

**A FOUNDATION FOR CREE IMMERSION EDUCATION**

A thesis submitted by

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## ABSTRACT

This study provides selected research findings on which decisions can be based in planning an in-school, publicly-funded, Cree immersion program from kindergarten to grade 8 in Saskatchewan. The study was an analysis of language education research relating to the learner in immersion programs. Consequences of immersion education for student linguistic, psycho-social, and educational development were examined and reported.

Immersion programs for French, and to a lesser extent, for heritage languages in Canada, have been extensively researched. Immersion programs for Indian languages are few and are relatively unreported. There is, however, an increasing interest in the creation of immersion programs in Indian schools.

The analysis of research relating to publicly-funded French, heritage language, and Indian language immersion programs in Canada revealed support for the creation of an early total Cree immersion program. It could have neutral or positive effects on student linguistic, psycho-social, and educational development, under specific program conditions. The following consequences for students were projected:

1. a positive effect on Cree language proficiency.

Native-like proficiency levels would not necessarily result.

2. a neutral or positive effect on cognitive development.
3. a positive effect on attitudes toward the Cree language and culture, and a strengthening of Indian identity.
4. a neutral or positive effect on self-concept.
5. a lessening of social distance between the generations.
6. a positive effect on attitudes toward language learning and the immersion experience.
7. a positive effect on student understanding of cultural, social, and political aspects of Indian/non-Indian relations.
8. a neutral effect on English language and literacy development. Temporary lags in English literacy skills could be expected until after the teaching of English reading. Skill levels could become equivalent to those of comparable students in regular programs within one school year, with the possible exception of spelling.
9. a neutral or positive effect on overall educational achievement. Greater understanding of their Indian culture, lowered drop-out rates, and improved work study skills could be predicted.

Certain program characteristics which were identified as essential if all of the projected neutral or positive consequences were to be realized include:

1. an early total immersion program model.
2. an immersion centre setting.
3. introduction of Cree literacy before English literacy.

4. adequate Cree language resource materials, for all subjects and grades taught in Cree.
5. fluently bilingual and biliterate qualified teachers with specialized training in bilingual education.
6. subjects to be taught in Cree to be selected dependent on the availability of resource materials and qualified teachers.
7. a carefully planned and implemented program.

A Cree immersion program could result in enhanced cognitive and linguistic abilities to the extent that Cree were spoken in students' homes, and that students had opportunities to use Cree outside of the school.

Under identified program conditions, early total Cree immersion could have at least neutral effects on student self-concept, cognitive development, English language development and academic achievement. It could have positive effects on student Cree language proficiency, attitudes toward the Cree language and culture, attitudes toward language learning, sociopolitical perceptions, communication within the family, retention rates, work study skills, and knowledge about Indian cultures. Cree proficiency attained by students might not be native-like, but could be at a level which would allow them to learn through Cree, and to continue learning the Cree language and culture.

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## CHAPTER ONE

### Introduction

The use of the Cree language in Saskatchewan is declining in the 1980s. According to a Statistics Canada analysis of 1981 Census data, 28 percent of the ethnic Crees in Saskatchewan reported Cree as their mother tongue, but only 21 percent of the same people stated that they still used Cree as a primary language in their homes (Lawrance, 1984). Other Statistics Canada data showed that, in 1981, 75 percent of Canadian Status Indians over the age of 65 reported that they spoke an Indian language as a mother tongue, compared to 32 percent of those under the age of 14 (Phillips, 1985). A pilot sociolinguistic study done by the Saskatchewan Indian Languages Institute documented a situation in a northern Saskatchewan community in which a grandmother, who was a monolingual speaker of Cree, could not communicate with her grandchildren, who were monolingual speakers of English (Saskatchewan Indian Languages Institute, 1987b).

According to Freda Ahenakew, Director of the Saskatchewan Indian Languages Institute, the situation in which grandparents cannot communicate with their grandchildren is not an uncommon one in Saskatchewan in the 1980s. Ahenakew stated that there is a growing number of young Cree parents, especially in the southern part of

the province, who are not fluent in Cree, with the result that, in 1988, few among the new generation of Cree parents in southern Saskatchewan are able to use Cree as a primary mode of communication with their children. While some northern Cree communities have retained the use of Cree to a greater extent than is true for the southern Cree communities (Ahenakew, personal communication), the Statistics Canada data point to an overall pattern of loss of the Cree language in the province.

The Cree of Saskatchewan want to maintain their language. The Saskatchewan Indian Languages Institute, a program of the Federation of Saskatchewan Indian Nations which serves the Status Indians of Saskatchewan, has stated that its goal is "the preservation of Indian languages and cultures" (Saskatchewan Indian Languages Institute, 1988, p.5). In the same document, the Institute went on to say that it was "dedicated to a future in which all our descendants will speak our Indian languages and rejoice in our Indian cultures" (p.5). The Saskatchewan Indian Languages Committee, a coalition of provincial organizations working in the area of Indian language retention, has stated in a policy document that "our Indian languages are the only languages which have grown out of this land, and should be regarded by Canadians as national treasures" (Saskatchewan Indian Languages Committee, 1988, p.2).

Non-Indian Canadians also view the retention of Indian languages in Canada as being important:

With respect to Native languages, it is important that we maintain them...as a distinctive part of the Canadian heritage and as an essential in maintaining seriously threatened cultures which are, indeed, the original Canadian cultures...The Native languages are the windows on our country. They are associated with a value system and world view which have much to teach us about the balance of nature. (Fleming, p.13 in Cummins, Ed., 1983)

Schools have played a major role in the decreasing use of Indian languages in Canada. Tschanz, in her historical review of government policy with respect to Canadian Indian languages, has stated that

the education of Native People in Canada, first under the auspices of the church and subsequently under that [sic] of the federal government, has always followed an ideology of replacement. In the broadest sense, the purpose of educating Native people has been to replace their culture with the culture of the dominant white society...accompanied (by) a policy of...replacing indigenous languages with English or French. (Tschanz, 1980, pp.1-2)

In the first half of this century, it was common practice in many schools to punish Indian students for using their languages on the school premises (Tschanz, 1980). Jane Willis, a graduate of an Anglican residential school in Quebec, reported having been told when she entered school at eight years of age: " 'Rule Number One...There will be no Cree spoken in this school. Anyone caught speaking it will be severely punished.' " (Willis, 1973, p.46).

In the 1980s, schools have had an opportunity to contribute to the revitalization of Indian languages.

Many Indian leaders and Indian institutions believe that the school has a role to play in teaching Indian languages. In its 1972 position paper: Indian control of Indian education, the National Indian Brotherhood recognized the importance of Indian languages in Indian education: "There is a great need for formal instruction in the native languages..." (National Indian Brotherhood, 1972, p.10). Ida Wasacase, a Saskatchewan educator of Cree ancestry, stated: "Those of us involved with Indian education during the past few years have realized that the promotion of Indian languages in schools should be encouraged." (Wasacase, 1975). According to the late Ida McLeod, the first director of the Saskatchewan Indian Languages Program of the Federation of Saskatchewan Indian Nations, the Program had its origin in requests expressed by Indian parents in Saskatchewan in the early 1970s for the inclusion of their languages in the schools (McLeod, in Cummins, Ed., 1983). The work of the Program and its successor, the Saskatchewan Indian Languages Institute, has been based on the premise that Indian languages belong in schools (Saskatchewan Indian Languages Institute, 1988). The Saskatchewan Indian Languages Committee has phrased its position on the issue in this way: "We believe...that our Indian language should be the basis of the education of our children: for if education is truly the transmission of culture, we must educate our children

in our culture." (Saskatchewan Indian Languages Committee, 1988, pp.1-2).

In Saskatchewan, some Cree children speak only Cree when they enter school, some speak only English, and some speak both Cree and English (Lawrance, 1984). According to 1986 Census data, only 5,670 children in Saskatchewan between the ages of 5-19 spoke Cree as a mother tongue (Canada. Statistics Canada, 1987). Data on how many Cree children spoke English or how many spoke both Cree and English were not available.

A survey of in-school Indian language programs in Saskatchewan which was conducted by the Saskatchewan Indian Languages Institute in the fall of 1986 found that over 5,400 students in Saskatchewan were receiving some form of Cree language instruction. School principals, the respondents in this questionnaire survey, reported that some of the programs were designed for students who spoke only Cree, some for students who spoke only English, and some for both Cree and English speakers. At that time, there were 62 school programs in Saskatchewan which included an Indian language in their curriculum, and 50 of these, or 80 percent, involved the Cree language (Saskatchewan Indian Languages Institute, 1987a). None of these were immersion programs; almost all used the core approach.

Immersion education programs in Canada have been successful in producing levels of second language competence which are higher than levels commonly produced in core language programs (Genesee, in Shapson & D'Oyley, 1984). In core language programs, a second language is taught as a subject for a short period of time once, twice, or several times per week. In an immersion program, the second language is used as the language of instruction for several or all of the subjects in the curriculum. An identifying feature of immersion education is that it is designed for students who speak the dominant language within a geographic area; within immersion contexts in Canada, this language has been English.

The idea of using the immersion school model to teach Indian languages to monolingual English-speaking Indian children has been proposed by Martin (1975), Wasacase (1976), Burnaby (1976, 1980), the Ojibwe community of West Bay, Ontario (Mary Lou Fox, personal communication, 1987), the Mohawk community of Kahnawake, Quebec (Lambert, Genesee, Holobow & McGilly, 1984), and the Six Nations Band in Ontario (Hill, 1985). Indian institutions such as the Saskatchewan Indian Languages Institute (1988), and the Saskatchewan Indian Languages Committee (1988), have identified the need for Indian language immersion programs in Saskatchewan. A group of Cree parents and grandparents in Saskatoon, Saskatchewan who started a Cree immersion

daycare in January, 1988, has expressed a desire for in-school Cree immersion programs for their children and grandchildren (nehiyaw-waciscwanis council, 1988).

Among the requirements for the creation of a Cree immersion program is a statement of foundation. A statement of foundation for an educational program may be thought of as a statement which gives the anticipated educational advantages of such a program, and which identifies basic program issues that must be addressed. It is generally considered advisable to conduct foundation research before recommending or implementing educational change. A case in point is Directions, a document which might be considered as the foundation statement for the new core curriculum adopted in 1984 by the Saskatchewan Department of Education. The formulation and drafting of this document took over two years of study (Saskatchewan Education, 1984).

The educational advantages claimed for immersion programs which are examined in this study include: first, that students will learn a language more quickly and to a higher level of proficiency in an immersion program than in a core program; second, that the cognitive and attitudinal development of the immersion students will be comparable to, or better than those of students in regular English-medium programs; and third, that the English language development and general educational attainment of



the immersion students will be at a comparable or higher level than in a regular program. Basic program issues derived from the French, heritage language, and Indian language immersion experiences are discussed in terms of their relationships to the consequences of immersion for students.

#### Purpose of the Study

A statement of foundation for Cree immersion education does not exist. This creates a problem for those who desire to implement such a program in Saskatchewan. This study formulates a statement of foundation, insofar as the linguistic, psycho-social, and educational development of the students, and basic program issues are concerned.

#### Definitions of Terms

For the purpose of this study, the following terms and abbreviations will have these meanings:

Additive bilingualism: The acquisition/learning of a second or subsequent language in addition to the language already spoken by an individual. cf. "subtractive bilingualism".

Anglophone: A person whose mother tongue or dominant language is English.

Bilingual: The use of two languages, or an individual who uses two languages.

Bilingual program: An education program which uses two languages as languages of instruction.

Code-switching: A skill possessed by monolinguals or bilinguals which enables them to switch from using one style, register, or dialect of a language to another; or to switch from one language to the other.

Core language program: A school program in which the target language is taught only as one of the subjects in the school curriculum, as opposed to being used as the language of instruction in a subject area.

CTBS: Canadian Test of Basic Skills: a standardized battery of tests, normed on Canadian school-aged children.

Delayed immersion program: An immersion program which delays the use of the target language as the primary medium of instruction until the grade 5 level. It is usually preceded by several years of core target language instruction. cf. "late immersion program".

Dialect: A variety of a language.

Dominant culture: The culture associated with the dominant society in a country. Synonymous with "majority culture". cf. "ethnic minority".

Dual-track school: A school in which both an immersion program and a regular program are housed. cf. "immersion centre".

Early partial immersion program: A type of immersion program which usually begins with use of the target language 100 percent of the time in kindergarten, and up to 50 percent of the time starting in grade 1. Literacy is usually introduced in English.

Early total immersion program: A type of immersion program which begins in kindergarten and is normally characterized by the use of the target language as the language of instruction for 100 percent of the school day during at least the first two years of the school program, and thereafter, for varying proportions of the school program. Literacy is first taught in the target language, and subsequently, usually in grade 2 or 3, in the first language.

ESL: English as a second language.

Ethnic minority: Refers to a group within a society whose ethnic identity is other than that associated with the dominant culture within that society. cf. "dominant culture".

Ethnolinguistic group: A group of people with a common ethnic and linguistic affiliation.

Extended core program: A core second language program, supplemented by target language-medium instruction in one or two school subjects.

First language: The first language acquired by an individual. Synonymous with "mother tongue" and "native

language", although the use of the latter term will be avoided when possible because of possible confusion with the use of "Native" in some of the research literature to refer to Indian people.

Francophone: A person whose mother tongue or dominant language is French.

Heritage language: Any language in Canada other than the official or indigenous languages.

Home-school language switch: A term used to characterize a bilingual program in which the language of the school is other than the child's home language.

Immersion centre: A school or educational centre in which only an immersion program is offered. cf. "dual-track school".

Immersion program: A type of bilingual program intended for students whose first language is normally a majority language, and which is characterized by a home-school language switch. The target language is used as the primary language of instruction for all or some school subjects. cf. "submersion".

Indian: An individual defined as an Indian under the terms of Canada's Indian Act. Synonymous with "Status Indian". In this study, "Indian" and "Status Indian" are used interchangeably.

Indian languages: Languages of the indigenous peoples of North America, other than the Inuit people.

Indigenous person: An individual of North American indigenous ancestry, including, in Canada, Status Indians, non-status Indians, Metis, and Inuit.

Language acquisition: The process through which an individual develops the ability to use a language. The term is generally used to refer to first language development, and has also been used by researchers such as Krashen (1981) to refer to second language development which occurs in naturalistic settings. cf. "language learning". See discussion pp. 37-38.

Language learning: The process through which an individual learns to understand and use a language. The term is generally used in reference to second language development. Krashen (1981) and others have used the term in contrast with "language acquisition" to refer to language development in less-naturalistic settings, and in formal language teaching situations. cf. "language acquisition". See discussion pp. 37-38.

Language of instruction: The language used for teaching and learning within a school program. Often synonymous with "medium of instruction".

Late immersion program: An immersion program which starts at the grade 7 level or later, after several years of core or extended core instruction. cf. "delayed immersion program".

Maintenance bilingual program: A bilingual program intended to produce bilingual graduates. Both languages are used throughout the program. This type of program does not intend that a second language should replace the first language. It is a program intended to result in additive bilingualism. cf. "transitional bilingual program".

Majority language: The dominant language within a particular country or geographic area.

Medium of instruction: The language of instruction. For example, French-medium education refers to an education program which uses French as a medium of instruction.

Metis: An individual who identifies himself or herself as Metis because of an ancestor who was of Indian heritage.

Minority language: Any language other than the majority language which is used within a particular country or geographic area.

Monolingual: The use of only one language, or an individual who uses only one language. Synonymous with "unilingual".

Mother tongue: Synonymous with "first language".

Native speaker: An individual who speaks a specified language as a first language.

Non-official language: A language that does not have status as an official language within a particular country or part of a country. For example, any language other

than French or English is a non-official language in Canada. cf. "official language".

Non-standard dialect: Any dialect of a language that is usually associated with less power and prestige within society than is a standard dialect. cf. "standard dialect".

Non-status Indian: An individual of Indian ancestry who is not a Status Indian under the terms of Canada's Indian Act.

Official language: A language designated by a government as an official language of a country or part of a country. For example, French and English are official languages in Canada. cf. "non-official language".

Second language: The second language acquired/learned by an individual.

Semilingualism: Refers to the alleged partial ability of an individual to use one language (or two languages in the case of bilingual individuals).

Sequential bilingualism: Occurs when a child begins acquiring one language first, and then later begins acquiring/learning another. cf. "simultaneous bilingualism".

Simultaneous bilingualism: Refers to the acquisition of two languages simultaneously, usually from birth. cf. "sequential bilingualism".

Standard dialect: The dialect of a language that is considered to be the language of educated speakers. It is usually associated with greater power and prestige within society than is a non-standard dialect. cf. "non-standard dialect".

Status Indian: See "Indian".

Submersion: An educational practice which entails placing a student who speaks a minority language as a first language into an instructional program which requires exclusive use of the majority language, without adequate provision for second language learning by the minority student. cf. "immersion program".

Subtractive bilingualism: Refers to the replacing of the first language by a second, with the end result of monolingualism. In order to learn a second language, the first is sacrificed. cf. "additive bilingualism".

Target language: The language to be learned. Often synonymous with "second language".

Transitional bilingual program: A type of bilingual program intended for students who speak a minority language. The language of instruction for the first few years of schooling only is the minority language, with a shift to the exclusive use of the majority language. The intent is to enable students to proceed with their education using a language they know, until such time as they have learned the majority language well enough for it



to be used as the language of instruction. There is no intention of maintaining the first language. Transitional bilingual programs usually result in subtractive bilingualism. cf. "maintenance bilingual program".

#### Delimitations

The statement of foundation has been written for an in-school, publicly-funded immersion program, from kindergarten through grade 8, which is designed to teach the Cree language to English-speaking Status Indian children in Saskatchewan. The study examined research as it related to the learner in immersion programs. The consequences of immersion education for students' linguistic, psycho-social, and educational development were considered. Research relating to school administration or impact on the community was not discussed. The researcher used research reports published in North America since 1975.

#### Limitations

The following factors may limit the usefulness of the findings of this study:

1. Few Indian language immersion programs have been implemented, and of these, formal evaluations have been conducted for only one: the Mohawk immersion program at Kahnawake, Quebec. There have been few

studies investigating how Indian children learn languages. The foundation for Cree immersion has been based, to a large extent, on research relating to French and heritage language immersion education, research which may not be directly applicable to the Cree immersion context.

2. Certain limitations in the existing research done on immersion programs must also be considered as limitations of the present research. Individual differences tend to have been masked in second-language learning research in Canada (Genesee, 1978a). Few studies have been done of students who have withdrawn from immersion programs. Many evaluations have been narrow in scope, and have used only a quantitative approach to program evaluation. Factors such as teacher fluency, and teaching styles, as well as student achievement across the curriculum have not often been investigated. The data base for heritage language immersion research is very small, and no published data exist on students past grade 5 in heritage language immersion programs (Gillett, 1986).
3. A majority of the data used were secondary sources, in that they came from research reports which analyzed primary data. For example, two of the major sources of data in this study were meta-evaluations

of research on immersion programs (Swain & Lapkin, 1981; and Gillett, 1986).

### Methodology

The methodology employed in this study entailed a review and critical analysis of documents published since 1975 which concerned French, heritage language and Indian language immersion education in Canada. Data relating to the consequences of immersion education for students and basic program issues relating to these consequences were extracted from the documents and analyzed.

The use of literature analysis as a research method has been acknowledged by Borg and Gall (1983): "in recent years an increasing number of students have reported a literature analysis...for their thesis or dissertation, instead of conducting primary research. The conduct of a rigorous literature analysis makes a significant contribution to our understanding of research on a particular problem" (p.198). Unrepresentative sampling of the literature has been identified as a potential threat to the validity of research of this type. For this reason, a description of the data used in this study is provided.

### Data

The major type of document examined in this study is the published research report. Both primary research documents and reviews of primary research documents were consulted. When required and where possible, the published research documents were supplemented with unpublished reports, administrative documents, and interviews with educators, administrators, and researchers who have been involved in immersion education in Canada.

In certain instances immersion education was discussed in the context of childhood bilingualism. For this purpose, internationally-recognized researchers such as Cummins (1978, 1979a,b, 1984, 1986), Lightbown (1985), and McLaughlin (1984, 1985) were cited. Cummins is the director of the Heritage Language Unit at the Ontario Institute of Education. One of his major contributions has been the development of theory regarding the interrelationship between the first and second languages of majority and minority group children. Lightbown, of Concordia University in Montreal, is a well-known researcher in the field of language acquisition. McLaughlin has conducted a comprehensive, two-volume review and analysis of research on childhood bilingualism (1984, 1985).

In the case of French immersion, Swain and Lapkin's 1981 review of ten years of French immersion research in

Ontario was selected as a major source in this study because of the authors' reputations as being "among the foremost researchers on immersion" (Stern, 1984, p.6), and because of the comprehensive coverage of their review. Swain and Lapkin reviewed and analyzed 22 evaluations of early total, early partial, and late French immersion programs from five different education boards in Ontario. In many cases, the researchers compared the Ontario findings with evaluations of immersion programs in other provinces: Quebec, Alberta, and New Brunswick, for example. A number of studies reviewed by Swain and Lapkin (1981) are cited in this study on the basis of their review by these authors. Some studies of French immersion were consulted directly; these include Lambert and Tucker (1972), Swain (1981a,b), a Manitoba study (Manitoba Department of Education, 1981), Genesee (1983), Shapson and D'Oyley (1984), a federal government report (Canada. Commissioner of Official Languages, 1984), and Genesee, Lambert & Holobow, (1985). The Manitoba study (1981) was selected for study as an example of primary data relating to French immersion in Canada. The results of the Manitoba study were compared to those of Swain and Lapkin (1981).

In terms of heritage language immersion, Gillett's 1986 meta-evaluation of heritage language partial immersion programs in Canada was consulted as a major

source. Gillett reviewed and analyzed research reports of French immersion and heritage language immersion programs. Included in his study were more than 50 research reports and other documents relating to heritage language education in Canada. Some of the research documents included in Gillett's work are cited in this study on the basis of his 1986 review. Other documents relating to heritage language immersion education which were used in this study include papers or studies by Lupul (1976), Cummins (Ed., 1983; 1983), Cipywnyk (1984), Shapson and D'Oyley (1984), the Alberta Department of Education (1984, 1985, 1987), the Manitoba Department of Education (1984-85a,b), and the Saskatchewan Department of Education (1986). As in the case of the research method used with French immersion, the Manitoba studies (1984-85a,b), which had not been completed in time to allow inclusion in Gillett's (1986) study, provided a source of primary data which was used to compare to Gillett's findings.

Evaluations of Indian language immersion programs are scarce, partly because few programs exist, and partly because few formal evaluations have been done of existing programs. Because so few evaluations have been conducted, all available evaluations were used in this study. Formal evaluations of an Indian language immersion program in Canada have been conducted in relation to the Mohawk immersion program at Kahnawake, by a team of researchers

at McGill University. Evaluations using standardized tests of English and academic achievement have been done on an annual basis since 1984, at the request of the Kahnawake education staff (Lambert, Genesee, Holobow & McGilly, 1984; Holobow & Lambert, 1985; Holobow, Lambert & Chartrand, 1986; and Holobow, Genesee & Lambert, 1987). These four evaluation reports, all of which contain primary data, represent the main source of research results relating to Indian language immersion which was used in this study. These evaluations were supplemented by interviews with educators involved in Indian language immersion programs at Kahnawake, Six Nations, Ontario, and West Bay, Ontario, and with some Cree educators in Saskatchewan. A number of unpublished administrative documents and reports from the Woodlands Indian Cultural Centre, Ontario, and from the Saskatchewan Indian Languages Institute in Saskatoon were used. Other works which were used included studies of language in Indian education such as Burnaby (1976, 1980), and studies of other forms of bilingual education for Indian students, such as Vorih and Rosier (1978).

#### Outline of the study

This study is organized into six chapters. Chapter 1 includes sections on the purpose of the study, definitions

of terms used in the study, delimitations, limitations, methodology and the significance of the study.

The linguistic consequences for students in French, heritage language, and Indian language immersion education programs are discussed in Chapter 2. The chapter includes a description of immersion education in Canada, a discussion of childhood bilingualism, and a summary of the effect of immersion education on the target language proficiency levels of students. The linguistic consequences for students are discussed with reference to relevant program issues.

The psycho-social consequences of French, heritage language and Indian language immersion education for students are examined in Chapter 3. Those aspects of immersion students' psycho-social development which are addressed include cognitive development, self-concept, and attitudes. Attitudes towards the students' own language, towards the target language, towards the target culture and ethnolinguistic group, towards school, and towards language learning are discussed, all with reference to relevant program issues.

The educational consequences of French, heritage language, and Indian language immersion education for students are examined in Chapter 4. The academic achievement and English language achievement of immersion students are considered in the context of those program



issues which appeared to be related to the educational impact of immersion on students.

In Chapter 5, the results of the analyses in Chapters 2, 3, and 4 are discussed in terms of their implications for Cree immersion in Saskatchewan. The differences between the Cree immersion context in Saskatchewan and the French, heritage language, and Indian language immersion contexts in Canada are outlined, and the educational jurisdictions of Indian education in Saskatchewan are described.

Chapter 6 contains a summary of the research findings, conclusions of the research, and recommendations following from the study.

#### Significance of the Study

It is anticipated that the statement of foundation for Cree immersion education will be used to implement a Cree immersion program in Saskatchewan. Once a Cree immersion program has been implemented, the statement of foundation will facilitate the conduct of program evaluation studies which in turn should provide a firm basis for continuing development and adaptation of the program model which emerges.

This study represents a contribution to the body of research on Indian language education and immersion education, in that it is the first time an attempt has

been made to examine the use of an immersion approach for teaching an Indian language by formally and systematically analyzing the research on existing immersion programs.

## CHAPTER TWO

## Linguistic Consequences of Immersion Education

The linguistic consequences for students enrolled in French, heritage language, and Indian language immersion programs are discussed in this chapter. The chapter begins with a description of publicly-funded immersion education in Canada, followed by a discussion of issues related to childhood bilingualism. The major topic of this chapter: the effect of immersion education on the target language proficiency levels of students, is then discussed. Program issues, such as partial versus total immersion formats, are considered as they pertain to the linguistic consequences of immersion.

Immersion education in Canada

The origins of publicly-funded immersion education in Canada were in St. Lambert, Quebec, in the 1960s (Lambert & Tucker, 1972). A initial group of 12 parents in St. Lambert met in October of 1963 to discuss their concerns regarding the failure of the existing education system to produce graduates with a communicative knowledge of French (Melikoff, in Lambert & Tucker, 1972). Their concerns were expressed within the context of a growing recognition by Quebec Anglophones of the importance of the French language

in Quebec and in Canada. Olga Melikoff, one of the founding members of the St Lambert parents group, reported that in 1963, the St. Lambert parents believed that "their children were being shortchanged and should have the opportunity to become 'bilingual' within the school system, since it was so difficult to achieve this skill outside of school." (Lambert & Tucker, 1972, p.220).

After two years of meeting with other parents, of lobbying their school board, and of consulting language learning and teaching experts, the parents group finally obtained the reluctant permission of the school board to set up one experimental French immersion kindergarten class in September, 1965. The initial years of the 'experiment' were not easy (Melikoff, in Lambert & Tucker, 1972), but the idea 'caught on', and has subsequently spread across Canada (Stern, 1984), and to languages other than French (Jones, 1984; and Lambert et al., 1984).

Immersion education has come to be defined in the following way: "a type of bilingual education in which a second language...is used along with the children's native language for curriculum instruction during some part of the students' elementary and/or secondary education" (Genesee, 1983, p.3). Immersion programs have been characterised by certain pedagogical and sociocultural conditions (Lambert & Tucker, 1972; Swain & Lapkin, 1981, Genesee, 1983):

1. Immersion programs involve a 'home-school language switch', in that the primary language used by the teacher, during the initial phase of the program, is not the primary language used in the student's home (Lambert & Tucker, 1972).
2. During the course of an immersion program, both the first language and the second language of the students are used as languages of instruction in addition to being taught as subjects through language arts instruction (Genesee, 1983).
3. Students are permitted to use their first language in school during the initial phase of the program, and they continue to use their own language, at home, and to some extent at school, throughout their immersion schooling (Genesee, 1983). The second language does not replace the first, but is added to it. Immersion education is intended to result in additive bilingualism.
4. During the initial phase of immersion programs, the focus is on the development of students' comprehension skills. Their speaking skills are not forced to develop until after they have developed some ability to understand the second language (Swain & Lapkin, 1981).
5. The emphasis is on the communicative use of the target language. Target language errors made by immersion students are not given undue attention (Genesee, 1983).

6. The teachers are usually bilingual in the target language and in the students' first language, but they act as 'monolingual models' of the target language (Genesee, 1983).
7. It is intended that the immersion students follow the same curriculum as they would in the regular English program (Swain and Lapkin, 1981).
8. It is intended that immersion education provide a 'naturalistic' setting for second language learning. The second language is learned 'incidentally', with little attention devoted, at least at the kindergarten to grade 3 level, to explicit teaching about the second language (Swain & Lapkin, 1981).
9. Enrolment is voluntary. Parents are given the choice of placing their child in either an immersion program or a regular English-medium program.

Excluded by this definition are programs in which the target language is taught only as a subject, that is, core language programs; programs in which the same subject matter is covered twice, either consecutively, or concurrently, in both languages; and programs in which the school excludes entirely the first language of the students, that is, submersion (Genesee, 1983). Submersion in English-medium schools generally results in the loss of the child's first language, and is therefore thought to result in what has been called 'subtractive bilingualism' (Lambert, 1975).

An alternative to the early total immersion program on the one hand, and core language programs on the other, is the extended core program (Halpern, in Shapson & D'Oyley, 1984). "The extended approach is a combination of a core language teaching program plus the study of a content area through the medium of the second language." (p.20). In some cases, extended core programs use the target language as a medium of instruction for two content areas (Ukrainian Canadian Committee, n.d.).

Immersion education has assumed various forms. Early total immersion, early partial immersion, and late immersion are three of these (Swain, 1978).

Early total immersion is a type of immersion program which generally begins in kindergarten and is characterized by the use of the target language as the language of instruction for 100 percent of the school day during at least the first two years of the school program, and thereafter, for varying proportions of the school day. Literacy is first taught in the target language, and subsequently, usually in grades 2, 3, or 4, in the students' first language. There are three phases in an early total immersion program: in the first phase, usually from kindergarten to grade 2, all instruction is given through the target language. In the second phase, usually from grade 3 to the end of elementary school, both the first and the second languages are used as media of instruction, and

in the third phase, usually at the secondary level, certain courses are taught through the target language (Genesee, in Shapson & D'Oyley, 1984).

Early partial immersion is a type of immersion program which may begin with use of the target language for up to 100 percent of the time in kindergarten, and for up to 50 percent of the time starting in grade 1 (Genesee, in Shapson & D'Oyley, 1984). In one partial French immersion program described by Swain and Lapkin (1981), there was a pattern of 50 percent usage of the target language and 50 percent usage of English until the end of grade 8. Literacy is usually introduced in English, followed at the next grade level by the teaching of literacy in the target language. From the inception of early partial immersion programs, some subjects are taught in French, and others are taught in English.

Late immersion is a type of immersion program which begins using the target language as the main language of instruction at the grade 7 or 8 level, after several years of core or special preparatory target language instruction. For one or two years at the beginning of late immersion programs, students receive the majority of their instruction through the target language, followed in later grades by certain subjects taught through the target language, or advanced second language arts courses (Genesee, in Shapson & D'Oyley, 1984).



### French immersion

From its beginning in one Quebec community in the 1960s, the French immersion model has spread across Canada, and to all grade levels (Stern, 1984). In the 1987-8 school year, there were French immersion programs in every province and territory of Canada, and an estimated 202,066 of the students enrolled in Canadian schools were enrolled in some form of French immersion program (Canadian Parents for French, 1988).

Many variations of the immersion model are exhibited among the in-school French immersion programs in Canada. There are early total immersion programs, early partial immersion programs, delayed immersion programs, and late immersion programs (Stern, 1984). Early partial French immersion programs are usually characterised by the use of French to teach mathematics. An example of an early partial French immersion program is that of the Elgin County Board of Education in Ontario. In this program, the use of French as a medium of instruction began in grade 1. Starting in grade 1, mathematics, music, and French language arts were taught in French. Literacy was introduced first in English, and subsequently in French. From grade 3 on, mathematics, science and, sometimes, physical education were taught in French; the remainder of the school subjects were taught in English (Swain, 1978).

### Heritage language immersion

Publicly-funded heritage language immersion programs exist exclusively in the three prairie provinces of Canada. Because of provincial legislation in Manitoba, Saskatchewan, and Alberta, heritage language immersion in these provinces has been limited to a partial immersion format (Gillett, 1986). In Alberta, enabling legislation was passed in 1971 and 1974. In 1974-75, as the result of lobbying by the Alberta Ukrainian Language Committee, a pilot Ukrainian partial immersion project was implemented. Similar enabling legislation was passed in 1974 and 1978 in Saskatchewan, and in 1980 in Manitoba (Canadian Ethnocultural Council, 1988).

In the Alberta Ukrainian partial immersion programs, arithmetic, reading, science, and English language arts were taught in English for 50 percent of the school day. Social studies, physical education, art, music, Ukrainian language arts, and if applicable, religion were taught in Ukrainian for the remainder of the day. Literacy skills were introduced in English at the grade 1 level, and at the grade 2 level, in Ukrainian. At the junior high school level, the proportion of Ukrainian instruction dropped to 30 percent, and at the senior high school level, to 20 percent (Gillett, 1986).

Most heritage language partial immersion programs in Canada have involved the Ukrainian language, but in addition to the Ukrainian partial immersion programs in Alberta,

Manitoba, and Saskatchewan; Hebrew, Yiddish, German, Arabic, and Mandarin partial immersion programs have been established in Alberta, and German and Hebrew partial immersion programs are in place in Manitoba (Gillett, 1986). Most of these programs have not extended beyond the elementary level; only Ukrainian and Hebrew programs in Alberta have extended into the secondary level. The model established for Ukrainian partial immersion programs has been used by the other language programs (Gillett, 1986).

#### Indian language immersion

The first Indian language immersion program in Canada was an Ojibwe immersion program on the West Bay Reserve on Manitoulin Island in Ontario. According to Malvina Corbiere, who was one of the teachers in the program (personal communication, March, 1988), the pilot project started in the mid 1970s with one pre-kindergarten class, and was discontinued in the late 1970s when the pilot group had completed grade 2. Corbiere reported that Ojibwe was the primary language of communication at the pre-kindergarten and kindergarten levels, but beginning in grade 1, English and Ojibwe were each used for half of the school day. Although reasons why the program ended are unclear, they did not appear to be related to pedagogical factors.

In the 1981-82 school term, a Mohawk partial immersion program was initiated at Kahnawake, Quebec. Students in

the Kahnawake school, now called the 'Karonhianonhnha School', had been taught Mohawk as a subject for over 20 years, but their resulting Mohawk language skills were not believed to be high enough by some of the community members (Edward J. Cross, Principal, Karonhianonhnha School, personal communication, March, 1988).

In 1984-85, the Mohawk partial immersion program at Kahnawake was changed to a total immersion program, because it was felt that there was too much dependency on English in the partial immersion program. In the 1987-88 school year, the total Mohawk immersion program extended from pre-kindergarten (nursery) to the grade 5 level. In the total immersion program, 100 percent of the instruction was in Mohawk, from nursery through grade 3. Literacy was first introduced in Mohawk. In grade 4, English instruction began, and English was used for 40 percent of the school day. In grades 5 and 6, the use of English increased to 60 percent, and the use of Mohawk was reduced to 40 percent. Until grade 4, all subjects were taught through Mohawk. Starting in grade 4, English language arts was taught through English, and social studies was taught partly through English, and partly through Mohawk. The program was housed in a dual-track school, that is, in the same building as a regular English program (Cross, personal communication, March, 1988).

In September of 1986, Cayuga and Mohawk total immersion programs were implemented at Six Nations Reserve, Ontario, as the result of more than two years of lobbying and hard work by members of the Six Nations community, the staff of the Woodlands Indian Cultural Centre, and others. Both programs began at the kindergarten level, and in the current school year, 1987-88, the programs have been extended to grade 1. There are plans to continue adding one grade per year in each program (Amos Key, Native Language Program Co-ordinator, Woodland Indian Cultural Centre, personal communication, March, 1988).

In summary, there were, in the 1987-8 school year, three Indian language immersion programs in Canada. All involved Iroquoian languages; there were Mohawk programs at Kahnawake, Quebec and at Six Nations, Ontario; and a Cayuga program at Six Nations. All were total immersion programs, and all were in the process of extending at the rate of one grade per year. In the 1987-8 school year, the Kahnawake total immersion program included the pre-kindergarten to grade 5 levels, and the Six Nations programs encompassed kindergarten and grade 1. All three programs were situated on Indian reserves.

#### Childhood bilingualism

The linguistic consequences of bilingualism for young children have been discussed and summarized by Lightbown

(1985) and McLaughlin (1984, 1985) with reference to existing psycholinguistic research. According to Lightbown, there was no evidence that the rate of development of each of a child's two languages would be any different from the rate of development of a monolingual child's language. Her findings were supported by McLaughlin, who concluded that "first- and second-language acquisition involve essentially the same general...cognitive strategies" (1985, p.225).

The term 'language acquisition' has been commonly used to refer to first language development, while 'language learning' has been used with reference to second language development, especially in classroom settings. Since the mid-1970s there has been a trend towards downplaying the effectiveness of teaching in relation to language learning (Stern, 1983). Krashen (1981) has characterized language acquisition as occurring in naturalistic settings, as being intuitive, and as being less conscious and deliberate than language learning. He has described language learning as being more conscious, deliberate, and analytic than language acquisition.

McLaughlin has commented that "the interplay of variables in the classroom setting is so complex that one must be wary of universal statements about the language learning process in the school" (1985, p.25). In an immersion setting, second language development is similar to first language acquisition because it is intended that the

target language develop incidentally through its use as a language of instruction (Swain & Lapkin, 1981). It is dissimilar to language acquisition and similar to language learning in that there is relative isolation from first language speakers of the target language, in that student attitudes and motivation play a large role, and in that formal language teaching methods are used to varying extents. Stern has observed that "the learning-acquisition distinction is not common outside educational linguistics" (1983, p.413). For the purposes of this study, it will be assumed that the target language development of immersion students may be described in terms of both acquisition and learning.

Lightbown and McLaughlin have addressed the question of the interaction between the bilingual's two languages. McLaughlin found no support for the commonly held view that interference between the two languages is an inevitable and pervasive consequence of childhood bilingualism, with negative results for the individual (1985). He reported that research supported the idea that "there is a single language system that forms the basis for acquisition, storage, and retrieval of first and second languages" (1984, p.230). It is considered to be advantageous for children to acquire/learn each language in a separate context. When they do this, they are likely to be able to avoid unintentional mixing of the two languages (Lightbown, 1985).

There is also the matter of code-switching. This refers to a phenomenon, characteristic of both monolinguals and bilinguals, which lay people sometimes view as a problem and linguists view as a valuable skill (Stern, 1983). Code-switching refers to an individual's ability to switch from one register, style, or dialect of a language to another register, style, or dialect of the same language; or from one language to another language.

Some researchers have made a distinction between code-switching as intentional mixing of languages, and interference as unintentional mixing (Lightbown, 1985). However, the reasons for switching are often complex and sometimes impossible to determine simply by observation. In reality, when conversing with other bilinguals, a bilingual will normally feel free to code-switch, but when interacting with monolinguals, the same bilingual will be required to exercise his ability to keep the two languages separate.

Another issue related to the interaction between a bilingual's two languages is the relative level of fluency which it is possible to attain in the two languages. There are two major questions: one, to what extent it is possible to become a 'balanced bilingual', and the other, to what extent it is possible to be 'semilingual'. A 'balanced bilingual' refers to an individual who can use each of his two languages equally well. A 'semilingual' refers to an individual who can use neither language well.



With respect to the first question, Lightbown reported that research has indicated that when children learn two languages in separate contexts, they will develop "a sort of split competence", particularly at the lexicon and discourse levels (1985, pp.6-7). In other words, perfectly balanced bilinguals are extremely rare, not because such competence is impossible, but because most bilinguals develop language competence in relation to separate contexts which reflect their real-life sociolinguistic needs.

In relation to the second part of the question, that is, regarding 'semilingualism', a debate as to its very existence has been taking place over the past 10 or so years (Cummins, 1979a, Skutnabb-Kangas & Toukomaa, 1979; and Brent-Palmer, 1979). Skutnabb-Kangas and Toukomaa (1979) have argued that submersion education for minority language children may result in their becoming semilingual in both their first and their second languages.

Martin-Jones and Romaine (1986) have presented the following position on the 'semilingualism' debate. They have contended that the concept of semilingualism is related to a 'deficit' view of minority education and a 'container' view of language. The authors agreed with Hymes (1980) that there are variations among native speakers with respect to linguistic competence and performance. However, they have argued that until such time as we have an adequate knowledge base regarding what constitutes 'full competence', for

monolingual speakers of majority languages and monolingual speakers of minority languages, it is theoretically impossible to claim that a bilingual has half or partial competence in both languages.

Burnaby (1980, 1982) and Toohey (1982) are among those who have pointed out that many Indian children in Canada have been educated in submersion education programs. The children they referred to were those who entered school as first language speakers of Indian languages, but with little or no knowledge of English. In the case of many of these children, who were educated entirely through the medium of English, with no pedagogical planning to accommodate their needs as second language learners, their first language development suffered and English, their second language, tended not to develop in at a desirable rate.

Lightbown (1985) concluded her review of the linguistic consequences of bilingualism by stating that when bilingualism is socially valued, it may be possible for second language learning to be associated with enhanced knowledge and performance in the first language. She cautioned, however, that it is important for a bilingual to maintain his or her first language while acquiring the second. In other words, subtractive bilingualism and submersion education put a language learner at risk.

McLaughlin (1984, 1985) was more conservative than Lightbown (1985) with respect to the advantages of

bilingualism: he concluded that while the research was inconclusive regarding the beneficial effects of learning a second language upon the first, it was safe to say that there were no negative effects on either of a bilingual's languages which could be attributed solely to being bilingual. In general, the research findings (Burnaby, 1980; Lightbown, 1985; and McLaughlin, 1984, 1985) have supported the view that the educational and social conditions surrounding an immersion program which is "properly understood and implemented" (Cummins, 1984, p.177) are considered to be beneficial, in that immersion education entails additive, as opposed to subtractive, bilingualism.

#### Target Language Proficiency

What is now discussed is the effect of immersion on proficiency in the target language: that is, the students' second language which is the medium of schooling in immersion programs. The primary purpose of implementing an immersion program is to produce high levels of proficiency in the target language. An analysis of the research findings from studies of existing immersion programs helps to determine what the actual outcomes have been with respect to student proficiency in the target language. The implications of these findings for Cree immersion are discussed. The research results from studies of French,

heritage language, and Indian language immersion programs are presented.

### French Immersion

Swain and Lapkin (1981) analyzed 22 evaluations of French immersion programs in Ontario. Evaluations of early total, early partial, and late immersion programs were included in their investigation. They reported that a variety of measures have been used to assess the oral and written French language proficiency of students in immersion programs. Among these have been the 'test de rendement en français', a test which has been normed in Canada, and which involves the identification of sounds, word knowledge, formal grammar, spelling, and reading comprehension; a French comprehension test (Barik 1975, 1976); reading tests; oral and written comprehension tests developed by the Ontario Institute for Studies in Education (OISE); tests involving real life tasks; and oral and written cloze tests. Extensive testing has been done with students from kindergarten to grade 12 in the various types of immersion programs, although not as much testing has been done in early partial French immersion programs and late French immersion programs.

The results, as reported by Swain and Lapkin (1981), supported the view that students in all types of immersion programs learned more French than did students in core

language programs. Early total immersion students were reported as having attained levels of French language proficiency comparable to those of Francophones educated in French-medium schools in Quebec, although descriptive evaluations have suggested that the French produced by the early immersion students is and remains "non-native-like" (Swain & Lapkin, 1981, p. 127). This last finding has been supported by Spilka (1976), Will (1979), and Harley (1984).

Spilka (1976) reported the results of an assessment of the oral French of the St. Lambert pilot group at grade 6, and of the follow-up group at grade 5. The findings indicated that the immersion students made many more errors than did the Francophone control groups, and that the oral French performance of the immersion groups was much more variable than that of the control groups. Errors made by the immersion groups included errors of avoidance, errors of omission and deletion, and errors due to interaction with their mother tongue.

Will (1979) studied the oral French of a group of grade 4 French immersion students in an urban school in Saskatchewan. She found that while their French was understandable, many imperfections were evident. Student errors were identified on the basis of pretests, and corrective exercises in the form of games were designed by the researcher. After three weeks of treatment, the students were tested again. Will found that their French

more closely approximated Standard French, but that some errors were more fixed than others. For example, errors involving the incorrect use of auxiliary verbs did not tend to lessen in frequency following formal instruction, whereas errors involving omission of pronouns with reflexive verbs did tend to occur less frequently.

Harley (1984) reported that when early total French immersion students were tested at the grade 5/6 level, and again at the grade 9/10 level, they were still making a variety of grammatical and sociolinguistic errors. Late immersion students performed at lower levels on the same French language assessment measures than did the early total immersion students.

Swain and Lapkin (1981) reported that students in early partial and late immersion programs attained higher levels of French language proficiency than did students in core programs, but not as high as levels attained by students in early total immersion. In one study, early partial immersion students attained levels similar to early total immersion students at one grade level below them, when the partial immersion students were tested at the grade 8 level. The researchers noted that the conclusions regarding the early partial programs must be viewed as tentative ones, because of the small numbers of students who were included in the one partial immersion program for which research results were available.

Proficiency levels attained by late immersion students were not as high as those attained by early total immersion students or by bilingual Francophones, but higher than those attained by core French students (Swain & Lapkin, 1981). Swain and Lapkin noted however that in studies of late immersion programs in Montreal, French proficiency levels of late immersion students were found to be similar to those attained by students in early total immersion programs when students were tested in grades 10 and 11. The fact that the Montreal results were better than the Ontario results may be explained by the more intensive, and more recent exposure to French experienced by the Montreal late immersion students, in comparison to the Ontario late immersion students (Swain & Lapkin, 1981).

According to Swain and Lapkin's (1981) review, immersion centres were associated with higher levels of French proficiency among students than were dual-track schools. Immersion centres are schools where only French is used, whereas in dual-track schools, there is both an English track and a French track, and the administration of the school is conducted in English.

In descriptions of language proficiency, a distinction has been made between communicative skills, and literacy-related skills which are required for academic success (Cummins, 1976a,b). Swain and Lapkin (1981) reported evidence that French immersion students' communicative

ability in the French language was not related to IQ. Cummins (1979a,b) has argued that while literacy-related skills in the target language are related to students' IQ, there is no stronger correlation than exists between IQ and literacy-related skills in the first language for the same students. The implications of these findings are that students with all levels of IQ may develop French communicative competence in immersion programs, and students with below average IQs may attain literacy-related skills to the same levels that they are able to reach in their first language.

Another research finding reported by Swain and Lapkin (1981) was that immersion students tended to respond well when someone spoke to them in French, but that they tended not to initiate interactions in French. This, they suggested, may have been due to extra-school factors; in particular, to a lack of adult target language speakers to serve as models, and to a lack of opportunities to use the target language outside of school.

To summarize Swain and Lapkin's (1981) findings with respect to the French language proficiency of immersion students, early total immersion students were almost as linguistically proficient as Francophones, students in immersion programs attained higher proficiency levels than students in core programs, early total immersion produced better results than early partial and late immersion, and



immersion centres were better than dual-track schools. They found that while early total immersion students generally had as good receptive French language skills as their Francophone peers, their productive skills were not quite as good.

Several studies (Spilka, 1976; Will, 1979; and Harley, 1984) reported evidence of non-native-like French among immersion students. One study (Harley, 1984) reported that this variety of French remained at least until the secondary school level.

A study of French immersion programs in Manitoba (Manitoba Department of Education, 1981) yielded results very similar to those reported by Swain and Lapkin for programs in Ontario and Quebec. Students in early total, early partial, and late French immersion programs were compared to Francophones in French schools, and programs in dual-track settings were compared to those in immersion settings. The students' proficiency in speaking, reading, and writing French was assessed.

The researchers found that the early total immersion programs in immersion centre settings produced the highest levels of French proficiency, followed by early total immersion programs in dual-track centres, then partial immersion programs, and then late immersion programs. While the French proficiency of students in early total immersion programs was very good, neither their oral nor their written

skills were quite as good as those of the Francophones in the study. In conclusion, the results of the Manitoba study (1981) confirmed the results of Swain and Lapkin's findings (1981), except that the French proficiency of early total immersion students in Manitoba was found to be lower than that of their Francophone peers.

#### Heritage Language Immersion

Gillett (1986) studied publicly-funded heritage language partial immersion programs in Canada. In surveying the evaluations of the levels of heritage language proficiency achieved by students in these programs, he found that the partial immersion students had been compared to neither native speakers of the languages, nor to students in core heritage language programs. Rather, the target language proficiency of heritage language partial immersion students had been assessed in one of three ways. The Edmonton Public School Board and the Edmonton Catholic School System compared the Ukrainian language pre- and post-test scores of students in their Ukrainian partial immersion programs. The target language proficiency of students in German partial immersion programs in Edmonton, and of students in Ukrainian partial immersion programs in Manitoba were assessed by administering end-of-year batteries of target language tests. The target language proficiency of students in Ukrainian and German programs in Manitoba was

also assessed by questioning parents and teachers on the students' progress.

Gillett noted that a difficulty related to the evaluation of heritage language proficiency in all of these programs was that there were "no age-grade cohorts of native speakers of the heritage languages" in Canada (Gillett, 1986, p.144). This meant that, in contrast to the evaluations which had been done in French immersion, students who were learning heritage languages as second languages through immersion programs could not be compared to students who spoke these languages as their mother tongue.

The results of the evaluations, as reported by Gillett, were that Ukrainian partial immersion students at all grade levels made "significant progress" (p.147) in mastering Ukrainian. It should be noted that test results were reported only for students up to Grade 5. When teachers and parents were questioned, the majority said they were "satisfied" or "very satisfied" (p.147) with the students' Ukrainian language development. A majority of teachers observed that students' receptive skills were better than their productive skills.

Having analyzed these evaluations, Gillett (1986) concluded that the results were generally positive, in the sense that students appeared to be achieving satisfactory levels of competence in the heritage languages. However,

because of limitations in the research, he believed there remained a number of questions which needed investigation. For example, what did the results mean in absolute terms? Was there a relationship between teacher fluency in the target language and the levels of proficiency reached by the students? How would an immersion centre setting, as opposed to the existing dual-track settings of heritage language programs, affect levels of heritage language acquisition? If students remained in heritage language immersion programs to the end of Grade 8, would higher levels of proficiency result?

To the extent that the French immersion research results are applicable to the heritage language education context, total heritage language immersion programs would produce higher levels of target language proficiency than would partial immersion programs; immersion centres would produce higher levels of heritage language proficiency than dual-track schools; and students who maintained their enrolment in the heritage language immersion program until Grade 8 would attain higher levels of heritage language proficiency than those who withdrew prior to Grade 8. These predictions would need to be tested.

Gillett went on to speculate about whether minority ethnic group membership might have a beneficial effect on target language skills. French immersion students were, by definition, excluded from membership in the target language

ethnic group, with the result that they may have had few opportunities for social contact with native speakers of the target language when they graduated from immersion programs. It has been suggested that this lack of social contact has had a limiting effect on the development of French language skills (Swain & Lapkin, 1981). In the case of both heritage language and Indian language immersion, students may have the advantage of membership in the ethnic group associated with the target language. This may, in turn, have a beneficial effect on the development of their target language skills. This question requires investigation.

The acquisition of Ukrainian morphology by students from grades 1 to 7 in an Edmonton Ukrainian partial immersion program was studied by Sokolowski (1985). He found that the students had considerable difficulty in acquiring the particular morphological feature he studied. Sokolowski concluded that a non-standard variety of Ukrainian might be developing among the students in this program.

Sokolowski speculated that students' fossilization of morphological errors in an immersion program may be the result of several variables:

1. the learner's attitude and motivation when the target language has low social prestige.
2. the emphasis on communication rather than language mastery.

3. limited exposure to the target language outside the immersion classroom in a dual-track school, or outside the school in an immersion centre program. This situation becomes more critical when the immersion teacher is less than fully fluent, and when the target language is not spoken in the home.
4. social pressure experienced among students to speak like their peers, most of whom are also learning the target language (Sokolowski, 1985).

Cipywnyk (1984) has concurred with Sokolowski's conclusions, and has suggested that the target language proficiency levels attainable by students in the Ukrainian partial immersion programs in western Canada are limited by three factors:

1. the fact that target language development requires extra-curricular use of the target language, and extra-curricular contact with native language speakers, neither of which can be assumed to exist in Ukrainian partial immersion programs.
2. the fact that the target language is not used for more than 50 percent of the school day, due to regulations in the three prairie provinces which limit the amount of target language use.
3. the fact that the teacher must be fluent in the target language, and have the necessary teaching skills.

Cipywnyk was the principal investigator in a study designed to assess the Ukrainian language skills of Ukrainian-English partial immersion students in Manitoba (Manitoba Department of Education, 1984-85a). All 72 grade 6 students, in 5 different schools, were tested. The four-part assessment instrument was designed by the researcher, and was intended to assess various oral and written, and receptive and productive skills: vocabulary, spelling, receptive morphology, productive morphology, listening comprehension, and reading comprehension.

Various problems were reported to have been encountered in the course of the research (Manitoba Department of Education, 1984-85a). There were no external norms for Ukrainian language development, with the implication that the Manitoba partial immersion students' Ukrainian language proficiency levels could not be compared with those of others of the same ages. Existing published data regarding the Ukrainian language proficiency of partial immersion students were global in nature, and did not give specific information on students' proficiency levels in vocabulary, morphology, syntax, or orthography; nor for students' productive language skills. Data on students' pre- and out-of-school language use were not available. The non-standard target language features observed in the test results of the Ukrainian partial immersion students were problematic; the

researcher decided to mark them as correct for the purposes of this assessment, but special note was made of errors.

When the test results for all five Ukrainian partial immersion schools were combined, they showed that the students' listening comprehension skills were better developed than were their reading comprehension, vocabulary, receptive morphology, and spelling skills; and that their productive morphology skills were the least developed of the six skills tested (Manitoba Department of Education, 1984-1985a). When the schools were compared to each other, four of the five Ukrainian partial immersion grade 6 classes were relatively similar to each other in terms of their overall Ukrainian language proficiency. One school had considerably lower scores than all other schools on tests of all skills except receptive morphology. There was great variability among schools with respect to the various language skills tested. The narrowest range of scores was reported for reading comprehension skills, while the widest range was reported for vocabulary skills. Overall, student scores from all five schools showed correlations among the five language skills measured. Correlations were, in general, found to be "moderate to high, positive, and significant", but this pattern was not as clear within each of the five schools (pp.117-118).

Several conclusions and implications may be drawn from the Manitoba study (Sonia Cipywnyk-Morris, personal



communication, March, 1988). The variability of Ukrainian language proficiency among schools needs to be explained. Perhaps there were program factors which would have correlated with enhanced Ukrainian language development. More data were needed on the students, and these data should have been studied for possible correlations with the students' Ukrainian language proficiency. For instance, students' Ukrainian language use prior to school entry and outside of school, and students' academic potential were variables which might have affected students' Ukrainian language development in partial immersion programs. There has been concern expressed as to whether the Ukrainian language proficiency levels of partial immersion students have been sufficient to allow students to fully benefit from school instruction through Ukrainian (Manitoba Department of Education, 1984-85b).

To summarize the conclusions reported by Cipywnyk (1984), the Manitoba Department of Education (1984-85a), Sokolowski (1985), and Gillett (1986), there was evidence that students in heritage language partial immersion programs have made significant progress in learning their heritage languages. There has been some evidence that their receptive skills have developed to a greater extent than their productive skills (Gillett, 1986), that their listening comprehension skills were better than their other language skills (Manitoba Department of Education, 1984-

1985a), and that their productive morphology skills have developed to a lesser extent than have their other language skills (Sokolowski, 1985; Manitoba Department of Education, 1984-85a; and Gillett, 1986). There was evidence of the development of a non-standard variety of the target heritage language among some partial immersion students (Sokolowski, 1985).

It has been suggested that in order to overcome the problems relating to levels of target language proficiency attained in heritage language immersion programs, there needed to be as intensive as possible an exposure to the target language in the immersion program, and greater opportunities to use the target language outside the school. Along these lines, specific suggestions have been made to house immersion programs in immersion centres rather than dual-track schools, to implement total immersion rather than partial immersion programs (Alberta Education, 1984; Cipywnyk, 1984; Sokolowski, 1985; Gillett, 1986; Cipywnyk-Morris, personal communication, March, 1988).

There has not been sufficient study of the target language proficiency levels achieved by students in heritage language partial immersion programs in Canada to allow the conclusion that the proficiency levels achieved have been sufficient either in absolute terms, or in terms of their adequacy in enabling students to learn academic content

through the target language, particularly for students above the grade 5 level. Further studies are needed.

#### Indian Language Immersion

No formal studies have been done of the development of target language skills among students in Indian language immersion programs. An indication that student progress has been satisfactory in the total immersion programs at Kahnawake and Six Nations may exist in the fact that the programs have continued to this point. The Mohawk immersion program at Kahnawake has been in operation since 1981, and the Mohawk and Cayuga immersion programs at Six Nations have been in operation since 1985; all three programs are continuing to expand into the higher grades. If the students in these programs were not perceived by parents and educators and administrators to be learning the target languages at acceptable rates, it is difficult to speculate why the programs still exist, and why they have continued to expand.

In particular, it is the judgment of the Mohawk educators at Kahnawake that the Mohawk immersion students have learned more Mohawk than their peers who have been learning Mohawk via core programs for 30 minutes per day (Edward Cross, personal communication, March, 1988). Both groups of students have been receiving instruction in the same dual-track school, providing ample opportunity for

informal assessments to be made. Cross reported that the school staff were trying to make the community aware that the range of proficiency levels which are normal for school-age children at various ages are different than the range of levels normal for adult fluent speakers. Some of the parents at Kahnawake, Cross reported, seemed to expect adult levels of Mohawk language competence among the Mohawk immersion students. Because there does not exist at Kahnawake a same-age peer group of the Mohawk immersion students who are first language speakers of Mohawk, it has been difficult for the staff in the immersion program to assess how well the students' Mohawk language skills have developed (Cross, personal communication, March, 1988).

Judgements similar to the ones made by the Kahnawake educators have been made regarding the target language development of the Cayuga and Mohawk students in the Six Nations immersion programs. According to a March, 1988 interview with Claudine Van-Every Albert, a teacher in the Cayuga immersion program at Six Nations, the Six Nations Mohawk and Cayuga immersion students at the kindergarten level understood all classroom instruction, and were starting to use the languages to express themselves, and the grade 1 students were starting to use the language whenever they wanted. Although assessment has been difficult, as it has been at Kahnawake, due to the absence of same-age first language speakers of the target languages, Van-Every Albert

reported that the judgement of the education staff was that the immersion students' target language skills were acceptable for their age levels (Van-Every Albert, personal communication, March, 1988). She further reported that parents of the immersion program students needed to understand the developmental aspect of their children's second language proficiency. In other words, it was important for them to acknowledge that six-year-old children could not be expected to exhibit adult-level competency in the target languages.

Evidence for the acquisition of advanced Mohawk language skills by the Kahnawake immersion program students lies in the fact that students' mathematics test scores have been comparable to those of their regular program counterparts, even though mathematics has been taught in Mohawk (Lambert, Genesee, Holobow & McGilly, 1984; Holobow & Lambert, 1985; Holobow, Lambert, & Chartrand, 1986; and Holobow, Genesee & Lambert, 1987).

### Summary

This chapter has provided a description of publicly-funded immersion education in Canada, an overview of relevant issues relating to childhood bilingualism, and a discussion of the linguistic consequences for students which have resulted from their enrolment in immersion programs.

Publicly-funded immersion education in Canada began in the early 1960s in St. Lambert, Quebec as the result of concerted efforts by parents who believed that existing methods of teaching French were not adequate (Lambert & Tucker, 1972). The immersion model of second language teaching has subsequently spread across Canada, across all grade levels, and to non-official languages.

Publicly-funded French immersion programs exist in every province and territory of Canada; program variations include early total, early partial, delayed, and late immersion. Publicly-funded heritage language immersion programs exist only in Manitoba, Saskatchewan, and Alberta, and only the partial immersion format is used, due to provincial legislation which limits the use of the heritage languages to 50 percent of the school day. Indian language immersion programs exist in Quebec and Ontario. There are Mohawk total immersion programs at Kahnawake, Quebec, and at Six Nations, Ontario; and a Cayuga total immersion program at Six Nations. The two programs at Six Nations were implemented in the fall of 1986. The Kahnawake program began in 1981 as a partial immersion program, and changed to a total immersion program in the 1984-5 school year.

Research on childhood bilingualism (Lightbown, 1985; McLaughlin, 1984, 1985) has supported the view that from a linguistic point of view, bilingualism in itself has no detrimental effects on the individual. The social and

educational conditions of bilingualism are intervening variables. However, the social and educational conditions which, by definition, exist for immersion education, that is, for additive, sequential bilingualism, have been considered to be favourable conditions for bilingualism. Distinctions have been drawn between language acquisition and language learning. Target language development among students in immersion programs may be described in terms of both acquisition and learning.

Many studies have been done of the French language proficiency of students in French immersion programs. Very high levels of proficiency have been attained by students in these programs; students in all program types attained higher levels of French proficiency than did their counterparts who studied French in core programs. Some studies (Swain & Lapkin, 1981), but not all (Manitoba Department of Education, 1981) have shown proficiency levels among early total immersion students to be comparable to those of Francophones. Some studies have shown comparable levels for the receptive skills, but lower levels for the productive skills (Swain & Lapkin, 1981; Harley, 1984). The proficiency levels were highest among students in early total immersion programs in immersion school settings. The French proficiency levels of early partial immersion students and late immersion students have not been as high as those of early total immersion students. The lack of

meaningful social contact between students and Francophones in the larger community may have had a limiting effect on the French language proficiency of students (Swain & Lapkin, 1981). There was some evidence that the French language production skills of immersion students is and remains 'non-native-like' (Spilka, 1976; Will, 1979; Swain & Lapkin, 1981; and Harley, 1984).

The results from heritage language partial immersion programs have, in a general way, confirmed the findings related to French immersion, although the target language proficiency of students in heritage language immersion programs has not been as extensively evaluated as it has been in French immersion programs. Students in heritage language partial immersion programs have made considerable progress in learning their heritage languages, and there was evidence that the majority of parents and educators involved were satisfied with the heritage language proficiency of the students (Gillett, 1986). However, there has not been sufficient evidence produced to allow the conclusion that these students have attained high enough levels of proficiency to enable them to benefit fully from instruction through the target language in existing heritage language partial immersion programs. Evidence has been produced which showed that students' receptive skills have developed to a higher level than their productive skills (Manitoba Department of Education, 1984-85a; Sokolowski, 1985; and



Gillett, 1986), and that their listening skills were better than their other language skills (Manitoba Department of Education, 1984-85a). As in the case of French immersion, there was evidence that some heritage language partial immersion students were using a non-standard variety of the heritage language (Sokolowski, 1985). It was suggested that the target language proficiency levels resulting from heritage language partial immersion programs have been due to the partial versus total immersion format, the lack of contact with speakers of the target language both in and out of school, and in some cases, teacher fluency levels, or lack of appropriate bilingual resource materials (Cipywnyk, 1984).

The effects of enrolment in Indian language immersion programs on students' target language proficiency have not been formally studied in any of the three existing programs in Canada. Indirect evidence of the beneficial effects of such programs exists in the academic achievement of grades 1-4 students in the Kahnawake Mohawk total immersion program in subjects where Mohawk was used as the medium of instruction. Informal assessments of the students in each of the three programs have reported considerable progress in the development of the target languages, but formal studies are needed. The reported lack of same-age native speaker cohorts for Mohawk and Cayuga has created problems both in terms of assessment of target language proficiency levels of

immersion students, and in terms of providing contact with peers who speak the Indian languages. The lack of opportunities for students to speak the target languages outside the classroom was cited as a serious problem at both Kahnawake and Six Nations.

The implications of the French, heritage language, and Indian language immersion program findings for Cree immersion are that enrolment in a Cree immersion program could produce high levels of competence in the Cree language, given the existence of certain program conditions which will be outlined. This conclusion is based on indirect and informal evidence from existing Indian language immersion programs, and on the evidence from French and heritage language immersion programs.

If the following conditions were realised for a Cree immersion program, high levels of Cree language proficiency could result:

1. an early total program format, rather than an early partial, or late immersion program format.
2. an immersion centre, rather than a dual-track setting.
3. the provision of adequate bilingual resource material for all grades and subjects taught in Cree.
4. provisions for a high degree of contact with native speakers of Cree in the school, and in the students' homes and community.
5. fluently bilingual, biliterate, and trained teachers.

Another implication of the research findings is that parental understanding regarding expectations for the Cree language proficiency of their immersion children would be very important. If parents are permitted to maintain the expectation that 'native-like' target language competence will automatically and in all cases develop among students in immersion programs, or if they expect adult levels of competence among children, they will become disappointed. The research has indicated that under the beneficial conditions which have been discussed, groups of immersion students have attained very high levels of target language competence, levels which have enabled them to successfully learn curriculum content through the target language, but not levels which were necessarily native-like. If parental expectations regarding the target language proficiency of students in immersion programs are too low, students may not be motivated to achieve their full language-learning potential.

## CHAPTER THREE

## Psycho-social Consequences of Immersion Education

The conclusions drawn from studies done between 1900 and 1950 on the social and psychological consequences of bilingualism were largely negative; since that time they have been largely neutral or positive. Prior to 1950, the research was interpreted as showing that bilingualism had a negative effect on intellectual functioning (Lambert, 1977), and that bilinguals, compared to monolinguals, were at greater risk of suffering from mental disorders, and of feeling like outsiders (Jensen, 1962). The reported fear that bilinguals in Canada were even ambivalent about their political allegiance was probably a result of the two World Wars and major population shifts during this time (Lightbown, 1985).

The research designs of the early studies, as many researchers have pointed out since the 1950s (Jensen, 1962; Lambert, 1977; Lightbown, 1985), were inadequate because they did not control for factors such as socioeconomic status, availability of educational opportunities, intelligence, or degrees of language proficiency. As well, the standardized tests used were often administered in the weaker of the bilingual's two languages.

This chapter discusses the psychological effects of bilingualism on the individual student in immersion education. Various aspects of students' individual development are considered, including cognitive functioning, self-concept, and attitudes to school, to the students' own language and ethnolinguistic group, and to the target language and other ethnolinguistic groups. The consequences of French, heritage and Indian language immersion education in relation to these aspects, as found in recent research, are discussed in this chapter.

#### Cognitive Development

According to Segalowitz (1977), many of the hopes and fears which have been expressed by parents, educators, and others, regarding the consequences of bilingualism have not been based on strong evidence. Segalowitz argued that both the negative and the positive claims which have been made about bilingualism rest on two assumptions: (1) that cognitive processes are highly dependent on linguistic processes, and (2) that bilinguals process language differently than do monolinguals. According to Segalowitz, neither assumption appears warranted.

Segalowitz concluded that from a neurological point of view, the evidence indicated that "a brain can handle two languages just as easily as one" (1977, p.131). Pathological evidence has shown that the same basic

mechanisms, in the same areas of the brain, serve one or several languages. McLaughlin concluded in his review of the research that "first and second language acquisition involve essentially the same general...cognitive strategies" (1984, p. 225), and that there appears to be "a single language system that forms the basis for acquisition, storage and retrieval of first and second languages" (1984, p.230).

Cummins (1976b) has pointed out that the consequences of bilingualism or bilingual education are different for majority language groups than for minority language groups. For the former, bilingual education results in additive bilingualism, meaning that the second language is learned in addition to the mother tongue. For the latter, bilingual education often results in subtractive bilingualism, in that the first language is replaced by the second language. The first language of majority language children is, by definition, a socially prestigious and dominant language. It surrounds the child in the form of the mass media, literature, and by its wide use in the dominant society. Thus, through the majority child's normal interactions within society, his mother tongue continues to develop.

In contrast, the minority language child may have very limited contact with his first language. Although it may be spoken in the home, and perhaps in various settings and institutions within his immediate community, the second

language has a much more powerful presence because of its social prestige and pervasive use in the larger society. The usual pattern for the minority child, especially if schooling is conducted in the second language, is replacement of the first language by the second, and less than adequate second language development.

When instruction is through the medium of a second language (L2) and the school makes no concessions to either the language or culture of the minority-language child, the result [for the minority-language child] is frequently low levels of competence in both L1 and L2 and academic failure. (Cummins, 1978, p.395)

Cummins (1979a, 1979b, 1983, 1984) has developed what he has called the "interdependence hypothesis", which has explanatory power for the contradictory results of instruction through a second language for majority language students on the one hand, and for minority language students on the other:

To the extent that instruction in Lx is effective in promoting proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in school or in environment) and adequate motivation to learn Ly. (Cummins, 1983, p.41)

Using the interdependence hypothesis as a basis, Cummins has proceeded to develop a case for the interdependence of first and second language academic skills. He has proposed that there is an underlying cognitive and academic proficiency which normally develops under favourable social and pedagogical conditions, that is, under conditions which foster additive bilingualism. According to Cummins (1983), the interdependence principle

explains the lack of success of submersion programs for minority language students and the success of immersion programs for majority language students. Cree immersion education would entail additive bilingualism, in that the program would be designed for English-speaking students, even though the ethnolinguistic affiliation of most of the students would likely be Cree.

#### French Immersion

The results of studies done on the cognitive development of French immersion students have been relatively consistent: no detrimental effects on cognitive development have been observed. In addition, some evidence of enhanced cognitive development among early total immersion students has been reported.

In their evaluation of early total and early partial French immersion programs in Ontario, Swain and Lapkin (1981) concluded that the early immersion experience did not result in cognitive confusion or any other negative consequences "with respect to general intellectual functioning" (p. 103). Their conclusions were based on two bodies of data: first, the early total immersion students' academic achievement test scores, which implied "in a general way that the students' intellectual development has not been affected negatively by their bilingual experience" (p. 97), and second, the stability over time of IQ scores



which were obtained annually for the early total and early partial immersion students.

Swain and Lapkin (1981) reported evidence from three studies which found cognitive advantages associated with enrolment in early total French immersion programs. Barik and Swain (1976) reported that the IQ scores of the early total immersion students they studied increased over time at a rate greater than those of students in regular programs. When early total immersion students were compared to their English-educated peers, they were found to have higher verbal and/or higher non-verbal scores, when tested at the grades 5 and 6 levels (Edwards, Doutriaux, McCarrey & Fu, 1976). Either equivalent or superior levels of cognitive flexibility and divergent thinking were found in relation to early total immersion students when they were compared with English-educated students (Bruck, Lambert & Tucker, 1974).

It should be noted that Swain and Lapkin (1981) did not report IQ data for late immersion students, and they indicated that academic achievement data for these students were somewhat inconsistent. Achievement levels appeared to be higher among students who had studied core French prior to entering the late immersion program. The conclusion reached was that in all types of French immersion programs evaluated, normal intellectual growth occurred, although there was some evidence that early total immersion was the most favourable setting for cognitive growth.

Scott (1973) studied the effects of French immersion education on children's divergent thinking, a cognitive skill that is considered by some to be an indicator of creativity. She collected data over a seven year period, beginning when the English-speaking subjects were starting at grade 1 in a French immersion program. The experimental group was matched with a control group on measures of intelligence, socioeconomic background, and parental attitudes toward French people. The French immersion students scored substantially higher than the regular program students on tests measuring divergent thinking (cited in Lambert, 1977).

Scott's results are similar to those of other researchers who have studied the effects of bilingualism on cognitive functioning. Lambert and Anisfeld (1969) found French-English bilingual children in Montreal to have higher verbal and non-verbal measures of intelligence, a "more diversified structure of intelligence", and "more flexibility in thought" than carefully matched monolingual children (cited in Lambert, 1977, p.16). Other carefully designed studies of bilinguals around the world (Torrance, Gowan, Wu, & Aliotti, 1970; Balkan, 1970; Ianco-Worrall, 1972; Ben-Zeev, 1972; and Cummins & Gulutsan, 1973; all cited in Lambert, 1977) have provided evidence that "bilingual children, relative to monolingual controls, show definite advantages on measures of 'cognitive flexibility',

'creativity', or 'divergent thought' " (Lambert, 1977, p.16).

In summary, there is no evidence that French immersion education has had any negative effects on students' intellectual development, although the strongest argument for this exists in relation to early total immersion. Under some circumstances, bilingualism has been shown to be correlated with certain cognitive advantages. There is some evidence that early total French immersion has had beneficial effects on the cognitive development of students (Swain & Lapkin, 1981).

#### Heritage Language Immersion

Cognitive development studies of heritage language immersion students have been done in Ukrainian language immersion programs in Alberta. In general, the findings have suggested a neutral effect of immersion on cognitive growth, providing evidence that instruction may be delivered through the Ukrainian language at no cost to students' cognitive development. There is some evidence of a positive effect among students from Ukrainian-speaking homes, with the implication that the level of fluency in Ukrainian was correlated with cognitive advantages of bilingualism.

Gillett (1986) studied existing evaluations of heritage language partial immersion programs in Alberta, Saskatchewan, and Manitoba. He reported the results of two

studies with respect to the consequences of these programs for cognitive development. Neither study found evidence of significant differences in favour of either immersion or regular program students, with the exception of one study (Cummins & Mulcahy, 1978) which reported cognitive advantages for students from homes in which the heritage language was spoken.

In one study reported by Gillett, Bain (cited in Ewanyshyn, n.d.), studied 30 Ukrainian partial immersion students in relation to 30 students from the regular program. He used the 'conservation' and 'embedded figures' tests to obtain information on the students' cognitive style and level of logical cognition. No significant differences were found between experimental and control groups.

The other study discussed by Gillett was done by Cummins and Mulcahy (1978). They compared experimental groups of 12 fluently bilingual (Ukrainian-English) students in grade 1 and 12 in grade 3 with two control groups: one group of students who were in the same Ukrainian immersion program as the experimental group, but who were from non-Ukrainian-speaking homes, and another group of monolingual students in the regular program. The groups were matched for non-verbal IQ (Raven's Progressive Matrices), socioeconomic status, sex and age. Six tests of cognitive and linguistic development were used. The tests measured word association, semantic-phonetic preference, verbal

transformation effect, class inclusion, ability to analyze ambiguities, and awareness of the arbitrariness of language.

Cummins and Mulcahy found that the fluently bilingual immersion students were better than both other groups at analyzing ambiguities, and that the non-fluent immersion students made fewer semantic choices. On five of the six tests, there were no significant differences between the fluent bilinguals and the other two groups. The findings indicated that cognitive advantages associated with enrolment in immersion programs may be experienced particularly by students from Ukrainian-speaking homes (Cummins & Mulcahy, 1978). The critical factor appeared to have been Ukrainian language proficiency levels, whether Ukrainian was a first or a second language of the students (Cipywnyk-Morris, personal communication, 1988).

Cummins' (1983) review of heritage language immersion program evaluations, which covered minority language programs in Canada, the United States and Europe, did not include any additional references to studies relating cognitive development to enrolment in heritage language bilingual programs.

On the basis of the small amount of research which has been done on the cognitive consequences of heritage language immersion, it appears that heritage language immersion programs have an overall neutral effect with respect to cognitive functioning. There is evidence which suggests

that heritage language immersion students from homes in which the heritage language is spoken may derive greater cognitive benefits from their immersion experience than do students from homes in which only or primarily English is spoken.

#### Indian Language Immersion

Although no studies were found which directly investigated Indian students' cognitive development in relation to enrolment in an immersion program, it should be noted that the overall academic achievement scores of Mohawk total immersion students at Kahnawake have remained equivalent to those of comparable Mohawk students in the regular program (Holobow & Lambert, 1985; Holobow et al., 1986; and Holobow et al., 1987). Swain and Lapkin (1981) used academic achievement scores of French immersion students as general indicators of their levels of intellectual functioning. The Mohawk students' academic achievement scores, therefore, may be viewed as indirect evidence that enrolment in an Indian language immersion program has no negative consequences for students' cognitive development.

Another relevant research finding in the studies of the Kahnawake program is that the non-verbal reasoning skills (Ravens Progressive Matrices) and the English vocabulary skills (Peabody Picture Vocabulary Test) of the Mohawk total

immersion students have been consistently either greater or the same as those of other Mohawk students in the regular program (Lambert et al., 1984; Holobow & Lambert, 1985; Holobow et al., 1986; and Holobow et al., 1987). This was interpreted by the researchers as evidence of normal intellectual growth among the Mohawk immersion students.

### Summary

Neurological and language acquisition research have produced evidence in support of the position that bilinguals process and store language in the same ways as monolinguals (Segalowitz, 1977). This may be interpreted to mean that there is no necessary physiological or psycholinguistic basis for the belief that learning two languages has a detrimental effect on cognitive development. However, the social and pedagogical conditions surrounding bilingualism are intervening variables.

The effect of immersion education on cognitive development has not been extensively studied in either French immersion or heritage language immersion programs, and has not been studied directly in Indian language immersion programs. The stability of French immersion students' IQ scores, along with their levels of academic achievement, have been investigated. There was some evidence of higher levels of divergent thinking among early total French immersion students in relation to regular

program students (Swain & Lapkin, 1981). The conclusion drawn was that French immersion education does not have a negative effect on students' cognitive development or functioning, and that it may, in the case of early total immersion, have beneficial effects.

The cognitive development of heritage language immersion students has been studied with relation to Ukrainian partial immersion program programs by Bain (cited in Ewanyshyn, n.d.) and Cummins and Mulcahy (1978). Bain studied Ukrainian partial immersion students' cognitive style and levels of logical cognition, using the 'conservation' and 'embedded figure' tests. Cummins and Mulcahy used various tests which measured cognitive skills and metalinguistic awareness. They compared fluent and non-fluent students in Ukrainian partial immersion programs. The conclusion drawn from both studies of Ukrainian partial immersion programs was that, in general, there was neither a negative nor positive program effect on the students' cognitive development, although one study reported evidence of a beneficial effect when the target language was spoken in the home as well as in the school. Both the French immersion and the Ukrainian immersion research findings supported the position that higher levels of target language proficiency were related to cognitive advantages for immersion students.



With respect to Cree language immersion, there is no evidence to suggest that there would be detrimental program effects on students' cognitive development. This statement is based on two sets of data: first, the non-verbal reasoning skills, English vocabulary development, and academic achievement levels of Mohawk immersion students (Lambert et al., 1984; Holobow & Lambert, 1985; Holobow et al., 1986; Holobow et al., 1987); and second, the research findings related to French immersion and heritage language immersion students--in no instance was there evidence of negative consequences for cognitive development. To the extent that the French and heritage language immersion research is applicable to Cree immersion, these two conditions might be correlated with cognitive benefits: an early total immersion format, and Cree being spoken in the students' homes.

#### Attitudes and Self-Concept

It is generally agreed that affective factors such as attitudes and self-concept are very important in the context of language education (Stern, 1983; and McLaughlin, 1985). These affective variables, as they manifest themselves in the language learner, are important for various reasons. One reason is that motivation for further language learning may be influenced by student attitudes towards the target

language, towards the target language group, and towards language learning itself (Lambert & Tucker, 1972).

Student attitudes have been examined in terms of their effect on language learning, in terms of their development during language learning, and as outcomes of language learning (Stern, 1983). It is the attitudinal outcomes of language learning which are examined in this section. Because self-concept is closely related to student attitudes towards their own and the target language ethnolinguistic groups, and hence to their sense of ethnic identity, self-concept outcomes of immersion education are included in the following discussion.

Researchers have studied the effects of enrolment in immersion education programs on student attitudes towards the target language and ethnolinguistic group; towards their own language and ethnolinguistic group; towards language learning; and towards their educational experience in general. In particular, researchers have attempted to determine whether immersion education has adversely affected either students' sense of their own ethnic identity, or their attitudes towards school; and whether it has had a positive effect on their attitudes towards the target language and culture.

The results of the research (Swain & Lapkin, 1981; Gillett, 1986) generally indicate that immersion has not had negative effects on students' self-concept or on their sense

of ethnic identity. In addition, they appear to have developed positive attitudes towards the target language and culture, as well as towards language learning, and they also tend to develop a more sophisticated understanding of the sociocultural reality of bilingualism.

To place these findings within a Cree immersion context, English is generally the mother tongue or dominant language spoken by the prospective students, but it is not the language associated with their ethnolinguistic group. This situation is similar to that of heritage language immersion, where the target language is associated with the students' ancestral culture. This is in contrast with the French immersion situation, where both the target language and the target culture are foreign to the student.

Another point to consider is that because Cree is a minority language associated with a minority culture, prospective Cree immersion students may enter school with ambivalent attitudes towards their own cultural heritage, and towards both Cree and English. This context has some similarity to that of heritage language immersion, but is very different from the French immersion context.

Studies on the education of minority children have suggested that one of the ways that children from minority culture backgrounds have reacted when faced with the task of choosing an identity was to reject the home language and culture (Lambert, 1975; Cummins, 1981). Because of this, an

expectation of heritage language and Indian language immersion programs would be that student attitudes toward the minority language and culture should improve in relation to regular program students.

### French Immersion

Studies of French immersion students have focused on their self-concept and sense of identity as members of English-speaking society, their attitudes towards the French culture, and their attitudes toward their immersion experience. Each of these are considered in turn.

Swain and Lapkin (1981) have discussed the impact of immersion education on French immersion students' social psychological make-up. They noted that most research of this nature has been done with students in the Montreal area, and cautioned that while results would likely be similar in other areas of Canada regarding students' perceptions of self and their own ethnolinguistic group, they might differ with respect to their perceptions of the target language group. The results, they suggested, would depend on the students' proximity to the target culture and on the nature and extent of their interaction with the target language community.

With respect to the effect of French immersion on student self-concept and ethnic identity, Swain and Lapkin reported on three studies of French immersion students in

Quebec. In one of these, Lambert and Tucker (1972) studied the original French immersion students in St. Lambert, Quebec. They concluded that the French immersion group and the English comparison group "both made favourable assessments of themselves and of English-Canadians" (cited in Swain and Lapkin, 1981, p.114). In another study, Genesee, Tucker and Lambert (1978) used a doll preference technique with grades 1 to 5 English-speaking students in English schools, French schools, and immersion schools, and found no appreciable differences between groups with respect to their English Canadian identity. Swain and Lapkin reported on a study by Cziko, Lambert and Gutter (1979) of grades 5 and 6 Anglophone students in an English program, an early immersion program, and a late immersion program. All students perceived themselves as English Canadians, regardless of which program they were in, although the early immersion students "perceived themselves as more similar to bilingual English-Canadians and bilingual French-Canadians than did the late immersion or English program students" (Swain & Lapkin, 1981, p.115). The conclusion drawn by Swain and Lapkin was that the French immersion experience did not result in any damage to students' self-concept or sense of identity as English Canadians.

Several studies dealing with student attitudes towards the French language and culture were discussed by Swain and Lapkin (1981). One of these was a study by Lambert and

Tucker (1972). They compared grade 2 and 3 French immersion students in St. Lambert with students in a regular English program, and discovered more favourable attitudes towards French language groups in Canada and Europe among the French immersion group. When the same researchers compared grade 5 and 6 French immersion and regular program students, they found that immersion students were more likely to identify with both English-Canadians and French-Canadians, in comparison with the regular program students, who identified much more with English-Canadians than with French-Canadians.

In another study of French immersion students' attitudes towards the French language and culture, Genesee (1977) studied perceived social distance and found that grade 6 French immersion students perceived a lesser social distance between themselves and French Canadians than did a comparison group in an English program. Cziko et al. (1979) found less social distance perceived by grades 5 and 6 early French immersion students between themselves and French-Canadians, especially bilingual French-Canadians, than was perceived by either late immersion or regular program students.

There is conflicting evidence in relation to whether the positive effects of French immersion on student attitudes towards the target ethnolinguistic group are short-lived or lasting. Swain and Lapkin reported that several studies (Genesee, Morin & Allister, 1974; Genesee,

Polich & Stanley, 1977; Cziko, Holobow, Lambert & Tucker, 1977; and Cziko, Holobow & Lambert, 1977a,b) have found that the significantly more positive attitudes towards the target language group which appeared among younger students in the first one to two years of immersion education, in comparison with regular program students, tended to disappear over the course of immersion schooling.

Swain and Lapkin speculated that the reason for the apparent lack of a sustained positive effect on French immersion student attitudes towards the target language group might be attributed to the limited opportunities for social contact between the Anglophone students and the Francophone community. Other studies reviewed by Swain and Lapkin (Cziko, Lambert, Sidoti & Tucker, 1978; and Genesee, 1980) found lasting effects on immersion students' positive attitudes towards French-Canadians, and they also found that the immersion students used French more than did their English program counterparts.

On the basis of the research which examined the effect of French immersion education on student attitudes towards the target language group, Swain and Lapkin (1981) concluded, first, that there was no evidence of any negative short-term or long-term effects; second, that there appeared to be an initial positive effect among early immersion students; and third, that there might not be long-term positive effects. Whether or not there were long-term

positive effects was claimed to be dependent on the degree and nature of social contact between the students and the target language community.

Cree immersion students would likely have greater opportunities for social contact with Cree-speaking communities than do French immersion students with Francophone communities. The Cree culture is, by ancestry, the culture of their own ethnolinguistic group. It might be expected, on the basis of increased opportunities for social contact with the target language community, that there would be long-term positive effects of Cree immersion on student attitudes towards the Cree culture. The finding that there was a reduction in social distance between French immersion students and the Francophone community (Swain & Lapkin, 1981) could be used to predict a lessening in social distance between Cree immersion students and their parents, grandparents, and other community members.

Another aspect of the psycho-social impact of French immersion which has been studied is the effect of immersion on students' understanding of bilingualism in society. Two studies cited by Swain and Lapkin (1981) suggested that French immersion students developed more sophisticated sociopolitical and sociocultural perceptions of Canada. In one of these studies, Swain (1980) used content analysis procedures on the written compositions of grade 5 and 6 students in Ottawa and Toronto. She found evidence of a



greater appreciation of cultural and linguistic diversity, and a broader perspective on what it meant to be a Canadian among early total French immersion students than among their English program peers.

In another study cited by Swain and Lapkin which investigated the sociocultural and sociopolitical perceptions of French immersion students, Blake, Lambert, Sidoti and Wolfe (1981) compared monolingual Anglophones, bilingual Anglophones in early French immersion, monolingual Francophones, and bilingual Francophones at the grades 6 and 11 levels in Montreal. Both of the bilingual groups were judged to be more sophisticated in their understanding of French-English relations, and in the quality of solutions they proposed.

An additional aspect of the affective impact of French immersion which has been examined is the matter of student adjustment to the immersion program, and their attitude to learning French. Several studies cited by Swain and Lapkin (1981) suggested that French immersion students, particularly early total immersion students, adjusted easily to school and had a positive attitude towards their immersion experience. Most of the studies cited by Swain and Lapkin used research techniques which directly solicited student opinions. All of these studies produced evidence that early total immersion students had adjusted to their school experience at least as well as had students in

regular programs, when students were studied at the grade 4 and 5 level (Lambert and Tucker, 1972), at the grade 8 level (Lapkin, Swain, Kamin, & Hanna, 1980), and at the grade 11 level (Cziko, Lambert, Sidoti, & Tucker, 1978). Students in extended core and late immersion programs were not as satisfied with their French programs as were the early total immersion students (Edwards, Colletta, Fu & McCarrey, 1979; and Lapkin et al., 1980). None of the studies reviewed by Swain and Lapkin (1981) were reported to have investigated the attitudes of students who withdrew from French immersion programs.

Trites and Price (1976) studied students who were experiencing difficulty in French immersion programs. They found no differences between students who were successful in French immersion and those who were unsuccessful when their attitudes towards French immersion were examined. However, among the students who were experiencing difficulty in French immersion, those who remained in the immersion program expressed more positive attitudes than those who switched to the regular English program. Halpern, Martin, and Kirby (1976) studied attrition rates in early French immersion and regular programs in the Ottawa area. Attitudes of students in these programs were not examined.

In conclusion, the psycho-social development of French immersion students has not been adversely affected by their immersion experience (Swain & Lapkin, 1981). In no case was

there evidence of negative affects on immersion student self-concept or sense of identity as Anglophones. Initially, early total immersion students have been characterized by attitudes towards the target language group which were better than those of regular program students, but due to limited contacts with the target language group, the more positive attitudes were not always lasting. Positive attitudes towards their immersion experience were reported for early total French immersion students throughout their immersion experience (Swain & Lapkin, 1981), but not for some early immersion students who withdrew from immersion programs because of difficulties they were experiencing in the programs (Trites & Price, 1976). The attitudes of late immersion and extended core students towards learning French were not as positive. French immersion students, particularly early total immersion students, had a more sophisticated understanding of the French-English reality in Canada from sociopolitical and sociocultural perspectives (Swain & Lapkin, 1981).

#### Heritage Language Immersion

Research findings on the effects of heritage language immersion programs on students' psychosocial make-up have been similar to those reported for French immersion; however, few studies have directly solicited student opinions. Rather, information on their opinions and

attitudes has usually been gathered from parents and educators. Both Cummins (1983), in his review of minority language programs in Canada, the United States and Europe, and Gillett (1986), in his meta-evaluation of heritage language partial immersion programs in Western Canada, found positive student affective outcomes related to the language programs. It should be noted that the target culture is normally the student's own heritage culture. Consequently, there are normally closer ties between student attitudes towards the target culture and student self-concept than exist in the French immersion context.

With respect to the effect of immersion on student self-concept and attitude towards the target language and culture, Cummins (1983) reported on a study in Toronto, where the Italian, Portuguese and Ukrainian languages were integrated into an extended school day. The majority of the 11,000 parents who responded to a questionnaire survey believed that the program contributed to their children's sense of self-worth and confidence, as well as to increased communication in the family.

Gillett (1986) reviewed several studies which investigated the effects of heritage language partial immersion education in Alberta and Manitoba on student psycho-social development. The results of these studies indicated that the majority of parents, teachers and school administrators questioned felt that: 1. the students had

enjoyed the bilingual program, 2. the immersion program had had a positive effect on the students' appreciation of the target culture, and 3. the immersion program had helped the students develop a positive attitude toward language learning, and a better understanding of other cultures. In another study discussed by Gillett, no significant differences were found on measures of self-esteem between an experimental group of all grade 3 German partial immersion students and a control group composed of all non-immersion grade 3 students at both schools where the immersion program was offered (Edmonton Public Schools, 1983).

In terms of student attitudes towards the immersion experience, Gillett reported that the vast majority of parents, teachers and school administrators in these partial immersion programs were of the opinion that the students enjoyed the bilingual program and had adjusted well to it (1986). As well, the majority of the parents and educators expressed satisfaction with the immersion program and the students' participation in it, felt that the immersion students were an integral part of the school, and wanted the program to continue as it was or with slight changes.

Gillett identified three studies of students who had withdrawn from heritage language immersion programs. The first two were done in Alberta: one involved former Ukrainian partial immersion students and the other, former German partial immersion students. Reasons for the student

withdrawals were solicited from the parents. Some parents indicated that the child had been unhappy, or had disliked the teacher, but most parents gave other reasons, such as family moves, academic reasons, or program-related reasons.

The third withdrawal study discussed by Gillett involved a comparison of heritage language immersion program attrition rates in Alberta with those in Manitoba. It appeared from this study that attrition rates from most programs were quite high, and that the attrition rates in Alberta were higher over the years than they were in Manitoba (Cipywnyk, 1984). Cipywnyk commented that attrition seemed to be related, at least in part, to changes from one school system to another (e.g. from elementary to junior high). In summary, the research indicates that for the most part, withdrawals from heritage language partial immersion programs have not been for reasons directly related to students' psycho-social development. The effects of heritage language partial immersion student withdrawal on their attitudes, identity, or self-concept have not been explored.

To summarize, the results from the research on student psycho-social development in heritage language immersion have been similar to the French immersion results, in that there has been a pattern of a neutral effect on self-concept, a positive effect on attitudes towards the target language and culture, towards language learning in general

and towards the immersion experience in particular. More withdrawal studies appear to have been done with respect to heritage language immersion than French immersion, and while there does not seem to be evidence of a pattern of psycho-social reasons for withdrawals, the attitudes of the students who withdrew were not investigated for either French or heritage language immersion programs. In other words, there have been neutral or positive effects on the psycho-social makeup of those heritage language program students who have chosen to remain in the programs, at least as long as they have remained enrolled in the programs.

#### Indian Language Immersion

Existing evaluations of Indian language immersion programs have not addressed the question of attitudinal outcomes, except to say that the researchers "presume that the immersion experience has very likely enriched these children with...a greater appreciation for their Mohawk identity." (Holobow et al., 1986, p.13).

In a study of a pilot bilingual education project in Manitoba designed for Cree-speaking, Ojibwe-speaking, and Ojibwe-Cree-speaking children, transitional bilingual programs in four northern communities were compared to control schools on measures of self-concept, attitudes towards school and attitudes towards the environment. More positive self-concept and attitudes were found among three

of the experimental groups in relation to their comparison groups. In the case of one pilot school, the control group scored higher than the experimental group (Manitoba Department of Education, 1975).

In a Navajo reservation community at Rock Point, Arizona, children normally enter school speaking not English, but Navajo. In the 1970s, the community implemented a Navajo-English bilingual school program. In this program, all initial instruction was delivered through the Navajo language, and English was taught as a second language. Researchers have claimed that among the various results of the program, the self-image of the students has been enhanced. The evidence they used consisted of informal observations of student behaviour. Program students were observed to be "aggressive, active, and involved", in contrast with the way Navajo children were often described, according to the researchers, as "listless, quiet, stand offish, passive, or dumb" (Vorih & Rosier, 1978, p.268). Vorih and Rosier also reported that an unnamed Navajo member of an independent evaluation team found the children in the bilingual program to appear "more open and more involved" than children in other reservation schools (1978, p.268).

Some researchers have claimed that the ability to think in their Indian language helps Indian children to better understand their social and personal situation (Hall, 1986). Even if an Indian language is taught as a second language



'core' program, with the result that only minimal levels of competence are reached, positive effects on student self-concept and sense of identity have often been reported. For example, Burnaby observed of core Indian language programs in Ontario that from the point of view of reinforcing the students' sense of their Indian identity, these programs seemed to be effective (Burnaby, 1982).

With respect to the development of an 'Indian identity' in the child, Burnaby has suggested that two school factors are involved: first, the degree of continuity perceived by the students between home, school, and society, and second, the degree to which the school accepts and respects the Indian child's ancestry and culture (Burnaby, 1980).

In a study of an indigenous community in the Maritimes, Kinsella found that the indigenous children chose not to identify with their own group because of the strong negative image of indigenous people in the larger community (Kinsella, 1973, cited in Burnaby, 1980). This type of research serves to remind us that school is only one of the variables in the development of a child's self-concept and identity. As Cummins has pointed out, for students from minority culture backgrounds, educational treatments may interact with sociocultural variables to produce feelings of ambivalence or negative feelings toward the majority culture and/or the minority culture (Cummins, 1984), feelings which may interfere with second language development.

In his report on Indian conditions in Canada, Hawthorne stated that "the process of estrangement seems to start early for the Indian child and culminates in the period around fifth grade" (Hawthorne, 1967, p.116, cited in Burnaby, 1980). Burnaby concluded, on the basis of Hawthorne's argument, that bicultural educational programs must start early if they are to be successful in helping the Indian child develop a healthy identity (Burnaby, 1980).

To summarize, although few evaluations exist, there is some evidence from school programs which include an Indian language, either as a subject or as a medium of instruction, of positive program effects on student self-concept, attitudes, and ethnic identity.

### Summary

The preceding section has examined the effects of immersion education on student self-concept, ethnic identity, attitudes towards the target language and culture, and attitudes towards their immersion experience.

Studies of French immersion students have, in general, not revealed adverse program affects on their psycho-social development (Swain & Lapkin, 1981). Participation in French immersion programs did not damage students' self-concept, nor their sense of identity as Anglophones. Early total immersion students have been characterized by attitudes towards the target language group which were better than

those of regular program students, but due to limited contacts with the target language group, these more positive attitudes were not always lasting. While positive attitudes towards their immersion experience were found among early total French immersion students throughout their immersion experience, the attitudes of late immersion and extended core students were not always as positive. There was some evidence of negative attitudes towards French immersion among students who withdrew from early immersion programs due to difficulties they were experiencing in the programs. French immersion students, and in particular, early total immersion students, were reported as having a more sophisticated understanding of the sociopolitical and sociocultural reality of French-English relations in Canada.

Research on the psycho-social impact on students in heritage language immersion programs has shown results similar to the French immersion results. There has been a pattern of a neutral effect on self-concept, a positive effect on attitudes towards the target language and culture, towards language learning in general, and towards the immersion experience in particular.

With regard to Indian language immersion programs, the formal evaluations which have been done have not addressed the question of the consequences of immersion for students' psycho-social development. Evidence from school programs which included an Indian language, either as a subject or as

a medium of instruction, supports the view that inclusion of Indian languages in the school has a positive effect on student self-concept, attitudes, and ethnic identity. In order to have these effects, a bilingual program for Indian students should begin early in the school life of the child, according to some researchers.

To the extent that it is possible to generalize from the results of French and heritage language immersion, as well as from the outcomes of core and bilingual Indian language programs, it may be predicted that a well-run Cree immersion program would have at least a neutral effect on student self-concept, and that it would have a positive effect on what Burnaby has called "ethnic self-image" (Burnaby, 1980, p.314), as well as on their attitudes towards language learning, and towards their immersion experience. It might also have a beneficial effect on their understanding of the sociocultural and sociopolitical realities of Indian/non-Indian relations in Canada.

However, in order for a Cree immersion program to have these beneficial effects, the program would need to begin at the early elementary school level. Furthermore, according to the research on French immersion, the program would need to be reinforced in both the home and community, in order for the positive effects on ethnic self-image to be long-lasting.

The improved ethnic self-image, enhanced appreciation of Cree culture, and deeper understanding of cross-cultural relations which might result from Cree immersion could in turn have a beneficial effect on school achievement and attainment. Whether or not this is true for existing school programs involving Indian languages does not appear to have been investigated.

## CHAPTER FOUR

Educational Consequences of Immersion Education

A central concern regarding immersion education has been its effect on student academic progress and on their first language development. There is a considerable body of research which has addressed this concern, and it is discussed in this chapter as it relates to French immersion, heritage language immersion, and Indian language immersion. It should be noted that within the context of existing French, heritage language and Indian language immersion research in Canada, the first language of the students has normally been assumed to be English.

Academic and English Language AchievementFrench Immersion

There have been numerous evaluations of French immersion over a span of 15 years, and, overall, French immersion education does not appear to have negatively influenced English language achievement, although in some cases there has been evidence of a temporary lag in the acquisition of English literacy skills. In the case of academic achievement, no long-term negative effects have resulted from early total French immersion, but early partial and late immersion program results have not been as

positive as those of early total immersion. There is a considerable body of evidence which suggests that, after the introduction of English instruction, early total French immersion students sometimes do better than regular program students on measures of English and academic achievement.

The academic and English language achievement of French immersion students have been studied by Swain and Lapkin (1981), who critically analyzed 22 evaluations of early total, early partial, delayed and late French immersion programs in Ontario. The Ontario findings were in many cases compared with evaluations of immersion programs in other provinces of Canada such as Quebec, Alberta, and New Brunswick; the findings were generally similar, and when they were not, the differences were noted and discussed.

Swain and Lapkin (1981) reported that the English language development of French immersion students has been assessed using the English language subtests of standardized tests such as the Canadian Test of Basic Skills (CTBS). It has also been assessed through the use of oral and written cloze tests, tests involving written narratives (spelling, punctuation, sentence complexity, organization, and originality), spoken retell (complexity, organization, and originality), communicative tasks and word association tests.

The academic achievement of French immersion students in Ontario has been assessed primarily through the use of

standardized test batteries such as the CTBS and the MAT (Metropolitan Achievement Test). Aspects of academic achievement which have been tested include mathematics, science, history, geography, social studies, and study skills. Geography, history and social studies achievement has been assessed using locally-developed tests which reflected school board to school board variation in content and scheduling for these subjects. Study skills have been assessed using the work study skills subtest of the CTBS (Swain & Lapkin, 1981).

The results of numerous studies of early total and early partial French immersion programs in Ontario have tended to show somewhat lower English language achievement scores for kindergarten to grade 3 students in relation to their peers in regular English programs. However, from the grade 5 level onward, early immersion students have performed at least as well on measures of English language achievement. In the case of early total immersion, there was a pattern of higher English language achievement beginning at the grade 4 level, as measured by CTBS scores (Swain and Lapkin, 1981). The results of tests of listening and speaking skills; qualitative analyses of students' speech and writing; and linguistic analyses and global assessments of student writing showed equivalent performances between early total immersion students and their regular program counterparts.



Swain and Lapkin's finding that until formal English instruction began, the English literacy skills of French immersion students in the early grades were lower than those of non-immersion students has been supported by others. Genesee, Lambert and Holobow (1985) reported that among the original French early total immersion students in St. Lambert, Quebec, the experimental group at the kindergarten to grade 3 levels scored significantly lower on tests of English literacy than did the control group, although they commented that the students' level of competence in English was surprising, considering that they had not been formally taught any English literacy skills. Once English instruction began, within one school year the experimental group had reached parity in almost all other aspects of English language competence. However, some studies have shown a lag in acquiring English spelling which continued after the introduction of English instruction (Barik & Swain, 1975, cited in Manitoba Department of Education, 1981; and Genesee, 1987).

Swain and Lapkin (1981) reported that early partial immersion students did not perform better than early total immersion students on measures of English achievement, despite greater exposure to English. Neither did the early partial immersion students after the grade 5 level show a pattern of English achievement which was significantly better than the non-immersion comparison groups, a pattern

which was observed among some early total immersion students.

Late immersion students in some cases experienced a temporary lag in English language achievement, but no long-term deficits have been found. Only one study cited by Swain and Lapkin (1981) reported evidence of superior performance by a late immersion group in comparison to regular English program students (Genesee & Stanley, 1976). This evidence related to the late immersion students' writing skills when tested at grades 7 and 11.

Swain and Lapkin's review (1981) showed that measures of academic achievement were equivalent, overall, when early total French immersion students and regular program students were compared. Early partial and late immersion students did not always perform as well as their regular program counterparts.

The aspect of academic achievement in French immersion which has been more extensively studied than any other aspect is mathematics. Swain and Lapkin (1981) reported the results of 38 separate administrations of standardized mathematics achievement tests, for early total immersion students from grades 1 - 8 within three school boards in Toronto and Ottawa. In the majority of cases, there were no significant differences between the early total French immersion groups and their English-educated counterparts. The exceptions were that in three instances, the regular

Board study, tests were administered in English to early total immersion and regular program students at the grade 7 level. No significant differences were found.

The study skills of early total French immersion students have been studied by using the work-study skills subtest of the CTBS battery. Swain and Lapkin reported that this subtest has been administered to grades 3 to 8 students in French immersion and regular programs in Ottawa and Toronto schools (Swain & Lapkin, 1981). These studies showed significantly higher scores among the early total French immersion groups on over half of the testing sessions, when scores were adjusted for IQ, or IQ and age. No significant differences were found in the remainder of the testing sessions.

Another indication that the overall academic achievement of French immersion students was equivalent to that of similar English educated students was found in the results of a survey of parents of French immersion students. McEachern (1980, cited in Swain & Lapkin, 1981) reported that more than 90 per cent of French immersion parents surveyed believed that French immersion did not hinder their children's growth of general knowledge.

According to Swain and Lapkin, a concern regarding the testing in the evaluations which have been cited has been whether the language of testing has influenced the results. In almost all cases, the language of testing with respect to

the academic achievement of French immersion students has been English, even though the language used to teach them those subjects had been French. Swain and Lapkin reported that studies of social studies achievement (grade 4), and mathematics (grades 1 and 2) have investigated the effect of language of testing on French immersion students' test results. In both cases, the total immersion students performed equally well in French and English. However, students who had studied social studies in French in an extended core program did not do as well on a French language social studies test as did their counterparts who had studied the same subject in a total immersion program. Swain and Lapkin (1981) concluded that although total immersion students appear to have sufficient French proficiency to permit successful testing in French, it remains risky to test students in all types of immersion programs in academic content areas in their second language.

The results of evaluations of the academic achievement of students in early partial and late French immersion programs have been somewhat inconsistent with the early total French immersion program results, according to Swain and Lapkin (1981). Fewer such programs exist, and fewer studies have been done.

Data on two early partial immersion programs, one in Elgin County, Ontario, and one in Edmonton, Alberta, were used by Swain and Lapkin (Lapkin & Stinson, 1978; Andrew,

Lapkin & Swain, 1979; Swain, Lapkin & Hanna, 1980; Edmonton Public Schools, 1980). Three cohorts from the Elgin County Board's program were studied. Data from an Ottawa program were not used because students were taught mathematics in English; Swain and Lapkin did not consider the mathematics achievement of these students to be useful in the context of their 1981 analysis.

In mathematics achievement, studies of the Elgin county early partial French immersion students over a seven year period revealed either no significant differences, or significant differences in favour of the English comparison groups. Students in the Edmonton program did not perform as well as their English peers at grades 3 and 4, but performed better at grade 5. In science achievement, three years of study of Elgin County students from grades 4 to 7 revealed either no significant differences, or significant differences in favour of the English comparison groups. Over a four year period, the Elgin County early partial immersion students did not out-perform the comparison groups on measures of work study skills.

Swain and Lapkin concluded that "the general trend...is that relative to early total immersion students, early partial immersion students may experience more difficulty in maintaining standards in subjects taught to them in French commensurate with those of their English-educated peers. Furthermore, in terms of work study skills, they show no

advantage over their respective comparison groups...as was the case for early total immersion students" (1981, pp.102-103).

In the Peel County late immersion program, mathematics, science, history and geography were taught in French in grade 8, and in later grades, history and geography were taught in French (Swain & Lapkin, 1981, p.103). When the mathematics achievement of these students was compared to their English-educated peers, there were inconsistent results; one cohort performed better than the comparison group, one performed equivalently, and one performed not as well. When their science achievement was studied, the initial group had significantly lower scores than the comparison group, but in later grades, when science was taught in English, no significant differences were observed (Barik, Swain & Gaudino, 1976; Swain & Lapkin, 1977; Andrew, Lapkin & Swain, 1980; Lapkin, Swain, Kamin, & Hanna, 1980, all cited in Swain & Lapkin, 1981).

When studies of other late immersion programs were examined, no clearer pattern emerged. Swain and Lapkin concluded that the results of the studies of the academic achievement of late French immersion students were inconsistent. They did conclude that the degree of academic success of late immersion students appeared to depend on the subject being studied, and on the amount of prior study of French. When late immersion students have had sufficient

exposure to French prior to entering the immersion program, their academic achievement has appeared to be comparable to that of their English-educated peers (Genesee, Polich, & Stanley, 1977; Stern, Swain, McLean, Friedman, Harley & Lapkin, 1976; all cited in Swain & Lapkin, 1981).

The English and academic achievement of French immersion students in other parts of Canada have not been tested as extensively as they have been in Ontario and Quebec. In part, this has been due to the smaller numbers of French immersion students in other parts of Canada, and in part because educators have felt they could rely upon the results of the extensive research which has been carried out in Eastern Canada. In Saskatchewan, for instance, few studies exist relating to French immersion. School boards in Saskatchewan have conducted some research with regard to the French immersion programs in their schools, but none of the research has been published (for example, Lundlie, Rummens & Weston, 1979). Marie-Jeanne Will (1979) studied the oral French of grade 4 immersion students in an urban Saskatchewan school, and designed some game techniques to overcome student errors.

In Manitoba, the English and academic achievement of grades 3, 6, and 9 French immersion students have been studied using the English and mathematics subtests of the CTBS with grades 3 and 6, and the English and mathematics subtests of the Stanford Achievement Test Battery with grade

9 (Manitoba Department of Education, 1981). Early total, early partial, and late immersion programs were studied, in both immersion and dual-track settings. The achievement of immersion students was compared both with national norm means, and with the achievement of a comparison group of Manitoban Francophone students. Certain limitations noted by the researchers were related to the small numbers of students, the unequal numbers of students in some groups, and the nature of selection for the immersion program.

The results of the Manitoba study (1981) were generally in agreement with those reported by Swain and Lapkin (1981) for Ontario, in that there were no negative long-term effects of enrolment in French immersion on students' English language achievement, and no negative effects of early total immersion on academic achievement. Unlike Swain and Lapkin's findings, the Manitoba study showed that when tested at the grade 9 level, early partial immersion and late immersion students scored significantly higher than national norm means for both English language and mathematics achievement, and that they obtained significantly higher results than did early total immersion students on mathematics achievement tests (Manitoba Department of Education, 1981).

The relationship between measured intelligence and academic achievement by French immersion students has been studied. For example, Genesee (1976a and 1976b, cited in



Manitoba Department of Education, 1981) found that although IQ is related to academic achievement in both the first and the second language, there are no greater academic difficulties experienced in French immersion programs by lower IQ students than would be experienced by comparable students in regular English programs.

The question of whether immersion education is equally suitable for normal and learning disabled children has been addressed by Trites (Trites & Price, 1976; Trites & Price, 1977; Trites, in press) and Bruck (1978; 1978-79; 1980; in press). Both researchers have studied children in French immersion programs or children who have withdrawn from immersion programs, and each has reached a different conclusion. Trites has suggested that "some children are predisposed to experience difficulty in early immersion and, consequently, screening measures should be instituted to identify such children before they enter the programme" (Cummins, 1984, p.165). Bruck has concluded that "learning disabled or 'language-impaired' children in immersion acquire basic academic skills at a comparable rate to similar children in English programmes" (Cummins, 1984, p.165).

Cummins (1984) has reviewed both Trites' and Bruck's research. He has argued that Bruck's position is more convincing than Trites' because: 1. Bruck's "empirical

studies are methodologically well-conceived whereas there are serious design problems with Trites' studies", and

2. "the findings that emerge from Bruck's studies are consistent with a large body of theory and research relating to bilingualism and second language acquisition whereas Trites' findings are not" (p.165). Cummins concluded that "the answer that emerges from research in both minority and majority contexts is that immersion programmes, properly understood and implemented, appear to represent an appropriate form of enrichment bilingual education for all students,...learning 'disabled' and non-disabled. Such programmes result in additive bilingualism at no apparent cost to children's personal or academic development" (pp.176-7).

In summary, evidence related to French immersion programs has suggested that overall student English language achievement has not been adversely affected. Some students have experienced a temporary lag in the development of English literacy skills, but after English literacy was introduced, student achievement in these skills reached parity with that of their regular program counterparts within one school year, with the exception, perhaps, of spelling. After grade 3, early total immersion students have tended to have higher English language achievement scores than have their English-educated counterparts.

When the academic achievement of French immersion students has been investigated, advantages have been found to be associated with early total immersion, in comparison with both early partial immersion and late immersion. A pattern of a neutral program effect on the academic achievement of early total immersion students has been found. Early partial immersion students have in many cases, not performed as well as their English-educated peers. The academic achievement of both early partial and late immersion students is thought to be related to their levels of French proficiency. Swain and Lapkin (1981) concluded that the French proficiency of early partial immersion students may not have been adequate for them to benefit fully from instruction through French, and that late immersion students' academic performance depended on their level of French proficiency on entrance to the immersion program. In Manitoba, early partial and late French immersion students attained levels of academic achievement which were significantly higher than national norms, but due to the small numbers of students involved, these results may not be generalizable (Manitoba Department of Education, 1981).

There is evidence that the work-study skills of early total immersion students are superior to those of their regular program counterparts and those of students in other types of immersion programs.

Measured intelligence of students was not correlated with achievement in French immersion to any greater extent than it was correlated with achievement in regular programs, and no convincing evidence has emerged which suggests that learning disabled children have greater academic difficulty in immersion programs than do similar children in regular English programs.

#### Heritage Language Immersion

The English language development and academic achievement of students in heritage language immersion programs have been studied in relation to partial immersion programs in Manitoba and Alberta. Studies reviewed by Gillett (1986), as well as studies of the English and social studies achievement of students in Manitoba Ukrainian partial immersion programs (Manitoba Department of Education, 1984-85a,b) are discussed.

Gillett (1986) reported that a variety of English language tests have been used to assess the English language development of students in heritage language immersion programs. Among the tests that have been used are the vocabulary and comprehension subtests of the CTBS, the Stanford Achievement Test, the Edmonton Public School Board Elementary Reading Test, the Gates-MacGinitie Vocabulary and Comprehension Tests, and the Wide Range Achievement Test in Reading (WRAT). In Manitoba, there also has been informal

assessment done through soliciting parent and teacher opinions regarding students' English development. In most studies, experimental and control students have been matched for one or several of the following variables: age, sex, grade, academic potential, and socioeconomic status. Studies of this nature should control for at least academic potential, age, and socioeconomic status.

In general, the results of the English language assessments of heritage language partial immersion students have agreed with the French immersion results, in that partial immersion students have done as well as control or regular program students on measures of English achievement. In heritage language partial immersion programs, some students did better than regular students. The results of the heritage language immersion studies, as reported by Gillett (1986), are now discussed.

Most studies have been done of Ukrainian partial immersion programs: some in Manitoba, and the remainder in Alberta by the two Edmonton school boards: the Edmonton Public School Board (EPBS) and the Edmonton Catholic School System (ECSS). Ukrainian immersion students from grades 1 to 5 have been studied but only one German immersion program has been studied with respect to student achievement: the EPBS has conducted two studies of students from grades 1 to 3 in its German partial immersion program.

When the English language achievement of Ukrainian partial immersion students was examined, the bilingual program students generally did as well or better than regular program or control students (Gillett, 1986). The Edmonton Public School Board used the Stanford Achievement Test and their own Elementary Reading Test to assess the English language proficiency of its Ukrainian partial immersion students over a five year period from 1974 to 1979. In most cases there were no significant differences between immersion and regular or control students. When significant differences emerged, they were usually in favour of the partial immersion students.

The Edmonton Catholic School System matched experimental students with control groups on the basis of several factors, including sex, socioeconomic status and academic potential (Gillett, 1986, p.83). Subtests of the Gates-MacGinitie, the WRAT, and the CTBS were used to test the English language achievement of this school board's Ukrainian partial immersion students over a period of time from 1974-5 to 1978-9. The pattern which emerged was one of no significant differences, or significant differences in favour of the experimental groups.

Student English achievement within Manitoba's Ukrainian partial immersion program has also been assessed. Although some significant differences were observed, methodological problems limited the conclusions to the statement that there

were no major differences between the partial immersion and regular program students (Gillett, 1986). The results of the study of the German partial immersion program were judged by Gillett as being inconclusive because of small numbers and because the study was not long enough.

When parents and teachers of Ukrainian and German partial immersion programs in Manitoba were questioned, the majority reported that they were satisfied with student English language development while participating in the program (Chapman, 1981; Roger, 1983; both cited in Gillett, 1986).

According to Gillett (1986), the academic progress of students in heritage language partial immersion programs has been studied in one of two ways: either through tests of students' mathematics achievement, or through soliciting the opinions of teachers and parents regarding student progress in what were considered the primary subject areas, that is, in mathematics, language arts, science, and social studies. The first method has been used by the two Edmonton School boards in evaluations of their Ukrainian and German partial immersion programs. Mathematics tests used have included the arithmetic component of the WRAT, the SRA mathematics test, the mathematics concepts and problems subtests of the CTBS, and a test developed by the Edmonton Public School Board. The second method has been used to evaluate Ukrainian partial immersion programs in Manitoba. The

opinions of parents and teachers were solicited in order to determine the percentages of students who were progressing satisfactorily.

Gillett reported that the heritage language partial immersion programs which were included in his study were characterized by the use of English to teach arithmetic, reading, English language arts, and science; and the use of Ukrainian to teach social studies, physical education, art, music, Ukrainian language arts, and, in the Catholic schools, religion (1986).

The results of the Alberta studies discussed by Gillett (1986) showed that mathematics scores of heritage language immersion students were generally equivalent to or better than those of regular program students. In the case of the EPSB, an initial lag in student mathematics achievement was found, that is, at the grade 1 level, while at the grade 5 level, the experimental students scored significantly better than the regular program students did. In the ECSS studies, there were only a few significant differences on test or subtest scores; three of these favoured the experimental group students, at grades 1, 2, and 5, and one favoured the control group at grade 2 (1986, pp.109-113).

Gillett (1986) reported the results of Manitoba studies of Ukrainian partial immersion programs as showing that the majority of teachers and parents who were questioned perceived the immersion students to be progressing



"satisfactorily". More specifically, grades 1 and 2 immersion students were believed to have been doing as well or better than control students in arithmetic, English language arts, science, and social studies.

Social studies is one of the subjects which has been taught in Ukrainian in the partial immersion programs. The only formal evaluation which has investigated the social studies achievement of students in these programs, using both the Ukrainian and English languages, was done in relation to grade 6 students in Manitoba (Manitoba Department of Education, 1984-85b). The purposes of the study were to determine whether the partial immersion students were doing as well in social studies as were students in the regular English program, and whether the partial immersion students could be expected to perform as well as other students of the same age in the event that they were to transfer to an English program.

Parallel forms of a test covering the content of one unit of the grade 6 social studies curriculum were constructed, and a Ukrainian version of each was created. Both forms of the test were administered to the partial immersion students and the regular program students, and the Ukrainian versions of the two forms were administered to the partial immersion students. The conclusions drawn from the results of the testing were as follows:

1. When tested in the language in which they were taught, the grade 6 partial immersion students appeared to have learned social studies concepts and study skills through Ukrainian as well as their regular program peers who learned social studies through English.
2. When tested in English, the grade 6 partial immersion students performed as well as their regular program counterparts.
3. The partial immersion students were able to use both Ukrainian and English equally well in their handling of social studies curriculum. (Manitoba Department of Education, 1984-85b)

While the conclusions drawn in the Manitoba study were positive ones, the researcher believed that the findings should be viewed "with extreme caution" (Manitoba Department of Education, 1984-85b, pp.68-71). In some cases, the researcher did not have access to the necessary data. She described the research limitations as follows:

1. No data were available on the amount of social studies material covered in the partial immersion classes over the school year, in other words, the 'time on task' variable: "if the [partial immersion students] did, in fact, cover less work, they could be expected to know it better than their [regular program] peers whose performance would be affected by the intervening content" (p.68).

2. It was not possible to ensure comparability of the partial immersion and regular program classes with respect to ability levels or class size.
3. The partial immersion students may have been more highly motivated to perform well on the tests.
4. Some aspects of the administration of the tests were different for the partial immersion classes than they were for the regular program classes.
5. No data were available regarding the extent of Ukrainian language use by the teachers, nor on which resource materials were used, in the immersion classrooms.
6. On one part of the test, the written Ukrainian responses of the immersion students were "shorter, less sophisticated, and, in some instances, incomprehensible" (pp.69-70) in comparison to the English responses of the same students.

Cipywnyk-Morris (personal communication, March, 1988) has speculated that the results of the Manitoba study imply that the partial immersion students had not attained a level of Ukrainian language proficiency sufficient to enable them to benefit fully from social studies instruction in Ukrainian. This, she suggested, may have been due to a lack of adequate Ukrainian social studies resource materials, and to the partial immersion format followed by the Ukrainian program, a format which has limited the use of Ukrainian to

not more than 50 percent of the school day. Cipywnyk-Morris has suggested that social studies may be a particularly difficult subject to teach through the target language in partial immersion programs, in part because of the need for bilingual resource materials. In all heritage language partial immersion programs, social studies is taught in the target language, and mathematics is taught in English; in French partial immersion programs, social studies is usually taught in English, and mathematics in the target language.

In summary, with respect to the English language development of heritage language partial immersion students, there was no evidence that the immersion programs have had negative effects. This conclusion, however, is limited by the lack of studies which have been done for heritage language programs other than Ukrainian, and the emphasis in the testing on the assessment of English reading skills, to the exclusion of speaking and writing skills. There was some evidence that heritage language partial immersion programs have a positive effect on student English language achievement, but further research is needed. Although fewer evaluations have been done of heritage language immersion than of French immersion programs, the consequences for student English language achievement appear to be similar, in that no long-term adverse affects on English development have resulted from enrolment in heritage language partial immersion programs.

Regarding the academic achievement of heritage language partial immersion students, the studies done of programs in Alberta and Manitoba have not provided conclusive results (Manitoba Department of Education, 1984-85b; Gillett, 1986). The conclusions of these studies have been limited by the numbers of cohorts followed, small numbers of students, limited geographical ranges, as well as by the methods and the narrow scope of many of the evaluations. For instance, in many studies, student scores on standardized math tests were used as indicators of those students' academic success. Since mathematics has been taught in English in the heritage language immersion programs in question, it must be questioned whether student achievement in mathematics is a valid indicator of the academic effects of being educated, in part, through the medium of a second language. The scope of all the studies reviewed by Gillett was limited to grades 1 to 5. Questions relating to components of the curriculum other than mathematics, such as the quantity and quality of learning in subjects such as social studies have not been sufficiently addressed (Manitoba Department of Education, 1984-85b).

A research report of a Spanish-English bilingual program in the United States (Curiel, Rosenthal & Richek, 1986) found that length of stay in the bilingual program was related to higher grade point averages and lower drop-out rates among students. The study was done of 86 students at

the secondary school level (junior and senior high) who had been enrolled in a bilingual program during elementary school. The experimental students were compared with control groups at the same grade levels. All were Mexican-Americans, and most entered school with "limited English proficiency". When statistical procedures were applied, the experimental and control groups were found to be comparable on socio-demographic variables. The one difference which the researchers pointed out might have affected the findings was that of school attended: 92 percent of the experimental group and only 20 percent of the control group attended a certain junior high school, while the remainder of the control students attended another junior high school in the Houston area. Experimental students in this study also reported a significantly greater use of Spanish in their homes than did control group students.

The results of this American study showed consistently higher grade point averages and levels of school attendance among the experimental students; however, these differences were not significant. Significant relationships were found to exist between length of time that students had been exposed to the bilingual program and student grades (higher) and drop-out rates (lower) at the secondary school levels. The researchers concluded from these results that there were beneficial effects on school achievement of bilingual education, and that these beneficial effects continued into

the junior and high school levels: "this study affirms that bilingual programs facilitate...school achievement and are a deterrent to school dropout" (p.365). Whether similar results might be experienced in a Cree immersion context in Canada is a matter which is open to investigation.

### Indian Language Immersion

Since 1984, annual evaluations of the Mohawk immersion program at Kahnawake have focussed on the English language and mathematics achievement of program students in order to determine whether instruction through the Mohawk language has adversely affected their English language development or school achievement. The results of the four annual evaluations (Lambert, Genesee, Holobow & McGilly, 1984; Holobow & Lambert, 1985; Holobow, Lambert & Chartrand, 1986; and Holobow, Genesee & Lambert, 1987) are now discussed.

During 1984, the first year that a formal evaluation of the Kahnawake program was done, the program was a partial immersion program. All children entered school as monolingual English speakers. The program was a dual-track one, in that a regular English program was offered alongside the Mohawk immersion program, in the same school. Choice regarding which program a child was enrolled in was left to the children and their parents.

The McGill University researchers (Lambert et al., 1984) tested the grades 1 and 3 students at the end of the school year. There were 14 students in the grade 1 experimental program, all of whom had started the program in grade 1. In the grade 1 program, instruction was given half in Mohawk and half in English, although for the two months prior to testing, the teacher had increased her use of Mohawk to almost 100 percent. The experimental students were compared with 45 students in the regular program. The grade 3 experimental students had been enrolled in the partial Mohawk immersion program (1/2 Mohawk, 1/2 English) since grade 1, and during the grade 3 school year, had been instructed 1/3 through Mohawk and 2/3 through English. They were compared with 52 grade 3 students in the regular English program.

The comparison students in the regular program were also Mohawk, and were enrolled in an English program housed in the same school as the immersion students. All students in the regular program received core Mohawk instruction (30 minutes per day), and starting at the grade 3 level, core French as well. It was reported that mathematics and science were taught through both Mohawk and English in the Mohawk partial immersion program (Lambert et al., 1984).

The experimental and immersion students at each grade level were matched on the basis of English vocabulary skills (Peabody Picture Vocabulary Test) and non-verbal reasoning



ability (Raven's Progressive Matrices). At the end of the school year, the MAT (Metropolitan Achievement Test) battery was administered to experimental and control students. These standardized tests were used to measure student achievement in English reading comprehension, mathematics, language (listening comprehension, punctuation and capitalization, usage, grammar, spelling, and study skills), science and social studies.

Results of the 1984 testing showed that at the grade 1 level, when students were matched for non-verbal reasoning ability, no significant differences existed between the immersion and control groups on English vocabulary test scores. The researchers noted that first language vocabulary development is considered to be an important indicator of general intellectual development, as well as of academic achievement. Accordingly, the conclusion drawn from this result was that the immersion program did not appear to have had a detrimental effect on students' intellectual development or on academic progress.

Other results at the grade 1 level added weight to this conclusion. On four of the subtests (mathematics, language skills, science and social studies), the immersion students scored significantly higher than the control group, while on a fifth subtest (reading comprehension), as well as on the basic test battery (a combined score of the reading, mathematics, and language subtests), there were no

significant differences between the experimental and control groups.

At the grade 3 level, it was necessary to match students on only non-verbal reasoning, because the two variables (English vocabulary skills and non-verbal reasoning ability) were found to be significantly related for the grade 3 group. When the researchers controlled for non-verbal reasoning ability, no significant differences were found between the Mohawk immersion students and the control group.

The researchers also noted that the non-verbal reasoning skills of both experimental groups were significantly higher than those of the control groups. Whether this difference existed as a result of enrolment in the immersion program, as a cause of enrolment, or whether it was an unrelated factor could not be determined on the basis of the existing data.

The conclusions drawn by the researchers from the 1984 study were that the experimental and control groups were essentially alike in terms of their English language and academic achievement. Although there was insufficient evidence to claim that the immersion students experienced academic advantages as a result of their immersion schooling, it was possible to say that "no (academic) price seems to have been paid for making Mohawk an important second mode of instruction" (Lambert et al., 1984, p.13).

The researchers concluded by recommending that further research be done on the Mohawk immersion program: longitudinal evaluations, tests of English and Mohawk speaking ability, and surveys of student attitudes towards the target language and culture.

Beginning in the next school year (1984-5), the program became a total immersion one. Evaluations similar to the one done in 1984 were done in 1985 (Holobow & Lambert), 1986 (Holobow et al.) and 1987 (Holobow et al.). The 1985 and 1986 evaluations showed evidence of problems with the students' English literacy skills. The researchers noted that temporary lags in the development of English literacy skills had also been discovered among various groups of students in French and heritage language immersion programs, lags which had disappeared after English literacy had been formally taught. However, they expressed concern particularly with the fact that the students did not possess sufficient English reading skills to complete certain of the subtests in mathematics and English. Furthermore, the results of those subtests which had been possible to administer were not entirely consistent with the 1984 results.

For example, the 1986 evaluation showed no significant differences between the kindergarten, grades 1, 2 and 3 immersion and control groups on most of the subtests. Two significant differences were in favour of the immersion

groups (on the numbers subtest of the MRT for the kindergarten students, and on the mathematics subtest of the MAT for the grade 2 students), and two significant differences emerged which favoured the control groups (on the English vocabulary pretest for the grade 1 students, and on the science subtest of the MAT for the grade 2 students).

The conclusions drawn by the researchers from the data were that there were comparable levels of academic achievement between the immersion and regular program students, although there was evidence of a lag in the development of English literacy skills up to the grade 3 level. The immersion students' inadequate English reading skills posed a problem in testing in that some test scores could not be used. Either students could not complete certain tests, or the tester read some of the questions aloud, thereby making comparisons difficult between the immersion and control groups. However, at the time of testing, English literacy had not yet been formally taught, and the researchers hypothesized that, as in the French immersion research, Mohawk immersion students' English achievement would reach parity with their regular program counterparts after the introduction of English literacy skills. They speculated that the lack of transfer of reading skills from the second language to the first language might have been due in part to differences between the Mohawk and English orthographies.

As predicted by the researchers, the 1987 evaluation (Holobow et al.) indicated that within one school year after English instruction had been formally introduced, the Mohawk immersion students caught up to their regular program counterparts with respect to English literacy skills. At the end of the 1986-7 school year, the immersion and regular program students at the grades 3 and 4 levels were tested. The mathematics and English subtests of the CTBS were used. Until the end of grade 3, 100 percent of the instruction had been delivered through Mohawk. The grade 4 group, which had been in the total immersion program since kindergarten, had received sixty percent of their instruction through Mohawk and forty percent through English. As in previous years, all students were pretested for non-verbal reasoning ability and English vocabulary skills. Because there was a significant difference in favour of the grade 4 immersion group on the test of non-verbal reasoning ability, experimental and control students were matched for this variable at the grade 4 level.

Results of the research (Holobow et al., 1987) showed no significant differences at the grade 3 level, between the immersion and control groups, for those subtests which could be administered. The immersion group was unable to read English sufficiently to allow for standard testing procedures to be used on four of the subtests. However at the grade 4 level, after one year of English literacy

instruction, the Mohawk immersion students were able to read and answer all of the subtests. No significant differences were found on any of the mathematics subtests. Neither were there significant differences on the majority of the English language subtests. On the spelling and capitalization subtests, the grade 4 immersion group scored at a significantly lower level than did the control group.

The researchers concluded that although there had been an initial lag in the development of reading and writing skills in English, within one school year after the introduction of formal instruction in these skills, the Mohawk immersion students caught up to their English-educated peers. Although it had not been possible to administer all of the mathematics subtests until grade 4, there did not appear to be any evidence of a lag in the development of mathematics skills or concepts. The only English literacy skills which still trailed behind at the grade 4 level among the Mohawk immersion group were spelling and capitalization, and the researchers anticipated that the immersion students would catch up in these two areas as well. Evaluations of some French immersion programs have found similar lags in the development of students' English spelling skills (Genesee, 1987).

Although no other studies of Indian language immersion programs were found, some researchers have investigated the English language and/or the academic achievement of Indian

students enrolled in various forms of bilingual education other than immersion: transitional bilingual programs for example. The results of these studies, while perhaps not directly relevant to the present study, nonetheless add some additional weight to the findings regarding immersion programs. For example, Gudschinsky (1977) has provided evidence that instruction through an Indian language helped the development of basic concepts in content subjects. Vorih and Rosier (1978) reported higher standardized test results for mathematics and English among Navajo-speaking students enrolled in a Navajo-English bilingual program at Rock Point, Arizona, in comparison with similar students in a regular program which included an ESL approach.

#### Summary

An overall neutral program effect on the English achievement of French immersion students has been found. There is some evidence of increased levels of English language achievement among early total French immersion students in relation to comparable English-educated students. Students in all types of French immersion programs have shown a tendency to temporarily lag behind their English-educated peers in the development of English literacy skills. Within one school year after the introduction of English literacy the lag disappears, with the exception in some cases of spelling skills. A neutral

program effect on the academic achievement of early total French immersion students has been observed; the results regarding early partial and late French immersion are inconsistent. Early partial and late immersion students have not always attained levels of academic achievement comparable to regular program comparison groups. The work-study skills of early total immersion groups were higher than those of English-educated comparison groups.

The English language development of students in heritage language partial immersion programs has not been adversely affected by their enrolment in the programs. Results of some of the evaluations of heritage language partial immersion students' academic achievement have raised questions as to whether these students have attained levels of academic achievement comparable to those of comparison students in regular English programs.

Both the heritage language immersion and the French immersion research have supported the view that adequate levels of target language proficiency are a key factor in determining student academic success in immersion programs. In both cases, partial immersion programs have not always appeared capable of producing levels of target language proficiency sufficiently high to allow students to benefit fully from instruction through the target language. In the case of late French immersion, students with several years of prior study of French through core or extended core



programs have not appeared to experience negative effects on their academic achievement in the late immersion program.

The implications of these findings are that a second language can be added via early total immersion education without threatening students' academic or English language achievement levels.

Individual differences among students such as learning style have not been investigated with respect to correlations with the academic outcomes of immersion. The effects of measured intelligence have been studied, and no differential effect has been found when immersion students and regular program students were compared. While there is conflicting evidence with regards to the suitability of immersion for learning disabled students, the prevailing view is that there is not a sufficient research base to suggest that such students perform less well in an immersion program than comparable students do in regular English programs.

In the case of Cree immersion, it is predicted that students could be instructed through the medium of the Cree language in an early total immersion program without experiencing negative effects on their academic or English language achievement, in comparison to their English-educated counterparts. This prediction assumes that the research results for French, heritage language and Mohawk language immersion programs can be generalized; it also

assumes the existence of favourable conditions for the implementation of a Cree immersion program.

Based on existing research, an initial lag in English literacy skills could be predicted, a lag which would likely disappear after English reading and writing had been formally taught, with the possible exception of spelling skills. An early total Cree immersion program would be suitable for students of varying levels of academic potential, and for students with learning disabilities, given adequate educational resources. Superior work study skills could be predicted on the basis of the French immersion data.

It also can be predicted on the basis of Curiel et al. (1986) that a Cree immersion program would have a beneficial effect on general levels of educational attainment, simply by increasing the extremely low levels of retention which presently exist among Indian students in Saskatchewan. This hypothesis would need to be empirically investigated.

The above predictions are limited by certain weaknesses in the research on which they are based. Published evaluations of immersion programs exist for only one Indian language program. Relatively few heritage language immersion programs have been implemented in Canada. Of the programs which have been implemented, Ukrainian partial immersion programs have been evaluated, but few others have been. Data relating to early partial and late immersion

programs are scarce, and data relating to early total immersion programs are restricted to the French immersion context, with the exception of the Kahnawake early total Mohawk immersion program. Existing evaluations are often narrow in scope: some use achievement on standardized mathematics tests as sole indicators of academic achievement, and few consider the influence of such variables as time on task, teacher fluency, quality of bilingual resources, or other qualitative factors. There are few studies of students past the grade 5 level, or of students who withdraw from immersion programs, and few follow-up studies of the graduates from immersion programs. The effect of immersion on the individual student is often not considered; the relationship between individual learner variables and academic success in immersion programs has rarely been studied.

## CHAPTER FIVE

## Implications for Cree Immersion Education

In this chapter, the results of the analysis of the literature from chapters 2, 3, and 4 are discussed in terms of their implications for Cree immersion in Saskatchewan. The chapter begins with a discussion of factors which relate to the context of a Cree immersion program in Saskatchewan. An outline of the differences between the French, heritage language, and Indian language immersion situations in Canada, and the Cree situation in Saskatchewan is presented. The implications of research findings for Cree immersion education are then discussed, both for the students and for the program.

The Context of Cree Immersion in SaskatchewanFrench, Heritage Language, and Indian Language Immersion Contexts in Canada and the Cree Immersion Context in Saskatchewan

It is important to begin a discussion of the implications of research findings for Cree immersion education by noting that the research relating to French, heritage language, and Indian language immersion programs in

Canada may not apply directly to the context of Cree immersion in Saskatchewan.

The sociopolitical contexts which surround French immersion and heritage language immersion in Canada, and the status assigned to each language, differ greatly among themselves. It has been argued that the perceived political, cultural, and economic status of languages affects the outcomes of bilingual programs (Mackey, W. F. in Spolsky, B. & Cooper, R., Eds., 1977). The majority of French immersion students are Anglophones, and members of the dominant society. Both English and French are official languages, enjoy a high social status in Canada, and are protected by a strong legislative base (Yalden, in Cummins, Ed., 1983, p.16). Heritage languages also have a recognized place in Canadian society, although because they are not official languages, they do not have as much prestige as French (Yalden, in Cummins, Ed., 1983, p.16). However, Indian languages appear to have even lower prestige in Canadian society. There is still no federal or provincial policy relevant to the Saskatchewan situation with respect to Indian languages, although Indian organizations have been working to change this situation. For a number of social, political, historical and cultural reasons, Indian languages have a lower social status than Canada's heritage languages, and a much lower status than French.

Related to the point just made is the matter of economics. It is a common perception that there are economic advantages associated with being a French-English bilingual in Canada. The federal government is one of the largest sources of employment in Canada, and many jobs in the federal civil service require a French-English bilingual applicant. There are fewer direct economic advantages associated with speaking either heritage languages or Indian languages in Canada, although it is important to note that economic advantages do exist. James Fleming, Minister of State for Multiculturalism in the Government of Canada, stated at a 1981 conference: "these [heritage] languages...constitute an immense asset to the nation in economic and sociopolitical terms" (in Cummins, Ed., 1983, p.13). There is informal evidence that the economic benefits associated with speaking Indian languages in Canada are increasing, or it may be simply that recognition of the economic benefits is increasing. For example, over the past few years, an increasing number of jobs relating to Indian or Metis people which have been advertised in the Saskatoon Star-Phoenix, have stated that proficiency in an Indian language was either required, or considered an asset.

The manner in which students adjust to school is different for the typical Cree student than it is for the typical student in French immersion programs. As many cross-cultural researchers have pointed out, the school can

be a very foreign place for Indian students (Kleinfeld, 1972; Dumont, 1972; Phillips, 1974; Bowd, 1977; Barnhardt, 1980; and Arbess, 1981). Heritage language immersion students, similar to Indian language immersion students, are members of minority ethnic groups, so that for them as well, adjustment to school may be difficult. The point here is that the cultural gap between the school as an institution, and the students in it, is great for the average Cree student, considerably less for the average heritage language student, and virtually non-existent for the average white Anglophone Canadian student.

The variety of English spoken by students may be different for French and heritage language immersion students, and Cree immersion students. The average French immersion student speaks the dialect of English that is accepted and used in the school; Standard Canadian English. In contrast, many Saskatchewan Indian students speak a non-standard dialect of English (Blair, 1985), even if they speak it as their first language.

The research on the Mohawk immersion program at Kahnawake is probably the most relevant to Cree immersion, because it concerns a North American Indian language. However, the Mohawk language and culture are different from the Cree language and culture. Indian researchers such as Chrisjohn (1987) have cautioned against the 'pan-Indian' approach in which differences among Indian people are

glossed over. Also, the sociopolitical context of Mohawk immersion at Kahnawake may be different from that which will be relevant for Cree immersion education in Saskatchewan.

There are many differences between the Cree immersion context and the French, Mohawk, and heritage language immersion contexts. The differences which have been discussed have the somewhat negative implication that the beneficial effects on students which have been experienced in existing immersion programs may not materialize to the same extent for Cree immersion students. In contrast, the final difference which is discussed has positive implications for Cree immersion. This difference relates to the fact that the rates of school achievement and school attainment of Cree students in Saskatchewan, whether the students are monolingual or bilingual, are lower than those of the general population. For example, a 1975 study reported that 93 percent of the Status Indians in Saskatchewan dropped out of school before reaching grade 12 (Federation of Saskatchewan Indians and Department of Indian Affairs). Therefore, when considering whether enrolment in a Cree immersion program will negatively affect the academic achievement of students, it could be argued that they could hardly do any worse. When the results of some of the research included in this study are considered, for example, Curiel et al. (1986), it appears possible that they could do



better in a Cree immersion program than comparable students do in a regular English program.

Jurisdictional Parameters of Indian Education in  
Saskatchewan

Educational jurisdictions for Indian education in Saskatchewan are important to consider in the context of this study. Within different jurisdictions, there are different regulations and practices which may define the parameters of what is possible in terms of Cree language education for in-school education systems. For instance, for schools within provincial jurisdiction, a non-official language may not be used as a language of instruction for more than 50 percent of the school day.

Responsibility for the education of indigenous people in Saskatchewan falls on both the federal and the provincial governments. According to Canada's British North America Act, the education of Status Indians is a federal responsibility. Status Indians are educated in either federally-run schools, band-controlled schools, or provincial schools. Band-controlled schools and federal schools receive funding from the federal government. Provincial schools receive tuition payments from the federal government for those Status Indians enrolled in their schools. Both federal and band-controlled schools are free to develop their own curricula and objectives, although in

practice, many of these schools have followed provincial curriculum guidelines. Non-status Indians and Metis are educated in provincial schools.

According to the September, 1987 nominal roll data provided by the Department of Indian and Northern Affairs Canada (Staff member, Indian and Northern Affairs Canada, Saskatchewan Regional Office, personal communication, March, 1988), there was a total of 13,104 status Indian students in band, federal, and provincial schools in Saskatchewan. Of these, 50 percent were in band-controlled schools, 14 percent were in federal schools, and 36 percent were in provincial schools. The band and federal schools in Saskatchewan are located on Indian reserves, and the provincial schools attended by Indians are either in rural or urban locations.

In summary, the education of Status Indians in Saskatchewan is a responsibility of the federal government. Status Indians attend schools under band, federal, or provincial jurisdiction. In the 1987-88 school year, more Status Indians were being educated in band-controlled schools than in any other type of school. All band-controlled schools were situated on Indian reserves, almost all of which were in rural areas. Because of legislation which has restricted the use of non-official languages in Saskatchewan's provincial schools, it would be necessary to

implement an early total Cree immersion program in a band-controlled or federal school.

### Implications for Cree Immersion

#### Education in Saskatchewan

The research findings which have been reported in this study are now considered in terms of their implications for a publicly-funded Cree immersion program, from kindergarten to grade 8, for Status Indian children in Saskatchewan. The implications for the linguistic, psycho-social, and educational development of the students is considered first, followed by a discussion of the program implications which arise from the research related to the impact of immersion on students.

#### Implications for Students

The research findings relating to the linguistic consequences for students enrolled in an early total Cree immersion program in an immersion centre setting, with adequate bilingual resources and trained and fluent teachers, suggest that it is likely that high levels of Cree language proficiency would result. The levels of fluency attained would be higher than those attainable in core Cree classes, but not necessarily as high as those of Cree first language speakers of the same age. After several years of participation in an early total immersion program, student

oral and written fluency would be high, and their oral fluency would be such that they could use Cree for ordinary communicative purposes and as a language of schooling. The levels of their receptive skills would be higher than those of their productive skills. It is unlikely that a Cree immersion program would produce the high levels of oral Cree which exist among the Cree elders, many of whom are highly skilled orators, capable of using Cree in various specialised contexts such as traditional ceremonies, counselling, story-telling, and so on. However, the elders also possess tremendous knowledge of life, history, and culture, and people are not expected to attain these high degrees of wisdom and linguistic skill until they are older. The levels of fluency attained by Cree immersion students would open the doors for them to continue learning both the language and the culture.

There is some evidence to suggest that students in a Cree immersion program would develop a non-native-like form of Cree. Greater contact with members of the Cree-speaking community, both in and out of school, would lessen the extent to which this occurred. Community education would be important to aid in the development of realistic expectations for the levels of fluency attainable in a Cree immersion program. If parents were falsely led to believe that enrolment in a Cree immersion program would always and under all conditions lead to native-like fluency, or that

children would have the competence of adult speakers, they would be disappointed, and might withdraw their support for the program. If parental expectations were too low, students might not be motivated to reach their linguistic potential.

Predictions may be made regarding the impact of Cree immersion on student psycho-social make-up. In this regard, the consequences for student cognitive development, self-concept, and attitudes are considered. First, it is safe to say that the immersion experience would not have a negative effect on student cognitive development, in comparison to their regular program counterparts. For students from Cree-speaking homes, it is possible that enrolment in early total Cree immersion would result in cognitive benefits such as greater cognitive creativity, greater cognitive flexibility, and greater metalinguistic awareness.

Second, it is likely that Cree immersion would have a neutral or a positive effect on student self-concept and identity. The strengthening of their Indian identity would be a likely outcome of a Cree immersion program. Burnaby (1980) has suggested that a student's Indian identity may be strengthened to the degree that the school accepts his or her Indian ancestry, and the degree to which the student perceives a sense of continuity between his or her home, the school, and the community. A Cree immersion program would accept the student's Indian identity, and there would be a

high degree of continuity between the home, community and the Cree immersion school. Through the strengthening of their Indian identity, it might be that students would experience a beneficial effect on their self-concept, assuming that the immersion program were well-run. If the program were not planned and implemented properly, problems would arise which might result in negative attitudes on the part of students, attitudes which might have a negative effect on their self-concept and sense of identity.

A third conclusion with respect to the impact of Cree immersion on student psycho-social make-up is that they would likely develop more positive attitudes towards the Cree language and culture. There would be a lessening of social distance between Cree immersion students and their parents, grandparents, and other members of their Cree community.

As has been previously noted, the culture associated with the target language in a Cree immersion program is the students' own ancestral culture, in contrast with the French immersion situation, in which the culture of the target language community is not that of the students. In the case of French immersion, the lack of real and sustained contact with the target language group is believed to have limited the beneficial effects of the immersion experience on student attitudes towards the target language group. Because the Cree immersion students' culture would be that

of the target language, there should be many more opportunities for interaction in Cree than have normally existed for French immersion students to interact in French, with the result that positive effects on student attitudes toward the Cree culture would tend to be long-lasting.

A fourth conclusion with respect to the psycho-social impact of Cree immersion is that students could be expected to develop a more sophisticated understanding of the cultural, social, and political aspects of Indian/non-Indian relations in today's society. A fifth prediction is that the majority of Cree immersion students would develop and maintain a positive attitude toward their immersion experience, assuming that the program were well-run.

In turning to the educational consequences of Cree immersion education, levels of academic and English language achievement among Cree immersion students would be at least as high as those of comparable students in regular programs. Depending on program characteristics, Cree immersion students might attain levels of academic achievement which were higher than those of their English-educated peers. Cree immersion would be equally suitable for students of varying levels of academic potential, and for students with learning disabilities, assuming that adequate educational resources were made available.

In the case of English language achievement, as in regular English-medium schooling, improved English

achievement among students would likely result if a Cree immersion program were to add a strong English literacy and English as a second dialect component. However, there is no reason to suspect that the use of Cree as an instructional medium would detract, in the long run, from student English language fluency or from the overall development of their skills in reading and writing English. Until the introduction of English literacy, temporary lags in the development of English literacy-related skills would materialise. These lags should disappear within one school year after the formal introduction of English reading and writing, with the possible exception of spelling skills. The spelling skills of some immersion students in Canada have continued to lag behind those of their English-educated counterparts.

When academic achievement is considered, the research findings have suggested that in an early total immersion program with certain characteristics, Cree immersion students should be able to master the curriculum content through the medium of Cree at least as well as their counterparts in regular programs master it through the medium of English. The immersion program would require adequate bilingual resources, and trained and fluent teachers; careful consideration would need to be given to scheduling and to the assignment of subjects to each of the languages of instruction. In the upper elementary grades,



where choices are made regarding which subjects to teach through which language, decisions could be made based on the availability of required resource materials in either language. For instance, it has, in some cases, proven difficult to teach social studies in Ukrainian partial immersion programs (Alberta Education, 1984; Sonia Cipywnyk-Morris, personal communication, March, 1988). This has been due, in part, to difficulties experienced in translating many of the culture-laden concepts and content in social studies into the Ukrainian language, and in part, because of the lack of adequate resource materials in the Ukrainian language. On the other hand, mathematics teaching materials may be easier to produce in a language other than English or French than social studies materials have been (Cipywnyk-Morris, personal communication, March, 1988). The point here is that in order for the content of the curriculum to be covered in each subject area, adequate resource materials are required, and teachers need to be able to teach a particular subject in the designated language of instruction.

A possible educational outcome of a well-run Cree immersion program is that student retention rates would increase over those associated with Cree students in regular English programs. This prediction is based on research conducted in an American Spanish-English bilingual program (Curiel, H. et al., 1986), which found that length of time

spent in the bilingual program appeared to be related to higher school achievement and lower drop-out rates. However, because the data originated from only one program, in an American context, it may not be applicable to the Cree immersion context in Canada. As Cummins (1986) and others (Ogbu, 1978; Wong-Fillmore, 1983) have argued, the pattern of under-achievement of minority students is a complex matter; not one factor, but a complex set of interrelated factors must be viewed as responsible for this under-achievement. In other words, Cree immersion is unlikely to have a negative effect on student academic achievement, but in the event that it does not result in increased academic achievement, it will be because a number of factors, in addition to the program factor, are at work.

A positive educational consequence of Cree immersion may be that students would learn more about their ancestral culture and history. This can be considered a likely outcome for several reasons: first, all existing immersion programs have been characterized by enhanced curriculum content with respect to the target language culture. Consequently, Cree immersion students would benefit from greater attention being devoted, within the Cree immersion curriculum, to their culture, traditions, and history. There is also the cultural knowledge that could be gained through being able to see the world through a different language. Increased levels of fluency which would result

from enrolment in Cree immersion programs would enable students to interact socially to a greater extent with members of their cultural group, and hence, to learn more about what it means to be Cree. Their increased fluency, by increasing their levels of comprehension of oral Cree, would give them access to the elders, whom many Indians and non-Indians consider to be the greatest repositories of wisdom and knowledge regarding Indian culture and history. Many elders are monolingual Cree-speakers or Cree-dominant, so that without knowledge of the Cree language, it is difficult to learn from the elders.

#### Implications for Program

As noted in the discussion of the implications for students of a Cree immersion program, the positive results of immersion education have been associated with certain program conditions and characteristics. These include the following:

1. an early total immersion format, as opposed to a partial or late immersion format. The importance for Indian students of starting a bilingual program in the early school years has been argued by Burnaby (1980). A total immersion program would need to be implemented in a band or federal setting, because provincial regulations in Saskatchewan restrict the use of non-

official languages in provincial schools to no more than 50 percent of the school day.

2. an immersion centre setting, as opposed to a dual-track school setting. This requires that a band which desired to implement a Cree immersion program would need to have a sufficiently large school-age population to maintain one school building for the exclusive use of the Cree immersion program.
3. the teaching of English literacy after Cree literacy has been introduced, that is, at the grade 2 to 4 level, and the continued use of Cree to teach some subjects after the introduction of English literacy, at least until the end of elementary school.
4. the provision of adequate Cree language resource materials, for all grades and subjects taught in Cree. This would be a demanding task. In a discussion of Ukrainian immersion education in Canada, one of the greatest concerns facing Ukrainian language educators was reported to be the "preparation and printing of basic and supplementary resource materials" (Lupul, M. R., 1976, p.26).
5. the availability of a pool of fluently bilingual and biliterate qualified teachers, with specialised training in bilingual education methods.

In addition to the characteristics of the in-school component of a Cree immersion program which have been described, the use of the Cree language in the students' homes, and a high degree of contact between the students and the Cree-speaking community are societal characteristics which would be associated with linguistic, cognitive, and attitudinal benefits for Cree immersion students. If a Cree immersion program were implemented in a band-controlled school on a Cree reserve, the opportunities for interaction in the Cree language would be much greater than they would be in an urban community associated with a provincial school setting.

#### Summary

This chapter has presented the results of the analysis of research findings related to the linguistic, psychosocial, and educational consequences for students in French, heritage language, and Indian language immersion programs in Canada. The research findings have been examined in terms of their implications for a publicly-funded Cree immersion program in Saskatchewan, for Status Indian students from the kindergarten to grade 8 level. The chapter began with a discussion of factors relating to the context of a Cree immersion program in Saskatchewan. The differences between the French, heritage language, and Indian language immersion situations in Canada; and the Cree situation in Saskatchewan

were outlined. The educational jurisdictions of Indian education in Saskatchewan were discussed in terms of their implications for Cree immersion education. The implications of the findings from chapters 2, 3, and 4 for a Cree immersion program were then discussed: implications both for the students and for the program.

## CHAPTER SIX

## Summary, Conclusions and Recommendations

The aim of this thesis was to formulate a statement of foundation for Cree immersion education in Saskatchewan, insofar as the consequences for students were concerned. The consequences of immersion for student linguistic, psycho-social, and educational development were examined. Research related to each of these aspects, as conducted on French immersion, heritage language immersion, and Indian language immersion programs in Canada, was reviewed and analyzed, using a literature analysis method. Implications of these research findings for Cree immersion in Saskatchewan were suggested.

Summary and Conclusions

An early total Cree immersion program could, according to the research cited in this study, be founded on the basis of its projected consequences for students, assuming that careful consideration were given to various program matters. A central finding of this study was that attainment of a sufficiently high level of target language proficiency is key to students' academic success in immersion programs. Sufficiently high levels of target language proficiency are attainable in early total immersion programs with adequate

resources and with careful consideration having been given to teacher selection, teacher training, scheduling, and with thoughtful choices having been made regarding which language to use for various subjects.

### Consequences for Students

The following consequences for students of enrolment in an early total Cree immersion program were predicted:

1. high levels of oral and written Cree language proficiency: higher than levels attainable in core Cree programs, and high enough to enable students to benefit from instruction through Cree, and to use Cree for communicative purposes. The levels of their receptive skills would be higher than those of their productive skills. Native-like levels of Cree fluency would not necessarily result from the immersion experience. Proficiency levels would increase in relation to the extent that the Cree immersion students had opportunities to interact with members of Cree-speaking communities. If a Cree immersion program were implemented in a band-controlled school on a Cree reserve, the opportunities for extra-school interaction in the Cree language would be much greater than they would be in an urban community associated with a provincial school. In summary, the levels of Cree fluency attained by Cree immersion students would open



the doors for them to continue learning both the language and the culture.

2. a neutral or positive effect on cognitive development. It is possible that early total Cree immersion students would experience certain cognitive advantages, such as greater cognitive flexibility, greater cognitive creativity, and heightened metalinguistic awareness, if their fluency in the Cree language were to reach sufficiently high levels. The levels of fluency attained in an early total Cree immersion program would be high if Cree were spoken in the students' homes, and if there were many opportunities for students to interact with members of the Cree-speaking community.
3. a positive effect on attitudes toward the Cree language and culture, and a strengthening of their sense of Indian identity. These attitudinal changes would likely be long-lasting.
4. a neutral or positive effect on self-concept. Their heightened sense of Indian identity might enhance their self-concept.
5. a lessening of social distance between Cree immersion students and their parents, grandparents, and other members of their Cree community.
6. a positive effect on attitudes toward language learning and toward the immersion experience.

7. a more sophisticated understanding of cultural, social, and political aspects of Indian/non-Indian relations in Canada.
8. a neutral effect on English language development and English literacy skills. A temporary lag in the development of English literacy skills would be expected until after the students had been taught English reading and writing. A lag in the development of English spelling skills might persist for some students.
9. a neutral or positive effect on their overall academic achievement and attainment. Greater learning about their Indian heritage would result, as a result of enhanced curriculum content on Indian culture, and as a result of becoming able to learn from the elders and other community members through the Cree language. Work study skills would likely improve. Retention rates and achievement levels might improve, relative to comparable English-educated students.

It should be pointed out that the predictions of neutral effects have positive implications for the feasibility of a Cree immersion program. For example, the prediction that Cree immersion would have a neutral effect on English language development implies that students could gain competence in Cree through an immersion program,

without negative consequences for their English language development.

#### Program Characteristics

The following program conditions have been identified as essential if all of the projected neutral or positive consequences for students were to be realized:

1. an early total immersion format, as opposed to a partial or late immersion format. This would entail that the program be implemented in a band or federal school, because provincial regulations in Saskatchewan have restricted the use of non-official languages in schools under provincial jurisdiction to no more than 50 percent of the school day.
2. the teaching of English literacy after Cree literacy has been introduced, that is, at the grade 2 to 4 level, and the continued use of Cree to teach some subjects after the introduction of English literacy, at least until the end of elementary school.
3. the provision of adequate Cree language resource materials, for all grades and subjects taught in Cree.
4. the choice of subjects to be taught in Cree being dependent on the availability of sufficient Cree language resource materials, and dependent on the availability of teachers capable of using Cree to teach the subject matter.

5. the availability of a pool of fluently bilingual and biliterate qualified teachers, with specialized training in bilingual education methods.
6. a thoughtfully planned and carefully implemented program.

In addition, an immersion centre setting, as opposed to a dual-track school setting, would result in optimal levels of Cree language proficiency. A band which desired to implement a Cree immersion program would need to have a sufficiently large school-age population to maintain one school building for the exclusive use of the Cree immersion program.

#### Recommendations

On the basis of the research which was analyzed in this study, it appears that an early total Cree immersion program with the characteristics and resources which have been described would have positive consequences for students. However, the development of the required characteristics and resources would be a complex and time-consuming undertaking. A major recommendation of this study is that plans be initiated to implement one or more Cree immersion programs in Saskatchewan. It is recommended that:

1. the program be implemented on a Cree reserve, in a band-controlled or federal school.

2. the program be implemented while an adequate number of fluent Cree-speakers remain, in order to provide immersion students with opportunities to enhance their levels of competence in Cree, and in order to make easier the task of locating fluent speakers to staff the program.
3. community education efforts be implemented at the band level across Saskatchewan in order to inform Cree communities regarding various bilingual education options, including the immersion model.
4. a Cree immersion program be implemented only at the request of a community-based group, and that this group be involved with all aspects of the program on an ongoing basis.
5. that community education efforts encourage the adoption of realistic expectations among parents and community members regarding the fluency levels in Cree which are attainable in Cree immersion programs. Expectations should be neither too high nor too low.
6. when a Cree community has chosen to implement an immersion program, it commit its support to the program, and plan to maximize the opportunities for the immersion students to use Cree in their own homes and community.
7. Cree immersion programs be instituted at the pre-school and daycare levels.

8. conversational or literacy Cree classes for adults be implemented in the community.
9. adequate and long-term funding be identified for the development of classroom resource material in Cree, and for the implementation and evaluation of the program.
10. students of all ability levels, including learning-disabled students, be admitted to the program, and that the resources required to accommodate these students be assured.
11. students with varying levels of Cree language proficiency be accommodated within a Cree immersion program. Non-fluent immersion students would benefit from interaction with more fluent immersion students, but the program should be designed to challenge the more fluent speakers.
12. appropriate assessment procedures be developed for the purposes of placement, diagnosis, and instructional planning.
13. that changes in provincial legislation be made in Saskatchewan to allow for the possibility of an early total Cree immersion school in an urban provincial school setting.
14. that specialized teacher training programs be developed for Indian language immersion teachers at the University of Saskatchewan and the University of Regina.

Recommendations for further study include the following:

1. that alternatives to early total immersion programs and core programs be investigated for teaching Cree. The extended core program model is one which might prove to be effective and feasible.
2. that studies be undertaken of the acquisition of Cree, both as a first and as a second language, by learners of various ages, and under various conditions.
3. that studies of immersion programs take into account, and describe in their results, student linguistic proficiency and other learner variables, upon entry into immersion programs.
4. that when the consequences of immersion programs are studied, the scope of the research be broadened to include such factors as the effect of teacher fluency in both of the languages of schooling, teaching styles, patterns of teacher interaction, patterns of language use by teachers, quality and quantity of resource materials, and time on task.
5. that evaluations of immersion programs be referenced to general educational goals and objectives.
6. that studies be done of graduates from immersion programs.
7. that studies be done of students who withdraw from immersion programs.

8. that longitudinal studies be done of individuals and groups in immersion programs, and that the outcomes of immersion education be examined for correlations with variables such as socioeconomic status, IQ, learning style, ethnicity, learning disabilities, and language proficiency.
9. that the feasibility of using the immersion approach to teach other Saskatchewan Indian languages such as Dakota, Assiniboine, Saulteaux or Dene be investigated.
10. that once a Cree immersion program has been implemented, it be carefully evaluated along the lines of the recommendations for further study which have been made in this chapter, and with reference to the predictions which have been made in this study regarding the consequences of Cree immersion for students.
11. that evaluation reports of Indian language immersion programs be published and made available to Indian communities, Indian organizations, researchers, and educators.



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