australia. Overall, these authors found that the active ethnic linguistic experience was often nonexistent for these students. When Polish was spoken, it was limited to conversation with ethnic elders (parents, relatives, parents' ethnic friends), while conversation with ethnic peers (siblings, cousins, friends) was almost invariably conducted in English. Smolicz & Harris concluded that for the second generation, the mother tongue had become a language related to age and local ethnic parochialism. Furthermore, they predicted that the pattern they had observed spelled the extinction of the Polish tongue by the third and fourth generation.

The language usage of Italian immigrant children has been the focus of investigations both in Canada and Australia. In Toronto, Swain & Lapkin (1991) studied elementary level Italian children (although it is not stated, these children appear to be second generation). Results of the short questionnaire they administered to their subjects indicated that between child and at least one parent, Italian was often used; between child and grandparents, Italian was often used; between child and siblings, Italian was rarely used. More detailed but very similar findings were reported by Bhatnagar (1980) with respect to 273 Italian immigrant children (again it is not clear, but they appear to be second generation) living in Montréal. The findings revealed that about one-half of the children in the study spoke their mother tongue with parents; two-thirds of them used a Canadian language (either French or English) exclusively when they spoke with siblings; a large proportion (.70) used a Canadian language to interact with friends.

The languages used by Italian immigrant children (predominantly second generation) living in Australia follow closely the patterns just described for the children in Toronto and in Montréal. In summarizing the results of five research projects conducted in South Australian secondary schools, Smolicz (1983) documented that these adolescents continued to speak Italian with ethnic elders; they spoke a mixture of Italian, Italian dialect and English with parents; they spoke English

almost exclusively with peers and siblings. The authors also noted that while there was a positive desire on the part of many students to maintain and develop their Italian language, their actual usage of the mother tongue did not match their enthusiasm.

The language patterns of Lebanese immigrant children living in Australia were found to be very similar to the patterns reported for the Italian children in Australia and Canada. Taft & Cahill (1989) studied 62 ten and eleven year old children whose parents had been in Australia for an average of 10 years. The children were interviewed on a structured questionnaire covering various aspects of their language usage. Results indicated that while English was clearly the dominant language for these Lebanese children, they appeared to obtain plenty of practice in their mother tongue through speaking with parents, and, in some cases with grandparents. However, with their siblings and friends they showed a considerable preference for speaking English.

To sum up, it may be concluded that the investigations into the language patterns of minority language children share three characteristics: first, most of the studies seem to have involved second generation children; secondly, each of them has looked at subjects of a single linguistic background; thirdly, the reported findings are almost in total synchrony with respect to the languages spoken by the children with their parents, elders and peers.

Statement of the Problem

The literature review identifies a key issue which must be addressed before any attempt is made to investigate the influence of mother tongue instruction on the second language performance of minority language children. That issue concerns appropriate research design and corresponding quantitative methods for data analysis. It has been shown that even as mother tongue instruction was being endorsed across numerous and diverse studies, the research methods being used to conduct the investigations were being called into question (Cummins, 1979; Willig, 1985; McLaughlin, 1985). Several problems were isolated, chief among them was the inappropriate, but widespread practice of forming experimental and control groups which could not be adequately matched in terms of confounding variables and which consequently led to flawed research.

The recommended alternative to matching is the random assignment of subjects to groups (Willig, 1985; Campbell & Stanley, 1963). However, the fact that the bulk of the literature available for review describes studies which do not randomly assign subjects underlines the difficulty involved in conducting research which incorporates random assignment. In the majority of cases, children are found in specific programs because policy makers or parents have chosen those programs for them and researchers are then confined to conduct studies which use ex post facto groups. As a consequence of such a restriction,

researchers have attempted to match the groups on variables which might influence the results.

Given that matching of groups has been called into question, and given that the author would also be restricted to ex post facto groups, it is the aim of the present investigation to use a multivariate approach in order to study the variable mother tongue instruction in the education of minority language children. As a result, the linguistic performance of these children will be examined through the use of multiple regression analysis with ungrouped data and mother tongue instruction will be one of several predictor variables.

The inclusion of MTI as a predictor variable is well justified based on the survey of the literature. Within and across different countries, the numerous models of bilingual education, which incorporated the mother tongue element into the education of minority language children, are quite diverse. This substantial variance, rather than diminishing the case for bilingual education affirms that a single format has yet to receive unequivocal endorsement. And while it is true that some of the research was flawed, some sound research was also reviewed which demonstrated the positive effect of mother tongue instruction for minority language children. Therefore, based on the strength of previous investigations which have consistently demonstrated the positiveness of MTI, even when exposure time has been short,

it is expected that MTI will significantly predict second language performance.

At this time, a point of clarification is in order with respect to the variable MTI as it will be used in the present investigation. As was noted in the literature review, Canadian schools have historically offered few opportunities for bilingual education wherein MTI has been integrated into the regular school day. Much more prevalent has been the supplementary or extra-curricular type of MTI. In the province of Québec, MTI is accessible to minority language children in one of two ways--PELO (Programme d'enseignement de langue d'origine) and through local community or cultural centers. Both types of classes amount to approximately two and one-half to three hours of instruction time per week in oral and written language.

The PELO classes are under the auspices of the Ministry of Education and are taught in some schools either after school or at lunchtime. Responsibility for coordination of PELO classes rests with the participating School Boards and no fee is charged to the students. In contrast, community center classes, which are overseen by community leaders and interested parents, carry a nominal fee for consumable materials. Community center classes fall within the jurisdiction of the Minister of Immigration and they are held either on a Saturday or Sunday morning.

Thus, as used in the present study, mother tongue

instruction, refers to this supplementary or extra-curricular instruction (both the PELO type and the community center type) rather than any formal language lessons which are part of the curriculum.

In addition to establishing the importance of MTI for minority language children, the literature survey also provides insight into other predictor variables which might influence the language performance of these children. Self-esteem is shown to be positively related to second language acquisition, particularly so with respect to oral expression (Willig, 1985; Heyde, 1987). In addition, it can be determined from Willig's meta-analysis (1985) and Rotberg's research (1984) that the socioeconomic status of the children under investigation should also be taken into account. Intuitively it appears probable that the children's length of residence in the host country will also influence their language performance because the longer a child is in the host country, the greater the exposure time to the new language and the greater the likelihood that there is a decrease in cultural dissonance. Thus, it is expected that all three variables, self-esteem, socioeconomic status and length of residence will significantly predict second language performance.

The literature review also isolates intelligence or aptitude as an influential variable which ought to be considered when investigating second language proficiency (Willig, 1985). However, it is important here to distinguish between oral and

written proficiency. Both Genesee (1987) and Ekstrand (cited in Cummins, 1981) have reported that I.Q. is strongly related to written, academic language skills but either unrelated or minimally correlated with oral language skills. Based on those findings, it is expected that a measure of intellectual maturity will not predict the oral comprehension and oral production outcome measures being used in the present investigation. However, it is valuable to include such a measure in the study in order to establish the normalcy of the sample.

With respect to the second purpose of this investigation (the examination of children's language patterns) the literature survey reveals that most of the studies have been conducted on second generation children of a single linguistic background. The present study is concerned with extending knowledge in this area by establishing the language patterns of first generation immigrant children of varied linguistic backgrounds. As such, it is expected that, because first generation children have closer ties to their homeland, culture and language, the mother tongue will play a more prominent role in their overall language usage.

CHAPTER II

Method

Measures and Materials

French Second Language Proficiency Tests. The tests used to assess linguistic competence in French are developmental psycholinguistic tests designed by Dr. Florence Stevens (Concordia University) to measure both the oral comprehension and the oral expression of children for whom French is a second language. Test instruments have been developed for all grade levels of elementary school (Kindergarten to grade 6) and high school (Secondary 1 to 5). The appropriate test at each level takes approximately 15 minutes and is administered to the children individually. Their responses to the comprehension questions are recorded on an answer sheet and the utterances produced are tape recorded and later graded according to established criteria. A copy of test objectives and sample score sheets can be found in Appendix A.

Categories in the tests are consistent throughout all levels. These categories include: comprehension of vocabulary, syntax and discourse; expression of vocabulary, syntax and discourse. The items in each category vary according to grade level to take into account the different interests and stages of development of

each group, as well as the language components (vocabulary and structures) they would have been exposed to in the classroom.

For Kindergarten and Grade 1, language is tested mostly by means of concrete objects (a few pictures are used) and the examiner presents the toys in a very informal way. For Grade 2 through Secondary 5, two loose-leaf binders are used: the examiner asks questions listed in the Administration Manual, while the student responds by referring to the pictures or the text in the Student's Manual.

The test instruments were originally field-tested on a small sample of children in French Immersion in the province of Québec and they were subsequently used in several research studies in Montréal and Toronto to assess French second language proficiency. To date however, validity and reliability measures for the tests have not been formally established, a factor which will be taken into consideration when interpreting the findings of the present investigation.

Behavioral Academic Self-Esteem Rating Scale. The self-esteem of each subject was assessed by a translated version of the Behavioral Academic Self-Esteem Rating Scale (BASE, Coopersmith and Gilberts, 1982). The BASE consists of 16 third-person declarative statements that are responded to by teachers who have observed a child's classroom behaviours for a minimum of six weeks on a daily basis. Teachers rate how frequently a

child behaves in a particular way, using a five-point scale which ranges from 1 (never) to 5 (always).

The BASE was normed on 4,000 elementary school children (Kindergarten to grade eight) in the United States who came from families ranging in socioeconomic status from low to upper-middle class. The majority of the children were regular-education students but the sample also included children from both extremes of the distribution of school achievers (i.e., gifted students and educationally handicapped students). Ninety percent of the students were rated by regular classroom teachers, and the remaining ten percent by aides and remedial/special education teachers.

The general reliability of scales such as the BASE, which ask a teacher to rate a child's self-esteem, has been established by Lindholm (1990) who has shown teacher ratings of students' overall self-esteem and scholastic competence to be significantly and positively correlated with the students' self rating on those same measures.

The specific reliability of the BASE was established by measures of internal consistency and interrater reliability. Internal consistency coefficients were based on correlations of individual items with the total score. All correlations of single items with the total score were significant at the .001 level and ranged from a low of .37 to a high of .76 with a mean z transformation correlation of .61. Intercorrelations of factor

scores with the total score range from .71 to .94 with means of .83 for boys and .84 for girls. Interrater reliability, reported at .71, was computed on 216 students by having different teachers rate the same children.

Coopersmith & Gilberts (1982) established the validity of the BASE according to its relationship with a significant criterion, students' level of achievement on the Comprehensive Test of Basic Skills (CTBS), a norm-referenced academic achievement test. With a sample of 126 children it was found that BASE ratings were moderately strong predictors of academic achievement scores. The CTBS composite scores correlated approximately .50 with the total BASE scores. Some degree of face validity for this measure of self-esteem can also be accorded, given that it is theoretically founded on Coopersmith's well-established theory of self-esteem (1967).

Since the 29 teachers who participated in the present research were all French-speaking, it was necessary to translate the BASE, originally produced in English, into the French language. The translation was the work of a professional translator who has background experience both as a teacher and as a researcher. The final product was independently reviewed and verified by a French teacher who did not take part in the project. A copy of the original scale and the translated version can be seen in Appendix B.

Four Factor Index of Social Status. The children's socioeconomic status (SES) was determined by the Four Factor Index of Social Status developed by Hollingshead (1975). This index is an updated version of the Hollingshead Two Factor Index of Social Position developed in 1957 and takes into consideration the fact that social status is a multidimensional concept. The four factors used in the calculation of SES are: occupation (scored on a nine-point scale), education (scored on a seven-point scale), sex, and marital status. A simple mathematical equation is set up which incorporates all four factors. The solution to the equation, which can range from a low of 8 to a high of 66, becomes the numerical estimate of SES. It is assumed that the higher the score of a family or nuclear unit, the higher the status its members are accorded by other members of society. Appendix C contains a copy of the seven-point scale for educational factor, a sample of the nine-point scale for occupational factor, and the equation used to compute SES.

To validate the point-scales used for education and occupation, Hollingshead analyzed data gathered in the United States Census in 1970. The analysis revealed a definite gradient between the years of school completed and the score assigned to a group of similar occupations. The correlation between median years of school completed and occupational score groups was found to be .84 for males ($p < .001$) and .85 for females ($p < .001$). As a criterion against which the scores assigned to occupations

and occupational groups could be tested, Hollingshead compared the scores for occupational groups as established in the Four Factor Index of Social Status with the prestige scores developed by the National Opinion Research Center (NORC), an institution which had been studying evaluation of occupations and occupational groups for over 30 years. The results indicated that the occupational titles scored by the present index and those scored by NORC were highly correlated. The Pearson Product Moment Correlation between the nine-point occupational scale as developed in the Four Factor Index of Social Status and the NORC prestige scores was .927. Further support for the validity of the Hollingshead scale can be found in Mueller and Parcel (1981) who report that the Four Factor Index of Social Status is highly correlated with other common methods of SES determination, such as the Home Prestige Scale.

Goodenough-Harris Drawing Test. The intellectual maturity of each subject was assessed by the Goodenough-Harris Drawing Test (Harris, 1963). This is a culture-free, language-free test which considers children's concepts of the human figure to be an index of their intellectual and conceptual maturity (Goodenough, 1926). Because most children like to draw, The Drawing Test is recommended as a good introduction to test situations where children will be asked to perform increasingly complex tasks (Harris, 1963). It may be administered to children either

individually or in groups, using essentially the same instructions (see Appendix D for a copy). Each child is asked to draw a picture of a person (either gender is acceptable) using a plain lead pencil and a white 8" x 10" sheet of paper. No time limit is imposed. The figure produced is scored using a comprehensive and uniform set of 73 requirements when the picture depicts a male and a similar set of 71 requirements when the picture depicts a female. The calculated raw score is then converted to a standard score (mean of 100 and standard deviation of 15) which expresses the child's relative standing on the test in relation to his/her own age group and sex group.

Harris (1963) normed and standardized the Drawing Test on a total sample of 2,975 urban and rural children from all the major geographic areas of the United States. Approximately 300 children, whose families represented a substantial range of occupational status, were tested at each grade level from Kindergarten through the ninth grade.

The reliability of the Drawing Test has been established through interrater and test-retest consistency. Harris (1963) reports that the intercorrelations between independent scorers, even when their training has been minimal, ranges from the low .80's to as high as .96, with values commonly exceeding .90. Test-retest consistency, as derived from a number of studies (Harris, 1963), indicate correlations ranging from .60 to .70 between the scores of children's drawings separated by a time

interval of as much as three months. To further establish test-retest reliability Harris administered the Drawing Test on each of ten consecutive school days to four classes of Kindergarten children. A subsequent analysis of variance procedure revealed that although there were significant differences between the performances of boys and girls, and between the individual children, the portion of the total variance accounted for by variation within the sequence of ten drawings (intra-child variation) was insignificant.

The author of the Drawing Test demonstrates the validity of his test instrument by reporting on the effect of special training and experience on drawing-test performance, and by relating the scale statistically to other measures. Harris (1963) conducted a study in six first and second grades of two schools in order to assess the influence of the examiner in the test situation. In two examinations scheduled one week apart, he and the classroom teacher administered the Drawing Test according to the same instructions. The results show that the person of the administrator had very little influence on either the mean score achieved by the class or on the rank order of children's scores within the class. In none of the classes was the difference between the two administrations statistically significant. The correlations reveal no trend or pattern which would indicate a systematic effect attributable to the outside examiner or the familiar classroom teacher.

Harris (1963) also provides substantial evidence to support the position that school art training has no effect on test performance, and in fact, the method of scoring the drawing is independent of its artistic qualities. Numerous comparisons of the work of children who had art training with that of children who had no such training showed that there was no consistent difference between the performance of the two groups on the Drawing Test.

Finally, the Goodenough-Harris Drawing Test has been shown to be considerably correlated with other measures of intellectual maturity, notably the Stanford-Binet and the Wechsler Intelligence Scale for Children (Harris, 1963). Appendix D contains a comprehensive presentation of these correlations broken down according to sub-scales.

Structured Interview. A 15-question interview was developed by the author primarily to tap the children's language use in particular social situations outside the classroom. Previous investigations had been restricted to establishing the language patterns of minority language children as they communicated with elders and other children (Bhatnagar, 1980; Smolicz, 1983; Taft & Cahill, 1989). With the aim of broadening the range of knowledge, the present interview contained open-ended questions that asked the children which language(s) they spoke at home, with parents, with siblings, with grandparents,

with aunts and uncles, with cousins, with friends, when watching television, when playing at the park, when shopping in food stores, and when shopping in other stores. In addition, the last four questions of the interview were concerned with obtaining demographic information that related to the children's country of birth, their date of entry into Canada, whether or not they followed mother tongue instruction and, if so, when and where. A sample form of the interview can be seen in Appendix E.

Schools

Four Montréal area French elementary schools, representing three School Boards, participated in this study. In order to maintain the confidentiality which was assured to the school boards, individual schools and the parents of participating children, the schools will be identified and labelled in terms of their geographical location. Information gathered through observation over numerous days spent in each of the schools and through formal and informal sessions with the school board officials, principals, vice-principals and teachers, has been compiled to produce the following profiles of the individual schools.

School Northeast. School Northeast is located in a low socioeconomic neighbourhood in the northeast sector of the city. Of the 550 pupils enrolled at this school, approximately 85% are

minority language children who come mainly from Laos, Cambodia, Vietnam, Thailand, and Central America.

A high degree of structure, discipline and routine characterize the physical and learning environment of School Northeast. With the exception of the Kindergarten classes, all classrooms are arranged in neat rows and in some cases the desks are bolted to the floor. At School Northeast, one can walk up and down the corridor and hear predominantly the teachers' voices or that of a single student responding to or asking a question. With the noted exception of a child going to the washroom, students, even those at the grade 6 level, are not permitted to walk the hallways unattended. When changing classrooms or going to the playground or gymnasium, the teacher leads his/her pupils who are organized into two straight rows. Talking during these changeovers is not tolerated and on three separate occasions, representing three different classes, the author was present as an entire class of children was punished for the talking of a few in the group. The uniform punishment imposed by the teachers consisted of returning to the classroom and doing work rather than going out for recess.

The element of control that was observed within the school was also present at the administrative level in the principal's office. This research project was approved only after exhaustive interviews and, then, with the clear understanding that the contact time with each child was not to exceed 20 minutes and

preferably should be restricted to 15 minutes. In addition, children could not be withdrawn from the class for testing; they could meet with the author only during recess or after school.

School Northeast is characterized not only by its structured and disciplined environment but also by support programs which are firmly in place and which are expressly aimed at providing assistance to minority language children and their families. A perennial problem for immigrant children has been the inability of the parents of these children to communicate with the school and to act on that communication for the benefit of the student (Ure, 1981). School Northeast has effectively dealt with this problem by hiring interpreters to be on duty at the school on a regular basis. Interpreters, representing each of the major linguistic groups in the school, rotate duty days according to an established schedule which is communicated to the parents. Consequently, parents can see the interpreters whenever the need arises. In addition, interpreters are in regular contact with the parents, most often verbally due to a high level of illiteracy among the parents in this area, and they are present during parent-teacher interviews when their presence is requested. They also help parents to understand the many notices and forms which are sent home with the children as well as assist them in setting up appointments with other support personnel (i.e., school psychologist, speech therapist, and special education teachers). This service is entirely free of charge.

Also available at School Northeast is an after-school study program known as "Etude". Children funnelled into "Etude" are those who are performing below standard or experiencing difficulties in any of the academic subjects. Certified teachers (not regular staff members) are hired to direct and help students with their homework. The principal of School Northeast explained that this program was initiated when it became clear to her that the majority of the parents in the school did not speak, read or write the French language and were therefore in no position to assist their children with daily homework. A child attends "Etude" on a need basis and there is no charge for attendance.

At School Northeast, minority language children are encouraged to enroll in the mother tongue instruction classes which are held in the school three afternoons a week and which are free of charge. These mother tongue instruction classes fall under the auspices of PELO (Programme d'enseignement de langue d'origine). PELO teachers and the curriculum they teach are coordinated at the school board level by the classe d'accueil consultant. At School Northeast, PELO classes are available in Chinese, Vietnamese, Laotian, Cambodian and Spanish--the languages spoken by the majority of the immigrant children in the school.

A final example of support for children at School Northeast is evident in the daily food supplement (e.g., muffins, sandwiches,

fruit, raw vegetables, etc.) which every child in the school receives, compliments of the Ministry of Education.

School South. Located in a middle to high socioeconomic area on the south shore, School South has an enrollment of approximately 560 pupils, of which 25% are minority language children. The families of these children have emigrated predominantly from Hong Kong, Taiwan and the Middle East countries of Lebanon, Kuwait and Saudi Arabia.

Every grade level at School South is physically arranged as an open-area classroom or pod with same grade levels occupying adjacent space and sharing facilities and specialty centers. Desk arrangement within pods varies considerably: some are ordered according to perfectly aligned rows; others have small groupings of four desks facing each other; others are loosely arranged with no discernible pattern. Almost in the middle of the school there is a large stage which is often in use for rehearsals, plays, and class presentations. Nearly every pod or classroom is exposed, to varying degrees, to whatever is happening on this central stage. On one occasion, the two grade 6 classes were taking a School Board Mathematics Test while the Kindergarten children rehearsed their end-of-the-year musical.

School South has the usual support systems in place such as remedial help through a withdrawal program, visiting school nurse and access to specialists where deemed necessary. There

are however no specific support programs for minority language children such as PELO classes, the presence of interpreters, or extra-curricular help for struggling students and parents.

School Northwest. A school with an enrollment of approximately 515 children, of which 60% are immigrant children, School Northwest is located in the northwest sector of the city. The minority language children attending this school have come almost exclusively from the Middle Eastern countries of Lebanon, Qatar, Iran, Syria, Israel, and Saudi Arabia.

School Northwest is structured as a traditional closed-classroom school. Within classrooms, the arrangements vary according to the individual teachers, although few of the classrooms are arranged in definite rows. Both alone and in groups, children are free to walk the hallways without supervision.

School Northwest is well equipped with the kinds of support systems that are common to most schools, such as, remedial withdrawal programs and access to specialists, but there are no programs (e.g., PELO classes, interpreters, extra-curricular assistance) to specifically assist minority language children in the school. It must be noted however that at the time of this research project, the administration at School Northwest was seriously looking into the possibility of providing some mother tongue instruction for its minority language children through the

efforts of some volunteer parents. The instruction was to be in the Arabic language and there was to be a charge for the service.

School West. School West is situated on the West Island in a middle to high socioeconomic district. The school is at capacity with a total enrollment of 534 pupils, of which 30% are immigrant children. These children represent many and various countries of birth including Hong Kong, Turkey, Poland, Libya and the Middle East.

The classroom layout at School West is the typical closed-classroom arrangement. Within classrooms, desks are casually arranged according to various configurations. The spacious gymnasium is centrally located and on several occasions the noise radiating from it could be heard throughout the school. Also adding to the noise level is the fact that children freely roam the hallways even as they bounce basketballs and volleyballs.

At School West there are no PELO classes or other types of mother tongue instruction, no provision for interpreters or extra-curricular help for minority language children. However, one does find some support in the form of remedial classes and access to specialists.

Sample

One hundred and thirty-eight children, 78 girls and 60 boys participated in this investigation. At the time of testing, they

ranged in age from 8 years to 13 years. All subjects were first generation immigrant children; 131 of them were born outside Canada and the other 7 were born within a few months of the parents' arrival to Canada. The distribution of children according to schools and grade levels can be seen in Table 1.

Thirty-six different countries of birth and 18 different mother tongues are represented in the sample. The countries of birth are Cambodia, Chile, China, Colombia, El Salvador, Guatemala, Honduras, Hong Kong, India, Iran, Iraq, Israel, Kenya, Kuwait, Laos, Lebanon, Libya, Mauritius, Mexico, Norway, Pakistan, Poland, Qatar, Saudi Arabia, Sri Lanka, Surinam, Syria, Taiwan, Thailand, Turkey, United Arab Emirates, Uruguay, U.S.A., Vietnam, Zaire, and Zambia. The represented mother tongues are Amharic, Arabic, Armenian, Cambodian, Chinese, Creole, Dutch, English, Hebrew, Hindi, Iranian, Laotian, Polish, Spanish, Tamil, Turkish, Urdu, and Vietnamese.

Procedures

Locating the Schools and the Subjects. The thesis supervisor contacted various school principals and directors of education by telephone in order to explain the nature of the investigation and to solicit their cooperation. Names of five interested parties were then given to the author who followed up the initial contact with another call aimed at establishing liaison and determining whether the principals and directors would be

Table 1

Distribution of Sample according to Schools and Grade Levels

Schools					
Grade	Northeast	South	Northwest	West	Total
4	34	7	10	4	55
5	28	8	5	4	45
6	19	7	6	6	38
Total	81	22	21	14	138

willing to participate in the study. A follow-up explanatory letter, a copy of which may be found in Appendix F, was then sent to them

After several meetings and interviews with the author, officials at each of the five schools approved the project with the provision that confidentiality would be maintained and that they would receive a copy of the results.

It will be noted that although five schools originally confirmed their willingness to participate in the research project only four schools actually took part in the study. After a preliminary scan of the population of children at each of the schools, it became evident that one of the schools was rich in third and fourth generation immigrants but had few first generation immigrant children. By mutual agreement of the author and the school board administrator, that school was dropped from the study.

Within each school, locating children who would fit the criteria of the study was achieved in one of two ways. At School Northeast the principal had access to computer spreadsheets, formatted by class, which indicated each pupil's mother tongue and country of birth. From that information, the author was able to deduce which of the children fit the initial criteria of the study and could therefore be considered prospective subjects for the investigation. At the other three schools no similar spreadsheet or information was available. Therefore the author

prepared a simple questionnaire which asked each teacher to list those children in his/her class who spoke a third language (other than French or English) and to further indicate whether the child took mother tongue instruction and, if so, when. A copy of the questionnaire can be found in Appendix G. The principals at School South, School Northwest and School West delivered the questionnaires to the grade 4, grade 5, and grade 6 teachers. The completed questionnaires were returned to the author.

Once the children who fit the criteria were identified at each of the four schools, personally addressed bilingual letters of explanation and consent forms for parents, prepared by the author, were delivered to the individual principals for distribution to students (Appendix H). Consent forms were to be returned directly to the school where they were kept for the author.

Examination of Academic Files. The author had received parental permission via the consent forms to examine the academic file of each child who was to be a participant in the study. At all four schools, this examination occurred in a quiet corner of the secretary's office or an adjacent room where the files were kept and made available. The intent of this investigation of files was twofold. First, it was meant to create a personal profile of each child which would be used to add to and cross-validate any earlier information which had been received

through the teacher questionnaire, the parental consent forms and the computer spreadsheet. To this end, the author recorded each child's age, gender, phone number, grade level, country of birth, date of entry into Canada, mother tongue, presence/absence/type of mother tongue instruction and the parents' occupation and years of scolarity, whenever this information was also available. Secondly, each child's report card for the 1990-91 academic year was copied by hand at School Northeast and photocopied at the other three schools. Originally it had been hoped that some of this academic information could be analyzed as another measure of the children's performance. However, it later became evident that because the four schools fell under the jurisdiction of three different school boards, three very diverse systems of grading were in use and this factor mitigated against the use of the information collected.

Goodenough-Harris Drawing Test. The Drawing Test was administered to the children in groups approximately one week before the linguistic testing took place. In some cases the test was given just prior to the linguistic test, if a child had been absent from school on the day he/she had been scheduled for the group test.

In order to accommodate the 138 children who took part in the investigation, there were several sittings at each of the four schools and the test was always administered by the author. The

size of the groups varied according to logistics of organization and student availability. With the collaboration of the principals and teachers, children were gathered in a classroom during recess.

To establish some rapport with the children, the author introduced herself as a fellow student and gave a brief explanation of the Drawing Test and the linguistic test which the children would be asked to take at a later date. At no time was the actual word test used. Instead, the Drawing Test was presented simply as a request for a drawing and the linguistic test was presented as an opportunity to look through and talk about an illustrated book. The author underlined to the children that any activity they engaged in for her was unrelated to school grades and would not even be reported to their teachers.

Following the introductory remarks, each child was handed a blank drawing sheet which already had his/her name printed on it. The author then gave out the precise instructions for the drawing (Appendix D).

The scoring of the test occurred after all testing had been completed at all four schools. The Drawing Test can be scored by any person willing to follow instructions faithfully (Harris, 1963). As recommended, the author studied the accepted scoring for the illustrative drawings in the manual and subsequently scored the 12 Man drawings and 12 Woman drawings presented for practice. She then scored the 138 drawings done by the children

in the study. All the Woman drawings across the four schools were scored first, followed by all the Man drawings.

French Comprehension and French Expression Test. The French test (comprehension and expression) was administered to all 138 children in the spring of 1991 over a period of approximately five weeks. All testing was done by the author who, prior to the actual testing, familiarized herself with the requirements of the tests at each of the three grade levels. An intensive practice session was held with Dr. Stevens who advised on specific aspects of test administration, technique and scoring. A small pilot project was also carried out which involved the complete testing of five children who did not take part in the actual study.

The author, in consultation with the participating teachers, scheduled each child for an individual testing session requiring approximately 20 to 25 minutes. Testing occurred during class time, during recess and even after school depending on the students' availability and on the willingness of individual administrators to permit the children to be withdrawn from class.

In all four schools the author was provided with a quiet room or space where she could meet the children. Prior to receiving the children, the test area was set up with the tape recorder and the appropriate grade level materials. Because the

children had already met the author during the Drawing Test, rapport was easily established after several minutes of conversation, during which the child was reminded that the activity he/she was about to undertake would have no bearing on academic grades. No child ever refused to participate. During the testing the author encouraged the children, helped them in the examples which preceded each new phase of the test, responded enthusiastically to the responses given, and liberally reinforced the children for their efforts and answers. At no time was a child corrected or admonished for an inaccurate response. All responses were duly recorded on the answer sheets and on the tape recorder. All of the children completed the test.

The tests were scored after all testing had been completed. The author listened to each child's taped session several times in order to grade the expression portion of the test. Comprehension was easily scored from the individual answer sheets and from listening to the recordings.

The Interviews. Following the French comprehension and French expression tests each child was complimented on how well he/she spoke the French language and was then asked which language he/she spoke at home. That question served to introduce the structured interview phase of the session. Answers were taped and were also recorded by hand. Children were generally comfortable with the questions asked, forthcoming with

responses, and often elaborated beyond the scope of the original query.

Each taped interview was reviewed and analyzed by the author. Two types of data were collected from the interview session: information on language patterns and demographic information. The data on language patterns related to the languages spoken by the children in particular social situations and they were analyzed by tallying obtained frequencies for each of the situations according to six mutually exclusive language categories. These categories were: mother tongue; French; English; mother tongue & French combination; mother tongue & English combination; French & English combination.

The second type of information procured from the interview related to details about the child's birthplace, the number of years he/she had been residing in Canada and his/her exposure to mother tongue instruction, if any. These demographic data were used as a means of cross-validating earlier information that had been obtained through the academic files and the parental consent forms. There was remarkable agreement among the different sources but where discrepancies were noted, the parental information was deemed to be most reliable and was used in the research project.

Self-esteem Scale (BASE). Each of the 29 teachers who were teaching children, who were subjects in the study, had been

initially advised by the school principal that they would be asked to fill out a short rating scale for each of the participants. After all testing had concluded, the author prepared and delivered to each teacher a package containing scoring sheets and written instructions to be followed when filling out the rating scale (Appendix B). She went over the format of the scale with them and she informed them that the completed sheets would be collected in two weeks time. All agreed that was sufficient time in which to finish the task. While two of the teachers expressed concern over the extra work they were being asked to do, all 29 of them did complete all the forms which they had been given.

The 138 BASE scales were scored by hand by the author.

SES Information. At School Northeast, in all but two cases, the information required for calculating SES (parental occupations and years of schooling) was available in the children's academic files. The academic files kept at the other three schools did not contain this information. The author therefore contacted the parents of the participating children from those schools by telephone after all the data collection had been completed. With their children often acting as interpreters, the parents were told that some additional information was required for the investigation and they were assured of confidentiality. While some parents asked why that sort of

personal information was needed, none refused to answer. A few families could not be reached.

CHAPTER III

Results

This investigation had two primary objectives. The first was to examine the influence of supplementary or extra-curricular mother tongue instruction (and other predictor variables) on the second language performance of minority language children, using a multivariate approach. The outcome measures of the multiple regression analysis were oral French comprehension and oral French expression, as measured by the French Second Language Proficiency Tests. The predictor variables were: the child's number of years of mother tongue instruction, information obtained and cross-validated through academic files, parental consent forms and the structured interview; the child's length of residence in the host country, also obtained and cross-validated through academic files, parental consent forms and the structured interview; socioeconomic level, as measured by the Four Factor Index of Social Status (Hollingshead, 1975), self-esteem, as measured by the Behavioral Academic Self-Esteem Rating Scale (Coopersmith & Gilberts, 1982); intellectual maturity, as measured by the Goodenough-Harris Drawing Test (Harris, 1963). The results of the multiple regression analysis will be presented immediately following the presentation of descriptive statistics.

The second objective of the study was to add to the present knowledge in the area of the languages spoken by minority children in particular social situations. The structured interview (developed by the author) was used to tap these language patterns and the results compiled from those interviews will be presented at the end of this chapter.

Prior to analysis, the complete data file was examined through various SPSS^X programs for accuracy of entry, missing values, and assumptions of univariate and multivariate statistics. Missing values posed a problem in the case of only one variable, socioeconomic status. For 10 of the original 138 children in the study, a SES score could not be computed because the necessary information was not available in the academic file and it could not be obtained from the parents. In each of the 10 cases the group mean for SES (according to school attended) was inserted for the missing value. Tabachnick and Fidell (1989) recommend this solution in cases such as the present one where relatively few missing values are scattered randomly throughout a large sample.

Of the 138 children who took part in the study, one case with extremely low scores in French comprehension and French expression was identified as an outlier through an examination of the residuals. Follow-up discussions with the school vice-principal revealed that this child had speech difficulties which

warranted therapy both during and outside school hours. This single outlier was deleted, leaving 137 cases for analysis.

Descriptive Statistics

The range, mean and standard deviation for each of the outcome and predictor variables are shown in Table 2.

On the test of intellectual maturity, according to Harris (1963), the category of average is bound by a lower limit of 85 and an upper limit of 115. The range of scores for the sample in the present research fell one point below the lower limit and 22 points above the upper limit, with a mean of 106. Values for kurtosis (.14) and skewness (.42) as well as a frequency histogram with a normal curve overlay indicate a normal distribution for this variable.

The means reported for the two linguistic measures indicate distributions that are somewhat negatively skewed. However, further examination of the values for kurtosis and skewness reveal values close to zero in the case of both comprehension (.42 for kurtosis and -.69 for skewness) and expression (.07 for kurtosis and -.38 for skewness). Frequency histograms were plotted with the normal distribution as an overlay and they lend further support to the fact that neither comprehension nor expression deviate sufficiently from normality to make a realistic difference in the analysis or to warrant data transformation.

Table 2

Descriptive Statistics for the Sample (N=137)

Variable	Range	Mean	SD
French Comprehension	24-50	40.0	5.6
French Expression	23-49	38.6	5.0
Self-esteem	33-78	57.9	10.2
SES	8-66	32.7	18.7
Years of Mother Tongue Instruction	0-6	1.2	1.4
Length of Residence	1-13	5.2	3.2
Intellectual Maturity	84-137	106.2	11.3

The wide range of scores for self-esteem spans Coppersmith and Gilberts' (1982) system of classification which describes levels (high-moderate-low) of self-esteem. The mean value for the present sample falls within the category of moderate self-esteem.

As can be seen in Table 2, the families of the children in this study represent a very wide range (from lowest possible score to highest possible score) in terms of socioeconomic status. Within a classification scheme that encompasses low, low-middle, middle, middle-high and high socioeconomic strata, the mean SES of the sample is middle class. However, this statistic is relatively meaningless, given that the frequency histogram that describes the SES variable indicates a bimodal distribution with 85 cases clustered below a score of 40 and 52 cases clustered above a score of 40. A closer look at the make-up of the sample reveals that, of the 85 cases located below a score of 40, 80 of them are from School Northeast and the other 5 are dispersed among the other three schools. Of the 52 cases located above a score of 40, only one case is at School Northeast, while the remaining 51 cases which round out the sample are all found in the other three schools. This contingent or dependent relationship between SES and schools is also borne out by a significant chi-square between the two variables, $\chi^2(3, N = 137) = 113.83, p < .001$.

To explore how performance across the four schools may have varied on the key variables under investigation, descriptive statistics were also computed according to schools. Table 3 shows the schools and their corresponding mean scores and standard deviations with respect to French comprehension, French expression, self-esteem, SES, number of years of mother tongue instruction, length of residence and intellectual maturity. Mean scores for intellectual maturity and self-esteem are quite similar across the four schools. Using Hollingshead's classification system, the average SES score for School Northeast falls into the low SES category and at the other three schools the mean SES score is in the middle-high category. Regarding comprehension and expression, a pattern of achievement emerges. The highest mean score for both variables was found at School Northeast, followed by School South, and then School West. The lowest mean score for comprehension and expression was achieved by the children at School Northwest. School Northeast recorded the highest mean values for number of years of mother tongue instruction and length of residence in Canada.

Multiple Linear Regression Analyses

Multiple linear regression analyses were undertaken in order to determine which predictor variables significantly explain the variability in the children's performance on the

Table 3

Descriptive Statistics according to Schools

Variable	Schools			
	Northeast (n=81)	South (n=22)	Northwest (n=20)	West (n=14)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
French Comprehension	41.4(4.5)	40.2(7.0)	36.2(5.6)	37.6(5.7)
French Expression	40.8(3.9)	37.9(4.2)	33.9(4.2)	34.0(5.4)
Self-esteem	58.3(9.6)	57.4(9.6)	57.5(11.3)	57.5(13.7)
SES	19.2(8.5)	52.1(7.1)	53.2(11.8)	51.1(12.3)
Years Mother Tongue Instruc.	1.4(1.4)	.64(1.4)	.80(.89)	1.1(1.9)
Length of Residence	6.4(3.1)	3.6(2.0)	2.2(.98)	5.2(3.7)
Intellectual Maturity	106.7(11.6)	106.7(8.5)	105.8(12.3)	104.0(12.1)

comprehension measure and the expression measure of the language proficiency test. To begin, raw scores for the two outcome variables (comprehension and expression) were converted to z-scores at each grade level separately. This conversion allowed the scores of all 137 children who took tests at three different grade levels to be compared within a common distribution which has a mean of 0 and a standard deviation of 1.

SES, which distributed itself bimodally, was transformed into a dichotomous variable (low SES versus high SES) which reflected the nature and shape of the original distribution. The number of years of mother tongue instruction was also transformed into a dichotomous variable by dummy coding. Those children with no mother tongue instruction were coded with a 0 and those with anywhere from one to six years of mother tongue instruction were coded with a 1. This transformation was undertaken so that the variable, mother tongue instruction, could be looked upon as either being present or absent in the child's profile.

The data used in all analyses were tested to ensure that assumptions regarding multivariate statistics were met. Z-score transformations, frequency histograms and inspection of residuals (graphs and statistics) failed to reveal any univariate or multivariate outliers. Following each multiple regression analysis, there was an examination of normal probability plots and standardized scatterplots of residuals against predicted

comprehension and predicted expression scores. No serious departures from linearity, normality or homoscedasticity were detected.

As a preliminary step to the multiple regression analyses, zero-order correlations were calculated.

Zero-order Correlations. Zero-order correlations were examined in order to determine bivariate relationships. Results are presented in Table 4. The variables included for examination were comprehension, expression, self-esteem, SES, mother tongue instruction, length of residence, intellectual maturity, and gender. Gender (dummy coded) was included as a possible predictor variable but, as results indicate, there was no correlation between gender and performance in either comprehension ($r = -.08$) or expression ($r = -.07$). This variable was dropped from future analyses. In the case of intellectual maturity, it had been hypothesized that scores on the Drawing Test would not be related to comprehension and expression because both those outcome variables are measures of oral language skills which have been shown to be either unrelated or minimally correlated with intelligence (Genesee, 1987). The present findings, as expected, indicated no relationship between scores on the drawing test and the oral linguistic measures (comprehension and expression). Consequently, although the measure of intellectual maturity had been useful in establishing

Table 4

Bivariate Correlations of Outcome and Predictor Variables (N=137)

Variable	Mother Tongue Instruction	Length of Residence	SES	Intellectual Maturity	Self-esteem	Gender	Comprehension
Length of Residence	.29**						
SES	-.16	-.38**					
Intellectual Maturity	.03	-.01	.00				
Self-esteem	.07	.13	.01	.18*			
Gender	.01	-.24**	.12	.02	-.05		
Comprehension	.21*	.44**	-.26**	-.04	.10	-.08	
Expression	.18*	.41**	-.45**	-.06	.30**	-.07	.38**

** $p < .01$ * $p < .05$

the normalcy of the sample on this important variable, it was dropped from subsequent multiple regression analyses.

As can be seen in Table 4, the bivariate relationships among the remaining predictor variables (mother tongue instruction, length of residence, SES, and self-esteem) pose no problems in terms of redundancy of variables. No correlation coefficient involving these variables approaches .70, the critical value recommended by Tabachnick & Fidel (1989) and Pedhazur (1982) as possibly being indicative of multicollinearity.

A statistically significant, positive relationship exists between comprehension and mother tongue instruction and between expression and mother tongue instruction. There is a positive and statistically significant relationship between length of residence and both linguistic measures. In the case of self-esteem, the correlation matrix indicates a significant and positive relationship with expression only. The bivariate relationship between comprehension and SES and between expression and SES is statistically significant and negative in direction.

Determination of Predictor Variables. As noted above, those predictor variables which indicated a statistically significant correlation with the outcome variables were self-esteem, mother tongue instruction, length of residence and SES. The resulting coefficients support the inclusion of self-esteem,

mother tongue instruction and length of residence in the regression analyses.

In the case of SES, the relationship between predictor and outcome variables was found to be statistically significant and negative, thereby indicating that low performance on both linguistic measures was associated with high SES and high performance on the linguistic measures was associated with low SES. In turn, SES had been shown to be contingent or dependent on schools (refer to section on descriptive statistics). This relationship was further verified by a multiple linear correlation between SES and schools, in which the four schools were dummy coded for entry into the equation. The correlation coefficient was found to be .87. This high correlation suggests that SES could be a redundant variable.

To determine if SES makes any incremental contribution to the analysis of variance once variance due to schools has been accounted for, a hierarchical multiple regression was carried out in which schools (dummy coded) was entered on the first step of the analysis and SES was entered on the second step. Results, as seen in Table 5, indicate that in the case of both comprehension and expression, there is no change in R^2 from step one of the analysis to step two of the analysis. SES is a redundant variable; it makes no contribution to the analysis of variance once variance due to schools has been accounted for. On the strength of the foregoing results, it was decided that the simple variable,

Table 5

Incremental Variance in Outcome Measures Explained by SES
within Schools

Variable	R^2	R^2 change
Comprehension		
<u>Step 1</u> Schools	.17	.17
<u>Step 2</u> SES	.17	.00
Expression		
<u>Step 1</u> Schools	.30	.30
<u>Step 2</u> SES	.30	.00

SES, would be dropped from the final multiple regression analyses and that *schools*, a multi-dimensional variable that encompasses SES, would be included as a predictor variable.

Multiple Regression Analyses for Comprehension and Expression. Two two-step hierarchical/stepwise regressions were used to determine which variables would significantly predict each of the outcome variables after variability due to *schools* had been accounted for. The model building steps were the same for comprehension and for expression. *Schools* (dummy coded) was entered hierarchically in the first step. The second step consisted of a stepwise entry of a block of the remaining variables, mother tongue instruction, self-esteem and length of residence.

The results for comprehension are presented in Table 6. In total, the model accounts for 27% of the total variance in comprehension. On the first step, *schools* accounts for a significant proportion of the variance ($R^2 = .17$, $F(3, 133) = 8.76$, $p < .001$). The stepwise entry of the block of variables in step two resulted in only one variable (length of residence) entering the equation. Length of residence significantly increased the proportion of explained variance by 10% ($R^2 = .27$, $F(4, 132) = 12.00$, $p < .001$). Mother tongue instruction and self-esteem failed to enter the equation; they did not contribute significantly to regression.

Table 6

Hierarchical/Stepwise Regression Model for Comprehension

Variable	R^2	R^2 change
<u>Step 1</u>		
Schools	.17***	.17
<u>Step 2</u>		
Length of residence	.27***	.10
Self-esteem	-	-
Mother Tongue Instruction	-	-

*** $p < .001$

Results of the hierarchical/stepwise regression for expression are shown in Table 7. The model accounts for 41% of the total variance in expression. On the first step, *schools* accounts for a significant proportion of the variance ($R^2 = .30$, $F(3, 133) = 19.34$, $p < .001$). The stepwise entry of the block of variables in the second step shows that two variables (self-esteem and length of residence) met the statistical requirements for entry into the equation. Self-esteem significantly accounted for an additional 8% of the variance ($R^2 = .38$, $F(4, 132) = 20.49$, $p < .001$). Length of residence explained a small but significant proportion of the variance ($R^2 = .41$, $F(5, 131) = 18.44$, $p < .001$). Mother tongue instruction did not meet the statistical requirements for entry into the regression analysis.

The Interviews

The structured interview, a sample of which can be seen in Appendix E, was used in order to tap the children's use of languages in particular situations. For each of the questions asked, frequency of response (in terms of languages used) was tallied and subsequently converted to percentages.

Several discernible patterns, both general and specific, emerged from the information provided by the children. One general trend which existed across the sample was the children's marked tendency to refer to their mother tongue as "ma langue" rather than by its actual label. In a similar vein, when asked of

Table 7

Hierarchical/Stepwise Regression Model for Expression

Variable	<u>R²</u>	<u>R² change</u>
<u>Step 1</u>		
Schools	.30***	.30
<u>Step 2</u>		
Self-esteem	.38***	.08
Length of residence	.41***	.03
Mother Tongue Instruction	-	-

*** p < .001

the whereabouts of extended family members, many of them replied "mon pays" rather than naming their particular country of birth.

Specific language patterns surfaced with respect to language(s) spoken with elders; language(s) spoken with other children; language(s) for watching television; language(s) used at stores.

Language(s) Spoken with Elders. Minority language children tend to speak the mother tongue with their elders. Nowhere is this more evident than in their communication with grandparents. No other question in the interview schedule revealed such uniformity of response as the one concerning language(s) spoken with the grandparents (see Table 8). This holds true across the four schools. With the exception of two children, all those who had grandparents living nearby stated that they conversed with them exclusively in their mother tongue. Of those two exceptions, one used mother tongue and French; the other used mother tongue and English.

The mother tongue is also a dominant feature in communication with parents. This linguistic trend was revealed in two separate questions of the interview. The first question asked the children about their home language; the second one asked specifically which language they spoke with their parents. It had been anticipated that there might be some variance in the

Table 8

Language(s) Spoken with Grandparents, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
<hr/>						
Northeast (n ^a =31)	97% (30)	0% (0)	0% (0)	3% (1)	0% (0)	0% (0)
South (n ^a =9)	100% (9)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Northwest (n ^a =4)	100% (4)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
West (n ^a =6)	83% (5)	0% (0)	0% (0)	0% (0)	17% (1)	0% (0)

Note. L1 = mother tongue
Fr = French language
Eng = English language

n^a Reduced n size reflects removal of children who have no grandparents.

response to the two questions because, in the majority of cases, children share a home and communicate not only with parents but also with siblings and, in some instances, extended family members. In actual fact, as can be seen in Table 9, there was little variation in the answers given to the questions. All but 3 of the 137 children replied that at home they speak either their mother tongue uniquely or mother tongue in combination with French or English; all but 2 of the 137 replied that they speak either their mother tongue uniquely or mother tongue in combination with French or English when speaking with parents. It may be concluded therefore that while the mother tongue is not used as exclusively with parents as it is with grandparents, it is still a very prominent feature in the communication between parent and child.

Across the four schools, it was found that at School Northeast, the greatest proportion of children speak their mother tongue at home and with parents. However, when they speak it in combination with another language, that other language is French in all but a few cases. At the other three schools, the greatest proportion of children also speak their mother tongue at home and with parents but when they speak it in combination with another language, that other language is decidedly English.

The prominent use of the mother tongue with elders is also revealed in the language patterns that emerged with respect to the children's communication with their aunts and uncles.

Table 9

Language(s) Spoken at Home and with Parents, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
At Home						
Northeast (n=81)	77% (62)	0% (0)	0% (0)	22% (18)	1% (1)	0% (0)
South (n=22)	82% (18)	0% (0)	5% (1)	0% (0)	13% (3)	0% (0)
Northwest (n=20)	65% (13)	0% (0)	10% (2)	0% (0)	25% (5)	0% (0)
West (n=14)	93% (13)	0% (0)	0% (0)	0% (0)	7% (1)	0% (0)
With Parents						
Northeast (n=81)	77% (62)	1% (1)	0% (0)	21% (17)	1% (1)	0% (0)
South (n=22)	73% (16)	0% (0)	0% (0)	5% (1)	22% (5)	0% (0)
Northwest (n=20)	65% (13)	0% (0)	5% (1)	0% (0)	30% (6)	0% (0)
West (n=14)	93% (13)	0% (0)	0% (0)	0% (0)	7% (1)	0% (0)

Note. L1 = mother tongue
Fr = French Language
Eng = English language

Table 10 shows the children's language use when speaking with their uncles and aunts. The findings indicate that the majority of the children use their mother tongue uniquely or in combination with either French or English when speaking to their aunts and uncles. This general finding holds true across the four schools. It will be noted, however, that at Schools South and West there is considerable use of the mother tongue & English combination; at School Northeast, the second most frequently used language is French.

Language(s) Spoken With Other Children. In minority language children's communication with other children, there is continued but diminished use (in comparison with elders) of the mother tongue with cousins and siblings. French alone and English alone begin to emerge as language patterns. With friends, the trend to speak either French or English, or a combination of the two languages becomes more firmly established.

Table 11 shows the language(s) used by the children when speaking with their cousins. Overall, there is considerable use of the mother tongue alone or in combination with English and French. At Schools South, Northwest and West, children are fairly likely to use the mother tongue when communicating with cousins; they also make considerable use of English, and the combination of mother tongue & English. In contrast, French is used more frequently than the mother tongue by the children at

Table 10

Language(s) Spoken with Uncles and Aunts, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
With Uncles						
Northeast (n ^a =64)	75% (48)	5% (3)	0% (0)	17% (11)	3% (2)	0% (0)
South (n ^a =12)	58% (7)	0% (0)	0% (0)	8% (1)	33% (4)	0% (0)
Northwest (n ^a =10)	70% (7)	0% (0)	0% (0)	20% (2)	10% (1)	0% (0)
West (n ^a =9)	44% (4)	0% (0)	0% (0)	11% (1)	33% (3)	11% (1)
With Aunts						
Northeast (n ^a =66)	77% (51)	8% (5)	0% (0)	12% (8)	3% (2)	0% (0)
South (n ^a =13)	69% (9)	0% (0)	0% (0)	8% (1)	23% (3)	0% (0)
Northwest (n ^a =8)	100% (8)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
West (n ^a =9)	56% (5)	0% (0)	0% (0)	0% (0)	33% (3)	11% (1)

Note. L1 = mother tongue

Fr = French

Eng = English

n^a Reduced n size reflects removal of children who have no uncles or aunts.

Table 11

Language(s) Spoken with Cousins, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
Northeast (n ^a =64)	23% (15)	38% (24)	5% (3)	30% (19)	3% (2)	1% (1)
South (n ^a =15)	47% (7)	0% (0)	20% (3)	13% (2)	20% (3)	0% (0)
Northwest (n ^a =11)	46% (5)	0% (0)	36% (4)	0% (0)	18% (2)	0% (0)
West (n ^a =10)	70% (7)	0% (0)	20% (2)	0% (0)	10% (1)	0% (0)

Note. L1 = mother tongue
Fr = French language
Eng = English language

n^a Reduced n size reflects removal of children who have no cousins.

School Northeast when they speak with their cousins. Use of the mother tongue & French combination is also substantial.

Results for language(s) spoken with siblings are quite similar to those reported for cousins. As can be seen in Table 12, the children at School Northeast are most likely to speak French, or French & mother tongue with their brothers and sisters. At Schools South and Northwest there is greater use of the mother tongue, English alone and the mother tongue & English combination. In the case of School West, no real pattern emerges, the numbers are split rather evenly across the six language categories.

There is a dramatic change in the language(s) that minority language children speak with other children, when those children are their friends. Two questions in the interview related to the category of language(s) spoken with friends. Tables 13 reveals similar language patterns for the two situations, language(s) spoken with friends and language(s) spoken when playing at the park. Overall, the use of French alone and English alone and the two combined are quite prominent; the unique use of mother tongue is non-existent with friends and is marginally used at the park.

Looking across the schools, children at School Northeast show an overwhelming preference for French alone but they do also combine it to a certain extent with mother tongue when speaking with friends and when playing at the park. For both

Table 12

Language(s) Spoken with Siblings, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
Northeast (na=76)	11% (8)	42% (32)	1% (1)	45% (34)	0% (0)	1% (1)
South (na=21)	57% (12)	0% (0)	14% (3)	10% (2)	5% (1)	14% (3)
Northwest (na=20)	45% (9)	0% (0)	30% (6)	0% (0)	20% (4)	5% (1)
West (na=13)	15% (2)	8% (1)	23% (3)	15% (2)	23% (3)	15% (2)

Note. L1 = mother tongue
Fr = French language
Eng = English language

na Reduced n size reflects removal of children who have no siblings.

Table 13

Language(s) Spoken with Friends and at the Park, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
With Friends						
Northeast (n=81)	0% (0)	70% (57)	0% (0)	27% (22)	0% (0)	3% (2)
South (n=22)	0% (0)	23% (5)	5% (1)	27% (6)	0% (0)	45% (10)
Northwest (n=20)	0% (0)	0% (0)	45% (9)	5% (1)	20% (4)	30% (6)
West (n=14)	0% (0)	21% (3)	43% (6)	0% (0)	0% (0)	36% (5)
At the Park						
Northeast (n=81)	5% (4)	77% (62)	0% (0)	13% (11)	0% (0)	5% (4)
South (n=22)	9% (2)	18% (4)	4% (1)	36% (8)	0% (0)	32% (7)
Northwest (n=20)	5% (1)	0% (0)	50% (10)	10% (2)	10% (2)	25% (5)
West (n=14)	0% (0)	7% (1)	36% (5)	7% (1)	7% (1)	43% (6)

Note. L1 = mother tongue
Fr = French language
Eng = English language

situations there is dominant use of English and English in combination with French at Schools Northwest and West. At School South, the greatest tendency is towards use of French combined with either mother tongue or English.

Language(s) for Watching Television. Table 14 presents results which indicate that the majority of the children in the sample watch television in French and English. Viewing in the mother tongue plays a small role for the sample as a whole. Only one child revealed that he/she watches television exclusively in the mother tongue language. Programs using the mother tongue as language of communication are available through ethnic/cultural television productions and also through rented videotapes.

Across the four schools, many of the children watch television in both French and English. However, when either language is used uniquely, that language tends to be French at School Northeast and English at Schools South, Northwest and West.

Language(s) Spoken at Food Stores and at Other Stores. The distinction between food stores and other stores was originally made and worked into two separate questions of the interview because it was thought that perhaps the mother tongue might be more prominent in ethnic food stores than in other types of stores. Results, as seen in Table 15, do not support the need for

Table 14

Language(s) for Watching Television, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
Northeast (n=81)	1% (1)	48% (39)	6% (5)	12% (10)	0% (0)	32% (26)
South (n=22)	0% (0)	18% (4)	32% (7)	9% (2)	9% (2)	32% (7)
Northwest (n=20)	0% (0)	0% (0)	55% (11)	0% (0)	5% (1)	40% (8)
West (n=14)	0% (0)	7% (1)	21% (3)	0% (0)	0% (0)	71% (10)

Note. L1 = mother tongue
Fr = French language
Eng = English language

Table 15

Language(s) Spoken at Food Stores and Other Stores, expressed in percentage and (frequency), according to Schools

Variable	L1	Fr	Eng	L1 & Fr	L1 & Eng	Fr & Eng
Food Stores						
Northeast (n=81)	15% (12)	59% (48)	0% (0)	19% (15)	0% (0)	7% (6)
South (n=22)	5% (1)	45% (10)	18% (4)	5% (1)	5% (1)	22% (5)
Northwest (n=20)	10% (2)	20% (4)	25% (5)	0% (0)	10% (2)	35% (7)
West (n=14)	7% (1)	21% (3)	28% (4)	7% (1)	7% (1)	28% (4)
Other Stores						
Northeast (n=81)	11% (9)	57% (46)	0% (0)	24% (19)	0% (0)	8% (7)
South (n=22)	5% (1)	45% (10)	14% (3)	9% (2)	0% (0)	27% (6)
Northwest (n=20)	5% (1)	15% (3)	40% (8)	0% (0)	0% (0)	40% (8)
West (n=14)	7% (1)	14% (2)	28% (4)	7% (1)	7% (1)	36% (5)

Note. L1 = mother tongue
Fr = French language
Eng = English language

this distinction. The children indicate very similar patterns of language use in food stores and in other types of stores.

The mother tongue alone is not used a great deal in either situation. French and English dominate depending on the individual school: French and a combination of French and mother tongue are most used by the children from School Northeast when they go to the stores; French and French & English are most frequently used by the children at School South; English alone and French & English are more likely to be used by the children at Schools Northwest and West.

CHAPTER IV

Discussion

In the last two decades much of the research involving minority language children has centered on examining the relative effectiveness of either including or excluding mother tongue instruction in the educational experience of these children. The vast majority of researchers have elected to use experimental methods in conducting their investigations, even though random assignment of subjects to groups has generally not been possible and the adequacy of the alternative--equating experimental and control groups on extraneous variables--has been called into question in the case of children from dual language backgrounds. Consequently, it was the first objective of this study to use a multivariate approach to determine the influence of supplementary mother tongue instruction on the French second language performance of first generation immigrant children.

The preliminary finding, that, at the zero-order level, supplementary mother tongue instruction is positively and significantly correlated with the oral comprehension and oral expression of grades 4, 5, and 6 minority language children, is in the expected direction. It is in agreement with major investigations which have found bilingual education (with an inherent component of mother tongue instruction) to be either a

benefit for these children (e.g., Willig, 1985) or, at the very least, not a hindrance with respect to second language acquisition and academic achievement (Althena & Appel, 1982; Dulay & Burt, 1978). However, when supplementary mother tongue instruction is considered in conjunction with other variables (self-esteem, length of residence and *schools*), contrary to what had been expected, it does not emerge as a significant predictor in the case of either comprehension or expression. One possible interpretation of this finding is that there is no relationship between mother tongue instruction and second language achievement. However, the outcome can also be explained by considering first, the very nature of the mother tongue instruction variable used in this study and secondly, the language patterns revealed by the children during the structured interviews.

The present investigation was restricted to studying mother tongue instruction which is not a firmly entrenched educational program integrated into the children's regular school day. It is, as noted throughout, a supplementary or extra-curricular activity with approximately two and a half to three hours of exposure time per week. As such, it is a comparatively weak version of the mother tongue instruction variable generally encountered in the research on bilingual education. It follows therefore that when it is examined on its own in a bivariate analysis, supplementary mother tongue instruction does correlate

significantly and positively with second language measures but when it is considered in a multivariate analysis with other, stronger predictor variables, its influence is not significant. It would appear that this finding speaks to the strength of the variable being used rather than the variable per se.

A second factor to consider with respect to the outcome on mother tongue instruction is that, almost without exception, the children in this study (those with supplementary mother tongue instruction and those without it) continue to have substantial exposure to the mother tongue, primarily through their communication with elders. And so, while only some of the children are exposed to instruction in the mother tongue, all of them are substantially exposed to the mother tongue in their communication with nuclear and extended family members. Possibly, this commonality in terms of mother tongue use at home diminishes the distinction between children with and without mother tongue instruction and further undermines a variable which is already somewhat weak due to its extra-curricular nature.

While the variable mother tongue instruction does not enhance the prediction of comprehension and expression, the children's length of residence in the host country, as had been expected, does prove to be a significant variable in the regression models for both linguistic measures. This outcome speaks to the importance of the time factor, a crucial element in the

adjustment of minority language children. Previous investigations (e.g., Anthony, 1980; James & Jeffcoate, 1981; Cummings et al., 1983) have clearly delineated the struggles of these children who must cope with a new culture; they have also demonstrated that the culture conflict experienced by the majority of immigrant children can negatively influence their performance in the formal school system. However, it can reasonably be argued that, over time, physical and psychological acclimatization does occur, thereby reducing culture conflict and its unfavourable consequences. This factor appears to be reflected in the variable, length of residence, which positively predicts language performance. It is also true of course that length of residence is influential with respect to comprehension and expression simply because more time in the host country equals more formal and informal exposure to and practice in the second language being acquired.

Self-esteem also explains linguistic performance but only in the case of expression; it does not enter the regression analysis for comprehension. This finding is both in agreement with and an extension of the work of Heyde (cited in Brown, 1987) who studied the effects of self-esteem on the performance of university students learning French as a second language and found that self-esteem correlated positively and significantly with oral production. It appears that her finding generalizes to elementary level minority language children as well.

One can speculate that self-esteem explains expression but not comprehension because these two outcome measures represent very different processes. Linguistically, oral comprehension is the more passive of the two processes; it involves the reception and assimilation of the information being provided by the speaker. Oral expression, on the other hand, is an active and demanding process; it is an observable act which involves performance. Children are required to link thoughts and words to produce a polished end-product. To do so, they have to find the confidence to dare to express themselves. This confidence is fueled by self-esteem.

Perhaps the most compelling outcome of this investigation is the importance of the variable *schools*; it explains more variance in comprehension and in expression than any other predictor variable in the respective regression equations. To fully discuss this finding, it is first necessary to consider the nature of the relationship between schools and socioeconomic status (SES), as it presented itself in this sample.

SES distributes itself bimodally in such a manner that all but one of the children from School Northeast fall into the low SES category and all but four of the children from the other three schools fall into the middle-high SES category. In conjunction with the finding that SES and schools are contingent on one another, it is also important to bear in mind that the correlation between SES and performance on the linguistic tests, counter to

educational trends. is negative in direction. Thus, the low SES children at School Northeast are associated with high performance on both linguistic tests and the middle-high SES children at the other three schools are associated with low performance on the linguistic tests. Moreover, *schools* is a strong and significant predictor of performance on the outcome measures. What factors support such a finding?

The four public schools in this study are of comparable size, approximately 500 pupils per institution. In terms of intellectual maturity and self-esteem, mean scores achieved by the children at School Northeast and at Schools South, Northwest and West are very similar. However, the schools do differ with respect to the children's length of residence in Canada, a variable which this investigation has demonstrated to be of considerable importance when explaining second language performance. Of the four schools, School Northeast records the highest mean length of residence. In addition, other differences exist between School Northeast and Schools South, Northwest and West with respect first, to support programs for minority language children; secondly, the language patterns of the children; thirdly, the overall learning environment.

First, in terms of support programs for minority language children, School Northeast has several such programs in place which are not found at any of the other three schools. The assistance that is offered at School Northeast comes in the form

of interpreters, an after-school study program, mother tongue instruction (PELO classes), and food supplements. While it can be effectively argued that food supplements are not required in high SES areas, the same argument cannot be made for the other support programs.

Even though the parents of the children at Schools South, Northwest and West are financially and educationally better off than their counterparts at School Northeast, many of them still do not speak French and can therefore offer little assistance with homework; they would still find it difficult to actively participate at parent/teacher interviews and other school related activities. However, these high SES parents do not have access to in-school interpreters who can facilitate their communication with teachers and other personnel; their children do not have an organized and readily available after-school study program to attend when academic difficulties arise.

Nor do the children at Schools South, Northwest and West have a PELO program at their respective schools. While a good portion of these high SES children do take supplementary mother tongue instruction, they do so away from the school they attend, in community centers. In contrast, at School Northeast the PELO mother tongue instruction classes are organized by the school, paid for by the school board and held in school classrooms, features which combine, according to Hernandez-Chavez (1984), to lend a sense of legitimation by the school to the home language

and culture of the children. The presence of mother tongue instruction classes at school further suggests that the children at School Northeast will have a greater opportunity to experience an additive form of bilingualism which, Landry (1979, 1987) contends, can only come about if the mother tongue is used not only at home but also in valued social domains of activity, such as, the school.

When considered as a whole, it appears that the support programs being offered at School Northeast are akin to the components that would be found in a school-based support center, such as the type advocated by Aronowitz (1984) and successfully established by Golub (1984) for minority language children, their parents and teachers.

A second feature which distinguishes School Northeast from Schools South, Northwest and West is the languages spoken by the children outside the classroom. Although all 137 children make tremendous overall use of the mother tongue, whenever they combine a second language to use with the mother tongue, a definitive trend emerges. At School Northeast that second language is French, at Schools South, Northwest and West, it is English. Similarly, while many of the children watch television in both French and English, when the children at School Northeast report watching in only one language, that language tends to be French and when the children at the other three schools report watching in only one language, there is greater likelihood for that

language to be English. In fact, an overview of the findings rather consistently points to French as the dominant majority language for the children at School Northeast, while English is the dominant majority language for the children at Schools South, Northwest and West.

In addition to differing with respect to the children's language patterns and the availability of support programs, the four schools in this study are further distinguished by their overall learning environments. The children at School Northeast are exposed to a highly structured learning environment characterized by rather strict discipline, routine and little tolerance for noise. It appears to be very similar to the authoritarian school atmosphere that many immigrant children leave behind in their countries of birth (Stockfelt-Hoatson, 1977; Cummings et al., 1983). In contrast, the children at Schools South, Northwest and West are exposed to more loosely structured learning environments (varying degrees across the three schools) and less rigidity and concern with rules, regulations and noise. This learning environment appears to be much more similar to the liberal atmosphere that some minority language children have noted to be a source of frustration and disorientation for them because it is so different from what they were accustomed to in their country of birth (Mowat, 1969; Cummings et al., 1983).

At this point, it is important to underline that no causal link is being made between the findings of this correlational study and the differences just outlined with respect to learning environment, language patterns, mean length of residence and support systems as they exist at School Northeast and Schools South, Northwest and West. The outcomes of this investigation are concerned with relationships; they reveal that low SES children, who have been in Canada longer, have access to support programs, have greater exposure to French and experience a more structured learning environment, are associated with high linguistic performance in French while high SES children, who have been in Canada for a shorter time, have no specific support for minority children, have greater exposure to English in their respective communities and are also in a less structured learning environment, are associated with low linguistic performance in French. These elements are but a few out of a myriad of potential factors which might help to clarify the unexpected inverse relationship between linguistic performance and SES, and which also aid in understanding how it is that such a large portion of the variance in comprehension and expression is explained by the predictor variable, *schools*.

In part, the foregoing discussion supports the rationale behind the second objective of this study, which is, to examine minority children's language usage in community contexts because those language patterns can have some effect on second

language research results (Cziko & Troike, 1984; Willig, 1985; McLaughlin, 1985). In the present investigation the languages spoken by the children outside the classroom (specifically as they relate to the domination of either French or English) do help in furthering the understanding of the obtained results.

In addition to revealing the children's dominance in one of the two majority languages, the findings on language patterns also firmly indicate that in the case of first generation immigrant children in Montréal, the minority language or mother tongue does not appear, at the present time, to be in danger of extinction. With their nuclear and extended family, these children continue to use their mother tongue with older family members who may have little proficiency in French or English. As expected, the children in this study, possibly because of their closer ties to the homeland, culture and first language, use the mother tongue more frequently than second generation children do in their communication with elders. For example, Bhatnagar (1980) reports that only 50% of the Italian children in his sample spoke Italian with their parents, whereas, in the present study, the percentage of children who continue to speak their mother tongue with parents ranges from a low of 65% to a high of 92% across the four schools. With their grandparents, 135 of the 137 children in the present sample speak the mother tongue exclusively (the remaining two speak it in combination with either French or English). This finding is in stark contrast to Taft

& Cahill (1989) who indicate that the children they studied spoke the mother tongue with grandparents only in some cases. With respect to languages spoken with aunts and uncles, this investigation shows that with these elders, who had not been included in previous studies, there is also substantial use of the mother tongue.

As might be expected, the languages spoken with other children differ depending on whether those other children are cousins and siblings or whether they are friends. With cousins and siblings, who share their language and culture, first generation children continue to use their mother tongue, although not as extensively as they do with elders. Once again, this finding is in contrast to the findings on second generation children who are reported to speak almost exclusively in the majority language with their siblings (Bhatnagar, 1980; Smolicz, 1983; Taft & Cahill, 1989).

The gap between first and second generation narrows considerably when the inquiry addresses languages spoken in communication with friends. In agreement with previous investigations (e.g., Bhatnagar, 1980; Smolicz, 1983), this study demonstrates that with other children who are friends, the majority language is prominently used. In fact it is notable that not one child in the present sample indicated that he/she speaks the mother tongue exclusively with friends. These results are not surprising given that, as children engage in social activities

which remove them socially and physically from the home base, the use of the mother tongue diminishes and the majority language (French or English in the present case) emerges as the dominant language of communication. As demonstrated by the present investigation, this trend also generalizes to other social situations such as watching television and going shopping.

Taken as a whole, the findings on language patterns augur well for the continuity of the mother tongue in the lives of these first generation minority language children, representing 18 different linguistic backgrounds. Encouragingly, the results are in contrast to the findings of Wong Fillmore (1988) who writes with concern of the immigrant children in California who appear to be dropping their mother tongue completely in favour of the English language. The unfavourable consequences she speaks of, principally, the silence that develops between parents who have not yet learned the majority language and immigrant children who have lost their mother tongue, may be avoided by the immigrant families presently living in Montréal.

Directions for Future Research

The lack of reliable and valid measuring instruments with which to assess linguistic competency has repeatedly been targeted as an area of weakness in second language research (Cummins, 1987; Willig, 1985; McLaughlin, 1985). The findings of the regression analysis portion of this investigation must be

interpreted with caution due to the use of French second language proficiency tests which, to date, have not been normed or standardized. These tests are well structured so as to minimize anxiety due to the test situation; they are easily administered; they were very well received by the children who participated in the study. Future research should be guided towards norming and standardizing procedures for these test instruments and towards formal establishment of their reliability and validity, thereby enhancing and maximizing their use.

The multivariate approach used to study minority language children's linguistic performance was successful in explaining a significant portion of the variance in oral comprehension (27%) and in oral expression (41%). However, the greater part of the variance still remains unexplained in both cases. Future research should be concerned with isolating other predictor variables (e.g., classroom processes, teacher characteristics, affective factors etc.) which could prove to be valuable components of the regression equation. In addition, it would be worthwhile to extend the present work by examining written comprehension and written expression as outcome measures. A comparison of the set of variables that predict oral and written language skills would also be of interest.

In addition to studying the language performance of minority language children, it had been the original intent of the author to also examine the children's academic achievement. Data

to serve that objective was copiously gathered but remains unanalyzed because of the diverse grading systems in use at the different schools. Future researchers might wish to pursue this line of investigation by gaining access to the results of standardized tests used by Montréal area school boards.

The results of this study suggest the importance of tapping into the languages used by minority language children outside the classroom. The interview that was formulated to reveal language trends was very basic in nature and served the objective of the present study. In the future, however, researchers may be better served by a more refined test instrument that incorporates other particular situations into the existing interview schedule and that simultaneously collapses into a single question those particular social situations which proved redundant (e.g., languages spoken with aunts and languages spoken with uncles) in the present case.

Finally, as revealed here, the predominant use of either French or English outside the classroom can be an important variable to consider when studying second language acquisition in the Montréal area. Because the language patterns (with respect to use of French and English) in this study were so closely related to school attended and because *schools* had already been incorporated into the multivariate analysis, it was not considered necessary to introduce language dominance into the regression analysis as a separate predictor variable. However, in future

multivariate analyses, particularly in cases where a multi-dimensional variable like *schools* is not appropriate to the regression model, the inclusion of a predictor variable which defines language dominance outside the classroom might be valuable in explaining variability in outcome measures.

Conclusion

During the next five years Canada will welcome approximately 250,000 new immigrants annually. Already the proportion of minority language children enrolled in some Montréal area schools accounts for more than half of the student population, as witnessed at School West where 60% of the students are immigrants and at School Northeast where 85% of the children are of minority background. At this time of rapid immigration, it will be important for classroom educators, who interact with these children on a daily basis, to bear in mind that minority children need time in order to make a cultural and psychological adjustment to their new country and school; that, their initial lag in learning will be overcome because, as their length of residence increases, so does their linguistic performance; that their level of self-esteem influences oral expression, thus suggesting that activities meant to foster a positive self-image would be particularly beneficial for these children. It will be equally important for school authorities to reflect, in their decision making, the fact that the mother tongue

which minority language children already speak and the mother tongue instruction which they follow on an extra-curricular basis are in no way negative or interfering forces which might hinder second language acquisition.

Supplementary mother tongue instruction, as received either through PELO programs or ethnic community centers, has been shown to be positively associated with performance in French comprehension and expression. Hopefully schools and community centers will continue to provide and, perhaps expand, their programs of instruction in minority languages. The fact that this type of instruction does not emerge as a significant predictor in the multivariate analysis is an indication of the quality of the variable under investigation and should not be mistaken as a negative pronouncement on mother tongue instruction in general. Moreover, it is reasonable to assume that an integrated form of mother tongue instruction would have behaved quite differently in the regression analyses.

Theoretically, the present findings on mother tongue instruction do not support Cummins' position that minority children who perform well in their second language do so because there is a transfer of linguistic skills from L1 to L2. The children in this study did well linguistically but the mother tongue instruction variable did not emerge as one of the significant predictors of that language achievement. One possible explanation for these contradictory findings is that Cummins'

theory is based on integrated mother tongue instruction programs but the variable in the present investigation is supplementary in nature. The findings further indicate that, in the absence of a strong mother tongue instruction variable, other variables (i.e., *schools*, length of residence and self-esteem) do influence second language achievement.

The extent to which the mother tongue is intrinsically important to first generation minority language children was poignantly revealed by the many children who referred to it simply as ma langue, thereby denoting a special kind of ownership that requires no further labelling. The fact that these children are using and retaining their mother tongue within their respective ethnic communities is a desirable and enriching experience for them. It ensures that a communication gap with parents and other elders, at least due to linguistic reasons, is likely to be avoided.

Exploring minority children's language patterns is of particular importance in the unique linguistic environment of Québec where English is a majority language by virtue of the fact that it is the majority language of Canada, but French is also a majority language because it is spoken by 80% of the Québec population. The determination as to which of the two majority languages a child will predominantly speak outside the classroom appears to be very much dependent on the school attended and, by extension, on the linguistic dominance of the community in which

the school is situated. There are advantages associated with the dominant use of both French and English.

As was demonstrated in the present investigation, the children from School Northeast, who have French as their dominant majority language outside the classroom, are associated with high performance on the French second language proficiency tests. In contrast, the children of Schools South, Northwest and West, who are more apt to speak English outside the classroom, are associated with low performance on the French tests. This suggests that the use of French outside the classroom has a positive influence on the French being learned inside the classroom. Conversely, it suggests that the greater use of English is a disadvantage in the present context of performance on French linguistic measures. However, speaking English in the community can also be viewed as an advantage because the children from Schools South, Northwest and West will be more likely to retain their mother tongue, to speak French and to speak English as well. For the children at School Northeast, retention of the mother tongue and fluency in French do not appear to be problematic but the acquisition of English becomes a much more formidable task given their limited exposure to and practice in that language.

Perhaps the most compelling outcome of this investigation is the significant influence of the school on the language performance of minority language children. For educators, this

finding will be both disturbing and welcomed: disturbing because it indicates that our schools are not universally beneficial, that depending on the school attended, there are different learning environments and greater or less support for minority children and their families; but welcomed because the school is one element in the lives of these children which can be changed for the better.

This study reveals that the one low SES school that participated in the research project has several support programs firmly in place and readily available in order to maximize the educational experience of the children. Remarkably, not one of the three high SES schools had any such specific support systems to offer. Undoubtedly, part of the reason for this anomaly is that at School Northeast, 85% of the total school population consists of minority language children; at the other three schools the proportion of immigrant children is not as high. However, one can speculate that what is also at play here is the pervasive knowledge that high SES is generally associated with high academic performance. As a consequence, there may not be as great a concern in high SES areas when it comes to implementing support programs for its minority language pupils. However, the inverse relationship between SES and linguistic performance, as reported in this investigation, indicates that such a mode of thinking might not be applicable to the immigrant population. After all, minority language children in high SES areas face the

same linguistic and academic demands as their counterparts in low SES areas; the parents of these children, whether of high SES or low SES also face similar challenges in their attempts to connect and communicate with their children's schools. Perhaps support would benefit the immigrant population as a whole, not just that portion which is known to be socioeconomically depressed.

The school is a powerful institution, one that can make a difference in the lives of minority language children. Hopefully, all schools will use their influential position to provide the best possible educational setting and support for these children, thus enhancing their immediate learning and empowering them for the future.

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Appendix A
French Second Language Proficiency Tests

O B J E C T I F SCOMPREHENSION AUDITIVE

Questions 1 - 10

COMPREHENSION DU VOCABULAIRE

(On demande à l'enfant d'identifier des images.)

Questions 11 - 17

COMPREHENSION D'UNE COURTE PHRASE (SYNTAXE)

(On demande à l'enfant d'identifier des locatives.)

COMPREHENSION D'UNE COURTE PHRASE

(On demande à l'enfant d'identifier certaines actions.)

Questions 18 - 20

COMPREHENSION D'UN COURT TEXTE (DISCOURS)

(On demande à l'enfant d'identifier l'illustration qui correspond à un court texte ou à une histoire.)

EXPRESSION ORALE

Questions 21 - 30

VOCABULAIRE

(On demande à l'enfant de nommer des objets.)

Questions 31 - 37

PRODUCTION D'UNE COURTE PHRASE (SYNTAXE)

(On demande à l'enfant de faire de courtes phrases portant sur les locatives.)

PRODUCTION D'UNE COURTE PHRASE (DISCOURS)

(On demande à l'enfant de faire des phrases courtes - sujet, verbe et complément.)

Questions 38 - 40

EXPRESSION LIBRE

(On demande à l'enfant de raconter une courte histoire.)

COMPREHENSION ORALE

Nom et prénom:

Ecole:

Date:

Ex: a. Montre-moi le papillon.
b. Montre-moi le lapin qui court.

- | | | | | | |
|-----|---|---|---|---|---------------|
| 1. | A | B | C | D | ne répond pas |
| 2. | A | B | C | D | ne répond pas |
| 3. | A | B | C | D | ne répond pas |
| 4. | A | B | C | D | ne répond pas |
| 5. | A | B | C | D | ne répond pas |
| 6. | A | B | C | D | ne répond pas |
| 7. | A | B | C | D | ne répond pas |
| 8. | A | B | C | D | ne répond pas |
| 9. | A | B | C | D | ne répond pas |
| 10. | A | B | C | D | ne répond pas |
| 11. | A | B | C | D | ne répond pas |
| 12. | A | B | C | D | ne répond pas |
| 13. | A | B | C | D | ne répond pas |
| 14. | A | B | C | D | ne répond pas |
| 15. | A | B | C | D | ne répond pas |
| 16. | A | B | C | D | ne répond pas |
| 17. | A | B | C | D | ne répond pas |

Ex. Montre-moi la bonne image

- | | | | | | |
|-----|---|---|---|---|---------------|
| 18. | A | B | C | D | ne répond pas |
| 19. | A | B | C | D | ne répond pas |
| 20. | A | B | C | D | ne répond pas |

EXPRESSION ORALE

Ex.: Regarde l'image, et nomme trois objets ou choses que tu vois.
(Tasse, cigarette etc. sur table.)

(cuisine - 5 objets)

21.

22.

23.

24.

25.

(chambre de garçons - 5 objets)

26.

27.

28.

29.

30.

Ex. Dis moi: où est le chien?

31. (chat?) Correct pas Juste ne répond pas

32. (oiseaux?) Correct pas Juste ne répond pas

33. (chien?) Correct pas Juste ne répond pas

34. (chien?) Correct pas Juste ne répond pas

35. Que fait cette dame? Correct pas Juste ne répond pas

36. (dame?) Correct pas Juste ne répond pas

37. (ces gens?) Correct pas Juste ne répond pas

Ex: (Image - enfants dans une baignoire)
(Série - fille dans une piscine)

38. A B C D ne répond pas (Série: fille trompette)

39. A B C D ne répond pas (Image: cochon/bolte)

40. A B C D ne répond pas (Image: chien/enfants)

Appendix B
Behavioral Academic Self-Esteem Rating Scale (BASE)

Never
Seldom
Sometimes
Usually
Always

Never
Seldom
Sometimes
Usually
Always

I. Student Initiative

1. This child is willing to undertake new tasks. 1 2 3 4 5
2. This child is able to make decisions regarding things that affect him or her, e.g., establishing goals, making choices regarding "likes" and "dislikes" or -academic interests. 1 2 3 4 5
3. This child shows self-direction and independence in activities. 1 2 3 4 5
4. This child initiates new ideas relative to classroom activities and projects. 1 2 3 4 5
5. This child asks questions when she or he does not understand. 1 2 3 4 5
6. This child adapts easily to changes in procedures. 1 2 3 4 5

Student Initiative Total _____

II. Social Attention

7. This child is quiet in class, speaks in turn, and talks appropriately. 1 2 3 4 5
8. This child talks appropriately about his or her school accomplishments. 1 2 3 4 5
9. This child cooperates with other children. 1 2 3 4 5

Social Attention Total _____

III. Success/Failure

10. This child deals with mistakes or failures easily and comfortably. 1 2 3 4 5
11. This child takes criticism or corrections in stride without overreacting. 1 2 3 4 5

Success/Failure Total _____

IV. Social Attraction

12. This child's company is sought by peers. 1 2 3 4 5
13. This child acts as a leader in group situations with peers. 1 2 3 4 5
14. This child refers to himself or herself in generally positive terms. 1 2 3 4 5

Social Attraction Total _____

V. Self-Confidence

15. This child readily expresses opinions 1 2 3 4 5
16. This child appreciates his or her work, work products, and activities. 1 2 3 4 5

Self-Confidence Total _____

Total BASE Score _____

Transfer scores to profile on next page.

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Nom de l'enfant.....

Jamais
1
Rarement
2
Parfois
3
Souvent
4
Toujours
5

1. L'enfant se prête volontiers à de nouvelles tâches.....1 2 3 4 5
2. L'enfant est capable de prendre des décisions à propos de ce qui le/la concerne: ex., établir des buts, faire des choix en ce qu'il/elle "aime" ou "n'aime pas" ou à propos de ce qui l'intéresse académiquement..... 1 2 3 4 5
3. L'enfant fait preuve d'autonomie et d'indépendance dans ses activités..... 1 2 3 4 5
4. L'enfant apporte des idées nouvelles dans les activités et projets de la classe..... 1 2 3 4 5
5. L'enfant pose des questions lorsqu'il/elle ne comprend pas.....1 2 3 4 5
6. L'enfant s'adapte facilement aux changements dans le programme..... 1 2 3 4 5
7. L'enfant est sage en classe. Intervient à son tour et parle de façon appropriée..... 1 2 3 4 5
8. L'enfant parle de son travail scolaire avec discernement.....1 2 3 4 5
9. L'enfant coopère avec les autres enfants.....1 2 3 4 5
10. L'enfant fait face à ses erreurs et échecs sans difficulté ni gêne..... 1 2 3 4 5
11. L'enfant accepte les critiques et les remarques avec naturel sans dramatiser..... 1 2 3 4 5
12. L'enfant est recherché par ses pairs.....1 2 3 4 5
13. L'enfant agit avec autorité avec ses pairs en situation de groupe..... 1 2 3 4 5
14. L'enfant parle de lui/elle-même en termes généralement positifs..... 1 2 3 4 5
15. L'enfant exprime volontiers ses opinions.....1 2 3 4 5
16. L'enfant apprécie son travail, ses travaux scolaires et ses activités..... 1 2 3 4 5

Behavioral Academic Self-Esteem

A Rating Scale

Stanley Coopersmith
Ragnar Gilberts

DIRECTIONS: This scale is designed to provide an estimate of the academic self-esteem of your student. Your judgments of the frequencies of several important behaviors will form the basis of the student's score. Please base these judgments on the specific behaviors you have observed in your classroom.

Each item deals with a separate behavior. Items may appear similar, but each represents a different behavior and should be rated without regard or reference to other items.

Please circle the rating number (i.e., 1 through 5) that you believe is the best estimate of that behavior frequency noted in your classroom. It is best not to debate or linger over an item. Most ratings can be completed in less than four minutes.

Instructions: Cette échelle est destinée à établir une évaluation du respect de soi de votre étudiant. Vos appréciations de la fréquence de plusieurs comportements significatifs serviront à établir le score de votre étudiant. Veuillez baser ces appréciations sur les comportements spécifiques que vous aurez observés dans la classe.

Chaque fait traitant d'un comportement particulier, les faits peuvent sembler identiques, mais chacun, représente un comportement différent et devrait être évalué sans rapport ni référence aux autres faits.

Veuillez encrer le chiffre (ci-indiqué de 1 à 5) que vous croyez être le meilleur estimé de la fréquence du comportement observé dans votre classe. Il est préférable de ne pas discuter ou s'attarder sur un fait. La plupart des évaluations peuvent se faire en moins de quatre minutes.

Appendix C
Four Factor Index of Social Status

Score 9 (continued) *

Mathematicians	035
Mechanical engineers	014
Metallurgical engineers	015
Mining engineers	020
Optometrists	063
Petroleum engineers	021
Physical scientists, n.e.c.	054
Physicians	065
Physicists	053
Political scientists	092
Psychologists	093
Social scientists, n.e.c.	096
Sociologists	094
Space scientists	043
Teachers, college/university, including coaches	102-140
Urban and regional planners	095
Veterinarians	072

Score 8 Administrators, Lesser Professionals, Proprietors of
Medium-Sized Businesses

- a. Administrative officers in large concerns: district managers, executive assistants, personnel managers, production managers;
- b. Proprietors of businesses valued between \$100,000 and \$250,000;
- c. Owners and operators of farms valued between \$100,000 and \$250,000;
- d. Commissioned officers in the military; lieutenants, captains, lieutenants, s.g., and j.g., or equivalent;
- e. Lesser professionals (census code list).

<u>Occupational title</u>	<u>Census code</u>
Accountants	001
Administrators, college	235
Administrators, elementary/secondary school	240
Administrators, public administration, n.e.c.	222
Archivists	033
Assessors, local public administration	201
Authors	181

*A sample from Hollingshead (1975)

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Hollingshead Four Factor Index of Social Status (1975)

SES Computation

EDUC (Education - years completed)

- 1 = less than 7th grade
- 2 = junior high (grade 7,8/Secondary 1,2)
- 3 = partial high school (grade 9,10/
Secondary 3,4)
- 4 = high school graduate (grade 11,12/
Secondary 5)
- 5 = partial college (minimal 1 year/college
finished/specialized training)
- 6 = standard university graduation (B.A.)
- 7 = graduate professional training
(graduate degree)

FOCCUP: Father's occupation

MOCCUP: Mother's occupation

FEDUC : Father's education

MEDUC : Mother's education

IF single income family:

$$SES = (OCCUP \times 5) + (EDUC \times 3)$$

If double income family:

$$SES = [(FOCCUP \times 5) + (FEDUC \times 3) + (MOCCUP \times 5) + (MEDUC \times 3)]/2$$

Using the HOLLINGSHEAD Four Factor Index

- 1- Using each parent's occupation, find the occupation scores (1-9) from the table (pg 7-18) and multiply them by 5.
- 2- Find the education scores of each parent depending on the level of school completed (page 6) and multiply them by 3.
- 3a- For single income families: add these two products to get the SES score
- 3b- For double income families: score for both parents individually then add and divide by 2.

Example: Father is a dentist with a graduate degree and mother is a photographer with specialized training.

Father: Occupation score = 9

Education score = 7

Mother: Occupation score = 6

Education score = 5

$$\text{SES score} = \frac{(9 \times 5) + (7 \times 3) + (6 \times 5) + (5 \times 3)}{2} = 55.5$$

Appendix D
Goodenough-Harris Drawing Test

TEST DU BONHOMME DE F. GOODENOUGH

A - TECHNIQUE D'APPLICATION

- Feuille blanche, de demi format commercial
- Crayon noir no. 2 (usage des crayons de couleur interdit) - L'usage de la gomme n'est pas interdit.
- Donner une autre feuille si l'enfant désire recommencer
- Si l'enfant fait plusieurs dessins, tenir compte du meilleur
- Si l'enfant ne dessine que la tête ou le tronc, préciser "dessiner un bonhomme tout entier".

Consigne: "Sur cette feuille de papier, vous allez dessiner un bonhomme. Faites le plus beau dessin que vous pourrez. Prenez votre temps et travaillez avec beaucoup de soin. Je veux voir si tous les enfants d'ici font aussi bien que ceux des autres écoles. Si-vous faites très attention, vous verrez quel beau dessin vous ferez".

DRAWINGS AS MEASURES OF INTELLECTUAL MATURITY

TABLE * | *Summary of Correlations Between Goodenough Scores
7 | and Scores on Other Psychological Tests*

PRIMARY MENTAL ABILITIES		
		CORRELATIONS
Ansbacher (1952)	100 ten-year-olds	(PMA quotients) .40 Reasoning .38 Space .37 Perception .26 Verbal Meaning .24 Number .41 Total test
Harris (unpublished)	164 kindergarten children	(Raw scores) .29 Verbal Meaning .17 Perceptual Speed .43 Quantitative .43 Motor .46 Space .46 Total score
STANFORD-BINET		
		CORRELATIONS
Yepson (1929)	37 institutionalized mentally retarded boys, aged nine to eighteen years	.60 (IQ values)
McElwee (1932)	45 fourteen- and fifteen-year-olds, ungraded class	.72 (MA values)
Williams (1935)	100 children, aged three to fifteen, subnormal to gifted	.80 (MA values) .65 (IQ values)
Havighurst and Janke (1944)	70 ten-year-olds	.50 (IQ values)
McHugh (1945)	90 kindergarten children	.45 (MA values) .41 (IQ values)
Pechoux, <i>et al.</i> (1947)	100 abnormal and delinquent children aged five to eighteen	.38 boys (MA values) .26 girls (MA values)
Rottersman (1950)	50 six-year-olds	.36 (IQ values)
Johnson, <i>et al.</i> (1950)	all mentally subnormal, epileptic, and brain-damaged children in a state hospital	.48 (IQ values)
Ellis (1953)	116 children in outpatient psychiatric clinic, aged four to nine years	AGE N
		.75 4 17 (MA values)
		.78 5 19
		.69 6 20
		.79 7 26
		.92 8 20
		.60 9 14

*Reproduced from Harris (1963).

TABLE 7 (continued)

WECHSLER INTELLIGENCE SCALE FOR CHILDREN																																					
CORRELATIONS																																					
Rotterman (1950)	50 six-year-olds	V .38 (IQ values) P .43 FS .47																																			
Hanvik (1953)	25 psychiatric patients, aged five to twelve years	FS .18 (rho, IQ values)																																			
Ellis (1953)	psychiatric outpatients, aged eight to thirteen	(IQ values) <table><tr><th>V</th><th>P</th><th>FS</th><th>AGE</th><th>N</th></tr><tr><td>.77</td><td>.67</td><td>.70</td><td>8</td><td>16</td></tr><tr><td>.63</td><td>.59</td><td>.67</td><td>9</td><td>34</td></tr><tr><td>.17</td><td>.26</td><td>.24</td><td>10</td><td>20</td></tr><tr><td>.45</td><td>.46</td><td>.50</td><td>11</td><td>17</td></tr><tr><td>.50</td><td>.68</td><td>.62</td><td>12</td><td>19</td></tr><tr><td>.05</td><td>.15</td><td>.13</td><td>13</td><td>17</td></tr></table>	V	P	FS	AGE	N	.77	.67	.70	8	16	.63	.59	.67	9	34	.17	.26	.24	10	20	.45	.46	.50	11	17	.50	.68	.62	12	19	.05	.15	.13	13	17
V	P	FS	AGE	N																																	
.77	.67	.70	8	16																																	
.63	.59	.67	9	34																																	
.17	.26	.24	10	20																																	
.45	.46	.50	11	17																																	
.50	.68	.62	12	19																																	
.05	.15	.13	13	17																																	

WECHSLER ADULT INTELLIGENCE SCALE	
CORRELATIONS	
Berdie (1945)	56 older, retarded adolescents .62 (Raw scores)
Gunzburg (1955)	adult mental defectives V .43 (IQ values) P .73 FS .63

MISCELLANEOUS TESTS	
CORRELATIONS	
Havighurst and Janke (1944)	70 ten-year-olds (IQ values) .63 Cornell-Coxe .48 Minnesota Paper Form-board
Pechoux, <i>et al.</i> (1947)	100 abnormal and delinquent children, aged five to eighteen years (MA values) .25 boys Porteus Mazes .27 girls Porteus Mazes
Ansbacher (1952)	100 ten-year-olds (Raw scores) .34 Tracing McQuarrie Test .23 Tapping of Mechanical .16 Dotting Ability
Harris (1959)	98 kindergarten children .22 (Raw scores) Raven Progressive Matrices (1947)
Spoerl (1940)	30 mentally retarded children, tested during three successive years Examination, presumably individual, not named (IQ values) .56 first year .67 second year .78 third year

Appendix E
The Structured Interview

L'Interview

Mais tu parles très bien, alors...

Quelle langue est-ce que tu parles chez toi?.....

Avec tes parents?.....

Avec tes frères et tes soeurs?.....

Avec tes amis?.....

Quand tu regardes la télévision?.....

Quand tu vas au parc?.....

Quand tu vas acheter la nourriture?.....

Quand tu vas aux autres magasin?.....

Est-ce que tu as des grandparents, des oncles, des tantes, des cousins, des
cousines ici à Montréal?.....

Quelle langue est-ce que tu parles avec eux? grandparents.....
oncles..... tantes..... cousins/cousines.....

Dis-moi, quel âge avais-tu quand tu es venu au Canada?.....

Alors, ça fait combien d'années que tu es ici au Canada?.....

As-tu jamais suivi des classes où tu as étudié la langue que tu parles chez
toi?, le

Où est-ce que tu as suivi ces classes-là?.....

Combien d'années as-tu passé dans ces classes-là?.....

Appendix F
Explanatory Letter for School Officials

July 5, 1990

Dear Mr.

Further to our telephone conversation I am providing you with a written copy of the pertinent details of the research project which we discussed on July 4, 1990. I am a graduate student at Concordia University working towards a Masters degree in Education (Child Study) under the guidance and supervision of Dr. Florence Stevens. Having completed all the formal course requirements I am now at the point of undertaking my thesis investigation, one which centers on the broad topic of the education of immigrant children. Specifically, my substantive question will focus on the possible role played by the children's mother tongue in facilitating their progress in school. Mother tongue is defined as that language first spoken by the child (i. e., the Italian language for a child of Italian origin, the Greek language for a Greek child, ect.)

I have already conducted an extensive literature review and the numerous research findings emanating from that global review indicate that mother tongue maintenance is a critical component in the overall scholastic achievement, personal adjustment and future well-being of these children. But this type of research has never been carried out in the Québec school system and I propose to do just that. The design of my research calls for an experimental group (comprised of immigrant children who follow some sort of out-of-school mother tongue instruction such as what is being presently offered by the PELO classes) and a control group (made up of comparable immigrant children who follow no mother tongue instruction). The two groups of children will then be compared on the basis of such variables as school-based achievement, reports and also some language comprehension and oral production skills. If the central premise of my thesis holds true and if the results follow the pattern which has been recorded in other countries, statistical analysis of the data collected should indicate that for immigrant children, mother tongue instruction is a positive, desirable factor to be maintained and fostered.

Since I am interested only in group results the subjects' names will not be used, thus ensuring total confidentiality. The actual disruption of the children's school day will be minimal because most of the comparison variables consist of regular school records and the language measures require approximately 15 minutes of one-on-one testing.

It is my hope to begin testing in the fall of 1990 and I would very much appreciate your assistance in permitting me to use children in your elementary schools as subjects in my sample. The specific grade level, ages and total number of subjects has not been as yet determined

Appendix G

Questionnaire for Locating Subjects Suitable for the Study

Appendix H
Parental Consent Forms

October 9, 1990

Dear Parents,

I wish to bring to your attention a research project which I am conducting as a graduate student in the Masters Program in the Department of Education at Concordia University. My study centers on the education of first generation immigrant children and the possible role that mother tongue instruction might play in facilitating the learning of the French language. Mother tongue is defined as that language first spoken by a child (i.e., the Arabic language for a child of Arabic origin, the Chinese language for a child of Chinese origin, etc.).

At this time I am looking for students from Ecole Primaire who would be willing to take part in this project. The research design requires participation from two groups of immigrant children---those who follow some sort of mother tongue instruction and those who do not follow any mother tongue instruction. Whether your child fits into one category or the other, the extent of his/her involvement in the project would be to take a 15 minute French language test which I would administer at the school.

Let me emphasize that your child's performance on the test will be recorded for research purposes only. It will in no way affect school grades. In addition, I wish to note that I am interested strictly in overall group results. The children's names and their individual performance will not appear in any written report, thus ensuring total confidentiality.

Le 9 octobre 1990

Chers parents,

J'aimerais vous faire part d'un projet de recherche que je mène comme une étudiante en Maîtrise à la Faculté de l'éducation à l'Université de Concordia. Mon étude se concentre sur l'éducation des enfants immigrants de première génération et sur l'influence que l'enseignement de la langue maternelle pourrait possiblement avoir en facilitant l'apprentissage du français. La langue maternelle est définie comme étant la première langue parlée par un enfant (l'arabe pour un enfant d'origine arabe, le chinois pour un enfant d'origine chinoise etc.).

En ce moment, je suis à la recherche d'étudiants de l'Ecole primaire qui seraient intéressés à participer à mon projet. La participation de deux groupes d'enfants immigrants (ceux qui suivent des cours pour l'apprentissage de leur langue maternelle et ceux qui n'en suivent pas) est nécessaire pour réaliser le plan de la recherche. Que votre enfant fasse partie d'un groupe ou de l'autre, il n'aura qu'à se soumettre à un test de français de 15 minutes que je donnerai à l'école.

Je tiens à vous assurer que les résultats de votre enfant au test serviront seulement aux fins de la recherche. Ceux-ci n'affecteront aucunement ses notes scolaires. De plus, je suis intéressée exclusivement aux résultats généraux du groupe. Les noms des élèves et leur performance individuelle n'apparaîtront dans aucun rapport écrit, assurant une entière confidentialité.

Votre appui à ce valable projet de recherche serait grandement