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THE RELATIONSHIP BETWEEN AN AMBIVALENT SCHOOL CLIMATE AND THE
SOCIALIZATION OF SECOND LANGUAGE (FRENCH) LEARNING

by

Grace Lowe MacNab, B.A., M.A.

A thesis submitted to the Faculty of
Graduate studies and Research
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy

Department of Sociology and Anthropology

Carleton University

Ottawa, Ontario

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The undersigned recommend to the Faculty
of Graduate Studies acceptance of the thesis

The Relationship Between an Ambiguous School Climate
and the Socialization of Second Language (French) Learning

submitted by Grace Lowe MacNab, B.A., M.A.

in partial fulfilment of the requirements for
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ABSTRACT

In 1973-74 two public school boards in the National Capital Region of Canada introduced new and expanded existing programs for teaching French to Anglophone students. Although these programs were demanded by some parents, others in the community felt French was "being shoved down throats." This community ambivalence provided a setting in which the effect of negative cultural evaluations of certain cognitive skills would affect the learning of those skills.

Questionnaires were sent to class teachers, principals and teachers of French, with questions designed to tap four aspects of the cultural definitions and evaluations of French programs, called school climate for French. These aspects were a global attitude that French is or is not worthwhile subject (Beneficial); the opinions about the effect the French programs were having on teaching and working conditions (Conditions); the amount of French included in school activities and heard at the school (Integration); and the orientation of the principal to cognitive learning (Cognitive). Comments from teachers indicated a wide range of opinion about French and school indices formed from these items were distributed approximately normally. Positive relationships were hypothesized in correlations between these indices and the class mean scores on tests of French listening comprehension and attitudes toward learning French (Att LF) and toward French Canadians (Att FC).

Although the associations were generally very weak, moderate positive associations were found between Integration and Comprehension in grades six to eight, between Conditions and Att LF in grades five to eight, and between Conditions and Comprehension in the junior grades. This latter association disappeared after the effects of Fall score were removed. In addition, negative associations were found between Beneficial and Comprehension, and between Integration and Att FC, in the early grades. A discriminant analysis using high and low scoring classes indicated that school climate variables were significant in distinguishing between these groups of classes.

Other important findings were: Correlations among school climate variables indicated a lack of consensus among groups which would depress the effects of the separate variables of indices. Comparison of zero-order correlations indicated that the school climate indices conditions of 1973-74 seemed to have effects independent of previous school climate effects. There is strong evidence that the effects vary, in respect to both strength and direction on grade level. There is also evidence that the relation between school climate and learning is a complex one in which personality characteristics (such as ethnocentrism, concern, and insight) of respondents mediate between the ambivalent social situation and learning.

TABLE OF CONTENTS

List of Tables	v
List of Figures	x
Acknowledgements	xi
Chapter I Introduction: A Dilemma of Schools	1
II The Setting	29
III Research Design	44
IV French Learning in the Schools	79
V School Climate for French	105
VI School Climate and Learning	152
VII Summary and Discussion	207
References	241
Appendix A - Opinion Questionnaire for Students	253
Appendix B - Questionnaire to Class Teachers	259
Appendix C - Questionnaire to Principals	263
Appendix D - Questionnaire to French Teachers	282
Appendix E - Tables	296

LIST OF TABLES

	Page
Table 1 The Sample: Number of Classes and Classes Tested at Various Types of Schools, by Board. Ottawa Carleton Public Schools, Fall, 1973, and Spring 1974	73
Table 2 Return Rates for Class Teachers' Questionnaires Ottawa Carleton Public Schools, 1974.	76
Table 3 French Listening Comprehension: Results for Students by Board and Grade. Carleton and Ottawa Public Schools, 1973-74	82
Table 4 French Listening Comprehension: Results for Classes by Board and Grade. Carleton and Ottawa Public Schools, 1973-74	89
Table 5 Attitude Toward Learning French: Results for Students by Board and Grade. Carleton and Ottawa Public Schools, 1973-74	90
Table 6 Attitude Toward French Canadians: Results for Students by Board and Grade. Carleton and Ottawa Public Schools, 1973-74	91
Table 7 Attitude Toward Learning French: Results for Classes by Board and Grade, Carleton and Ottawa Public Schools, 1973-74	94
Table 8 Attitude Toward French Canadians: Results for Classes by Board and Grade, Carleton and Ottawa Public Schools, 1973-74	95
Table 9 Correlations Among Attitudes: Carleton and Ottawa Public School Students, 1973-74	98
Table 10 Correlations Between French Listening Comprehension and Attitude Toward Learning French. Carleton and Ottawa Public School Students, 1973-74	100
Table 11 Proportion of Variance in Spring French Listening Comprehension Score Explained by Attitudes and Fall Comprehension Score. Carleton and Ottawa Public School Students, 1973-74	101

List of Tables (continued)

	Page
Table 12 Stated Ability in French of Respondents, Ottawa and Carleton Public School Teachers, 1974	108
Table 13 Educational Background of Respondents, Ottawa and Carleton Public School Teachers; 1974	109
Table 14 Teaching Experience of Respondents, Ottawa and Carleton Public School Teachers, 1974	109
Table 15 Responses of Class Teachers to School Climate Questions (in Per Cents), Carleton and Ottawa Public Schools, 1973-74	110
Table 16 Education of Teachers of French by Mother Tongue, Carleton and Ottawa Public Schools, 1974	124
Table 17 Amount of French Reported Spoken Around the School by Teachers of French in Carleton and Ottawa Public Schools, 1974	125
Table 18 Per Cent of Teachers of French in Carleton and Ottawa Public Schools Who Reported French Display Material in Their School, 1974	126
Table 19 Disadvantages of Basic French as Perceived by Principals in Carleton and Ottawa Public Schools, 1974 (in Per Cents)	130
Table 20 French at Assemblies and Parent Nights in Carleton and Ottawa Public Schools, 1974	133
Table 21 Grouping and Criteria Responses (in Per Cent of Principals Responding), Carleton and Ottawa Public Schools, 1974	135
Table 22 Principals' Criteria for Giving Advice About French Programs (in Per Cents), Carleton and Ottawa Public Schools, 1974	139
Table 23 Composite Indicators of School Climate Aspects Carleton and Ottawa Public Schools, 1974	146
Table 24 Statistics for Composite Indicators of School Climate Aspects, Carleton and Ottawa Public Schools, 1974	147

List of Tables, (continued)

	Page
Table 25 Correlations Among School Climate Aspect Indices, Carleton and Ottawa Public Schools, 1974	149
Table 26 Correlations Between Beneficial Index and Spring French Comprehension Score with and Without Fall Score Controlled, Carleton and Ottawa Public Schools, 1973-74	160
Table 27 Correlations Between Conditions Index and Spring French Comprehension Score With and Without Fall French Score Controlled, Carleton and Ottawa Public Schools, 1973-74	162
Table 28 Correlations Between Integration P Index and Spring French Comprehension Score With and Without Fall French Score Controlled, Carleton and Ottawa Public Schools, 1973-74 . . .	163
Table 29 Breakdown of Integration FT by Rankings of Spring and Fall Scores on French Comprehension and Attitude Measures (By Grade Levels), Carleton and Ottawa Public Schools, 1973-74 . . .	165
Table 30 Correlations Between Cognitive Index and Spring French Comprehension Score With and Without Fall French Score Controlled, Carleton and Ottawa Public Schools, 1973-74	166
Table 31 Correlations Between Beneficial Index and Spring Attitude Toward Learning French Score With and Without Fall ATT LF Score Controlled, Carleton and Ottawa Public Schools, 1973-74	170
Table 32 Correlations Between Conditions Index and Spring Attitude Toward Learning French Score With and Without Fall ATT LF Score Controlled, Carleton and Ottawa Public Schools, 1973-74 . .	171
Table 33 Correlations Between Integration P Index and Spring Attitude Toward Learning French Score With and Without Fall ATT LF Score Controlled, Carleton and Ottawa Public Schools, 1973-74 . .	172

List of Tables (Continued)

Table 34	Correlations Between Beneficial Index and Spring Attitude Toward French Canadians Score With and Without Fall ATT FC Score Controlled, Carleton and Ottawa Public Schools, 1973-74 . . .	173
Table 35	Correlations Between Conditions Index and Spring Attitude Toward French Canadians Score With and Without Fall ATT FC Score Controlled, Carleton and Ottawa Public Schools, 1973-74	174
Table 36	Correlations Between Integration P Index and Spring Attitude Toward French Canadians With and Without Fall ATT FC Score Controlled, Carleton and Ottawa Public Schools, 1973-74 . . .	175
Table 37	Association (Kendall's Tau) Between School Climate Variables and French Learning: Ottawa and Carleton Grades 1-2 French Comprehension and Attitudes Toward Learning French and French Canadians, 1973-74	185
Table 38	Association (Kendall's Tau) Between School Climate Variables and French Learning: Ottawa and Carleton Grades 3-5 French Comprehension and Attitudes Toward Learning French and French Canadians, 1973-74	190
Table 39	Association (Kendall's Tau) Between School Climate Variables and French Learning: Ottawa and Carleton Grades 6-8 French Comprehension and Attitudes Toward Learning French and French Canadians, 1973-74	191
Table 40	Significant ($P \leq .05$) Associations Between School Climate Variables and French Learning: Ottawa and Carleton Grades 1-8, 1973-74	192
Table 41	Importance of School Climate Variables in Discriminating Between High and Low Groups on Spring French Scores, Ottawa and Carleton Public Schools, 1973-74	197
Table 42	Importance of School Climate Variables in Discriminating Between High and Low Groups on Spring French Scores, Ottawa and Carleton Public Schools, 1973-74	198

List of Tables (Continued)

Table 43	Importance of School Climate Variables in Discriminating Between High and Low Groups on Spring French Scores, Ottawa and Carleton Public Schools, 1973-74	199
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Appendix E

Table E-1	Factor Solutions for Teacher Attitude Questions (Oblique), Ottawa-Carleton Public School Class Teachers, 1974	297
Table E-2	Factor Coefficients of Teacher Attitude Questions, Ottawa-Carleton Public School Class Teachers, 1974	298
Table E-3	Principals' Grouping Criteria Factors (Varimax), Ottawa-Carleton Public Schools, 1974	299
Table E-4	Principals' Criteria for Giving Advice About French Programs Factors (Varimax), Ottawa-Carleton Public Schools, 1974	300
Table E-5	Disadvantages of Basic French as Perceived by Principals: Factors (Varimax), Ottawa-Carleton Public Schools, 1974	300
Table E-6	Associations Between Principal's Perception of Disadvantages With Respect to Core French and Related School Variables, Ottawa-Carleton Public Schools, 1974	301

LIST OF FIGURES

	Page
Figure 1 Comparison of French Listening Comprehension Scores of Students in 20 and 40 Minutes Per Day French Programs by Cumulative Time, Ottawa and Carleton Schools, 1973-74.	83
Figure 2 Comparison of French Listening Comprehension Scores of Students in two 20 Minutes Per Day French Programs by Cumulative Time, Ottawa and Carleton Schools, 1973-74.	84
Figure 3 Comparison of French Listening Comprehension Scores of Students in 20, 30, and 40 Minutes Per Day French Programs by Cumulative Time, Ottawa and Carleton Schools, 1973-74.	85
Figure 4 Percent of Variance in Spring Scores Explained by Attitude and Fall Score by Ottawa and Carleton Public School Students, 1973-74.	104
Figure 5 Correlations Between Class Teacher Scores on Status of French Factor and Pupils' French Comprehension Score by Grade, Carleton Public Schools, 1973-74	179
Figure 6 Correlations Between Class Teacher Scores on Career Factor and Pupils' French Comprehension Scores by Grade, Carleton Public Schools, 1973-74.	180
Figure 7 Correlations Between Principals' Concern with Administrative Oriented Grouping Criteria and Pupils' French Comprehension by Grade, Carleton Public Schools, 1973-74.	181
Figure 8 Correlations Between Principals' Concern with Pupil Oriented Grouping Criteria and Pupils' French Comprehension Score by Grade, Carleton Public Schools, 1973-74	182
Figure 9 Correlations Between Principals' Concern with Teacher Oriented Grouping Criteria and Pupils' French Comprehension scores by Grade, Carleton Public Schools, 1973-74	183

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I. . INTRODUCTION: A DILEMMA OF SCHOOLS

This study explores a dimension of school systems, asking if it might be salient in relating the school to levels of student achievement. The reasoning runs as follows: The educational institution has certain functions or goals with respect to children in the society and the staffs of schools act to achieve these ends, which may be either manifest or latent functions (Merton, 1957). In a pluralistic society such as ours, some of these ends may be incompatible with one another. When such incompatibility among goals exists, the achievement of one or both goals will suffer. Thus, incompatibility among goals in a school is a dimension of that system which may interfere with student achievement of the ends of the system.

In this chapter we will explicate this argument, illustrating it by an example from the literature and developing a conceptual framework. The next chapter will look at the social situation which provides the setting for an empirical study of the effects of incompatibility among functions. Chapter III will describe the research design, Chapter IV will examine the measurement of the dependent variables, and Chapter V will look at the measurement of the independent variables. The findings relating achievement and school variables will be reported in Chapter VI and their implications will be discussed in Chapter VII.

SCHOOLING AND STUDENT ACHIEVEMENT

Considerable research into education has sought to relate differences in educational resource input, teaching methodology, or school organization to the achievement of students. (For an excellent summary, see Averch, et al., 1972.) The results of this research have been disappointing. The only consistent finding has been that the home background of children, specifically the socio-economic status of the family, is a decisive factor in determining level of student output. The list of school variables which have been tried and found wanting in explanatory power ranges from expenditure per pupil and teacher's verbal score (Coleman, 1966) to age of school building (Michelson, 1970) and whether teacher snaps her fingers (Boocock, 1972:130).

However, the idea that the school ~~can~~, or should, produce achievement effects persists. For instance, Richer (1975), pleading for an examination of the more "meaningful" dimensions of schooling to be found at the classroom level, opens his argument by stating, "The absence of consistent facility and staff effects (as measured in these surveys) on cognitive achievement is taken as evidence that schools in general have little effect on cognitive growth," but he concludes by reaffirming his faith in the efficacy of educational institutions:

...to suggest, as some have done, that schools have no effects, is ludicrous. It has only been shown that particular school factors have null effects vis-à-vis particular output measures. It remains for us to discover the salient dimensions.

Indeed, it is ludicrous to suggest that schooling has no effects. At minimum, schooling is closely correlated, both historically and geographically, with the reduction of illiteracy, and, as McLuhan (1962) has argued, literacy itself produces changes in people. Literacy rates, moreover, are closely related to industrialization and higher standards of living. Economists have argued that economic development is, in part, a consequence of education, since the skills developed by education systems upgrade the labour force and produce "human capital" (Vaizey, 1973; Anderson, 1967; Vaizey and Debeauvais, 1961; Drucker, 1961; Blaug, 1970:61-100). Even where education is not vocationally oriented, the basic mathematics and reading skills acquired make job training easier. Cross-cultural studies on cognitive development indicate that higher proportions of adults have acquired formal (logical) operational skills in urban, educated populations than in uneducated village populations (Kohlberg, 1971:1065-66). It is a moot question whether this level of cognitive development is due to schooling or to the "massive general types of experience" which come from living in the educated society (Kohlberg, 1969:1029ff). Schelsky argues that "abstract modern qualities cannot be directly taught" (1961:36), but are acquired through participation in occupational life. What is agreed upon, by all these writers, is that modern systems of mass education are an important feature of societies with literate populations and complex occupational structures.

Certainly, one of the major purposes of our educational system is to produce adults who can perform occupational roles (albeit, some additional on-the-job training may be necessary) and participate in

the consumptive life of our society. The very success of the schools in achieving mass education may make it difficult to perceive this effect except in cross-cultural perspective.

In any case, the effects found to be "absent" (or not consistently present) are not things such as mass literacy and economic development. American researchers concerned with quality of schooling look for effects such as differential rates of student achievement which can be linked to differences in educational practices or inputs. Researchers hope, vainly it seems, to find causal relationships within the system which will indicate how the institution may be changed the better to perform certain functions and achieve certain goals.

Many educational researchers ask how various school practices affect the achievement of overt learning goals. Do advance organizers facilitate learning (Barnes and Clawson, 1975)? Are tangible rewards, social rewards, or knowledge of results more effective reinforcers of pupil learning (Schultz and Sherman, 1976)? Will students learn more in classes of 20 than in classes of 30 (Hendelman, 1975; Morrison, 1976)? Is the learning of a subject proportional to time spent on it (Morrison, 1976)? These studies may or may not look at student entry characteristics; they are sometimes well controlled and sometimes not; they are plagued by Hawthorne effects; and results are not consistent across studies (Averch, 1972:50-92). Most of these studies are not theoretically oriented, but rather are technical studies for educators. They assume that the function of the school is to teach a subject--reading, mathematics, or French, although sometimes non-

cognitive traits are measured. The educational practice is evaluated on the basis of how well it achieves some overt goal.

EDUCATION AND EQUALITY

Another function of the educational system has received the attention of other researchers for more than a generation. They have been concerned with the provision of equality of opportunity for all children in the society, believing that a function of the educational institution in a democratic society is to provide the "equal footing" which makes the competition for high status positions a "fair" one. (The phrasing is Ralph Turner's, 1960.)

The early research in this area indicated that the schools were not fulfilling this function. A second wave of research sought to explain inequality by examining differences in educational inputs and school practices among schools with high and low achievement levels. The main outcome of this work was simply to reinforce the earlier findings. It did not find in-school variables that could be manipulated to enable the schools to fulfill the equalization function. More recently the equality studies have struggled to a realization that the equalization function of the school system is in conflict with other, perhaps more covert, societal functions of the schools. Some writers are arguing that such "function conflict" is the reason why the schools cannot produce equality of opportunity.

Although the present study is not concerned with equality of opportunity as an effect of education, the arguments to be made in this paper parallel (on a small scale) those that have emerged from the equality work. Therefore, a review of these studies will prove useful to illustrate the concept of functional incompatibility.

The problem for those concerned with social equality seems to be that, even in Western democracies, education does not overcome the influence of family, that there is not enough change in the social class distinctions that children bring with them as they enter school. This fact is in conflict with the myths of the North American culture. Warner has noted:

The most significant characteristic of the American class system--and the reason Americans think of it as being democratic--is the firm belief that there must be equality of opportunity for all and a chance for everyone to have his turn at bat. Such a belief means that....a man, by applying himself, by using the talents he has, by acquiring the necessary skills, can rise from lower to higher status....(1962:129)

Furthermore, there is a belief that the educational system is an avenue to acquiring the necessary skills and developing talents:

....as a social system, the school probably constitutes the single most important influence on the adolescent's career development. Theoretical literature frequently defines the school as the social institution whose main role--although not the only one--is to assign young people positions in the socio-economic structure. In our particular social system it has become the main allocation agency for the occupational and stratification system. The adolescent's ultimate place in the social structure is largely the result of his experience in school. (Breton, 1972:6)

The school, as allocator, is expected to be engaged in a talent search (to use John Porter's phrase), developing the potential of individual students and sorting them into appropriate positions. The school serves both the individual and society, enabling people to make the best use of their talents, and society to find those best qualified for positions. "....the school constitutes a system of causal variables affecting adolescent vocational goal-setting behaviour; and...this causal role cannot be explained away by the personality and social background characteristics of the individual adolescent." (Breton, 1972:392)

Yet despite the myth, research has indicated that highly intelligent children of lower class parents are less likely to be selected for further education and high status positions than are the mediocre children of well-to-do parents. The hiatus between myth and reality was demonstrated for a specific community in the United States by Hollingshead (1961), for a state by Sewell and his colleagues (1968, 1969, 1970), and for the nation as a whole by Coleman (1966). In Canada, Porter (1965) demonstrated that the allocation of positions within elites tended to depend on family and school ties. (Harvey and Charner, 1975, argue that since the early 1960s the Canadian system may be becoming less elitist in character.)

The literature on class and educational achievement in North America is large. The works cited are merely highlights of the whole. Throughout the earlier work there is a subdued sense of shock at the findings. Education has failed its task, it ought to have done more to equalize opportunity.

Why this feeling of disappointment? Americans recognized that not everyone has equal talents. However, they believe that everyone should be able to rise to the highest social level to which his talents and personal efforts will allow. Turner (1960) describes the approved mode of mobility in the United States as a contest, "in which elite status is the prize in an open contest and is taken by the aspirants' own efforts." There is a belief that the contest ought to be "fair", that all contestants should "compete on an equal footing." The system "tends to delay the final award as long as practicable, to permit a fair race."

If status is awarded as a prize in a fair contest, there must be some mechanism for equalizing chances for success. That children from different family backgrounds would have unequal chances at birth was not surprising. However, it was believed that education, the American school system, would smoothe out the initial inequalities, so that each child would have a chance of making it which was as good as everybody else's and which would depend only on his own efforts. Turner said, "schooling is presented as an opportunity." Remedial help for the less successful is more common in American schools than enrichment programs, and junior and community colleges offer "second chances" for higher education.

As study after study indicated that American education did not iron out initial inequalities (and might even acerbate them), equality-oriented research tended to take a new tack. The question at issue became "what can be done to make the school system work to equalize opportunity?" Studies like Coleman (1966), Katzman (1971), Murnane (1975) and many others (see Averch, 1972, for a review) attempted to relate school system variables to student achievement levels to determine what could make a difference. The idea behind these studies was (and is) that if the inputs which lead to student achievement are known, then more of these inputs can be focused on school for children from low socio-economic backgrounds in order to equalize their chances.

The results of the multitude of studies were consistent, and disappointing. Almost without exception they indicated that student input characteristics explained almost all of the variance in student

outcome which could be explained by the analyses. Attempts to refine input specification did not seem to alter results. There was, of course, a small proportion of explained variance which could be related to a variable which might be manipulated by the school, but this school input variable was not the same from study to study. This research supported earlier studies, without revealing what kind of changes could be made to improve the school's ability to function as an equalizer of opportunity.

PRESERVATION OF THE STATUS QUO: SCHOOLS AS AGENTS OF SOCIALIZATION

The idea that the school has "no effects" refers, by and large, to the failure of schooling to remove effects caused by inequalities in the social status of children's families. Yet it is questionable whether this is really a function of the educational institution in the pluralistic, class society of the United States. Collins (1971) argues that the school is controlled by the dominant elite which uses the school in its struggle to maintain its position:

Insofar as a particular status group controls education, it may use it to foster control within work organizations. Educational requirements for employment can serve both to select new members for elite positions who share the elite culture and, at a lower level of education, to hire lower and middle employees who have acquired a general respect for these elite values and styles. (1971:1010-1011)

Since education is perceived as a means of getting ahead, there has been a demand "for large scale opportunities" to acquire educational qualifications.. Collins indicates that this "use of the schools...as a kind of patronage for voter interests" has resulted in a deflation of the educational currency with more and more years of schooling being required for admission to elite status (1971:1015). As time passes

everyone has to run farther just to stay in the same relative position.

Collins is saying, then that the idea that the schools should have the effect of providing equality of opportunity is part of the dominant cultural myth, masking the school's real effects of maintaining the class structure. Collins indicates that conflict theory predicts that:

The main activity of schools is to teach particular status cultures, both in and outside the classroom. In this light, any failure of schools to impart technical knowledge (although it may be successful in this) is not important; schools primarily teach vocabulary and inflection, styles of dress, aesthetic tastes, values and manners. The emphasis on sociability and athletics found in many schools is not extraneous but may be at the core of the status culture propagated by the schools. (1971:1010)

That the school, as a socializing agent, should itself subtly reinforce class distinctions should hardly be surprising. The finding that it exerts virtually no effect in changing the class structure is in keeping with its function as a socializing agent.

Thus, there seems to be a contradiction between the manifest function of providing opportunity, and the latent function of maintaining a class structure. To the extent that the schools are instruments of the existing culture, they should provide the appearance, but not the reality, of equality in opportunity. Clark's (1960) description of the "cooling out" function of community colleges shows this subversion of the "second chance" function of these institutions.

Jenks (1972) reviewing the educational equality literature also challenges the idea that the schools can provide equality in an unequal society. He argues that the cause of inequality lies outside the schools and that:

None of the evidence we have reviewed suggests that school reform can be expected to bring about significant social changes outside the schools. More specifically, the evidence suggests that equalizing educational opportunity would do very little to make adults more equal. (1972:225)

"Providing equality of opportunity" as a school effect has as its referent something outside the schools, embedded in the social and cultural conditions of the society. The school reflects the inequality in the larger society and not vice versa.

It is appropriate to ask if a set of school variables—resource use, curriculum, student input, teaching methods and the like—influence the amount of "equality of opportunity" provided by the school to the larger society. It should be recognized, however, that the question assumes that the school ought to perform this function to society. When it is discovered that the school does not achieve this goal, the functional assumption must be questioned. Collins claims that the school does have effects, but that understanding of all the functions of the system would not lead to expectations of equalization, but rather the opposite. Jenks supports this belief.

Boyle (1969:71) also recognizes that the school system has conflicting functions:

Clearly, one manifest function of the educational system is to bring about learning, which may be taken to mean the acquisition of knowledge and of skills for using this knowledge. (1969:71)

However, the schools also have the function of

selecting out those students who can best benefit from further increments of education, and of certifying that certain students have in fact acquired certain kinds of knowledge and skills.

The educational system copes with the selection and certification functions through techniques which are based on the acquisition of learning. This involves the assumption that at least within

a given school the development of learning is the individual responsibility of the student, and the further assumption that the accomplishment of learning can be measured, through the mechanism of grades. (1969:71-72)

While grades are "quite efficient" in the selection process, they do not predict adult achievement. Boyle's empirical study found that grades are inaccurate as indicators of quantitative reasoning and that the bias involved in this difference seemed to divert students away from creativity in learning at some schools. Thus, efficiency in the selection function was achieved at the cost of neglecting the creative aspects of learning. Such a finding is consistent with the idea that the school functions to support the existing social structure.

This look at studies relating education to equality of opportunity has indicated that findings of "no effects" from educational processes and inputs would be better interpreted as "not an equalizing effect." The expectation that the school would, and should, cancel out initial class effects blinded researchers to the function of the educational institution as a conservationist one with respect to the social status quo. Once this conservative bias of the schools is recognized as another function of education the empirical findings are not so surprising.

TWO ASPECTS OF SCHOOLING: THE HORNS OF THE DILEMMA

There can be no doubt that the school is an agent of socialization, whose function is to transmit the culture of the society. The culture to be imparted includes knowledge, beliefs, norms, values, and habitual ways of doing things; the truths, myths, and conventional wisdoms of the society. This function of education is conservative, resisting change and supporting existing institutions.

However, the conservative bent of socialization may be one horn of an educational dilemma in a pluralistic and changing society. The other horn is the demand that education develop the intellectual, creative faculties of the individual, his ability to "read, write and cypher" and to solve problems. The distinction is similar to Bloom and Krathwohl's distinction between the cognitive and affective domains (1956, 1964). The dilemma for schooling arises because moral, affective socialization instills cultural ways of thinking and of seeing the world, and excludes other ways of thinking and seeing. Cognitive education, however, may require that the unfamiliar, non-normative ways be learned in order to facilitate understanding and coping.

Parsons considers both these aspects of schooling. He says that the school attempts socialization of "both the commitments and the capacities for successful performance of...adult roles." (1964:130) Commitment involves social values broadly defined as well as those specific to occupational roles, and thus would coincide with moral or affective socialization. This is the 'moral component' of education which includes as fundamental "such things as respect for teachers, consideration and co-operativeness in relation to fellow-pupils, and good 'work habits'." (1964:137) The other component, the "capacities," are the cognitive elements, involving "the learning of information, skills, and frames of reference associated with empirical knowledge and technical mastery. The written language and the early phases of mathematical thinking are clearly vital." (1964:137) Furthermore, Parsons notes:

The striking fact about this achievement content is that in the elementary grades these two primary components are not clearly differentiated from each other. Rather, the pupil is evaluated in diffusely general terms; a good pupil is defined in terms of a fusion of the cognitive and the moral components, in which varying weight is given to one or the other. Broadly speaking, then, we may say that the "high achievers" of the elementary school are both the "bright" pupils, who catch on easily to their more strictly intellectual tasks, and the more "responsible" pupils, who "behave well" and on whom the teacher can "count" in her difficult problems of managing the class. One indication that this is the case is the fact that in elementary school the purely intellectual tasks are relatively easy for the pupil of high intellectual ability. In many such cases, it can be presumed that the primary challenge to the pupil is not to his intellectual, but to his "moral", capacities." (1964:137)

This moral content is a second curriculum of the schools. It has already been referred to by Collins, who sees inculcation of status cultures as the "main" activity of the schools. Turner (1960) also emphasizes this aspect of the curriculum by describing how it differs under different modes of mobility.

An important bifurcation of affective or moral socialization should not be overlooked: In some instances, as for Collins and Turner, the referent for socialization is the society which the student will face as an adult. This is what Parsons implies by speaking of "performance of adult roles." Yet the specific things Parsons includes in "moral content" are not so much related to the adult world as to the school itself. Kohlberg explicitly complains that much of "moral education" is merely "classroom management" and argues, "it is almost inevitable that this be the case in an education system in which teachers have no explicit or thought-out conception of the aims and methods of moral education." (1966:18)

The nature of classroom management as socialization for school is explicit in Gracey's article subtitled "kindergarten as academic boot camp." (1967)

That moral socialization to the school roles may be opposed to the educative function is demonstrated by Holt. He is concerned almost exclusively with cognitive learning, and yet he finds over and over again that the student's concern is with not displeasing the teacher, not asking stupid questions ("stupid" is ill-defined, pervasive and pejorative), and not bungling his own "classroom management." Holt points out, furthermore, that fear, which hinders the learning process, is used to force the child to work and to behave.

On the one hand, I try to dissipate those fears. But on the other, I have to do something to get him to do the work he so hates doing. What I do boils down to a series of penalties, which are effective in exactly the proportion they rouse the kind of fears that I have been trying to dispel. (1964:97)

In general, Holt's students were concerned with coping with the problems of school in a way which indicates that the moral ones were not "more challenging" than cognitive ones, but rather that the social problems intervened between the child and cognition. The child was afraid of making mistakes, of giving a wrong answer and being laughed at. These were the major problems of school, and the children's solutions were social--to become very finely tuned to social nuances, to hedge all answers, to find safety zones where answers were easy. He was being socialized, but at the expense of his cognitive education.

However, although there is opposition between cognitive education and effective socialization, both school role and adult role socialization seem to support one another. Authors such as Kozel (1967) and Herndon (1968) demonstrate that classroom management techniques are

used to bring about status socialization. Both describe vividly the extent to which teachers in black schools focused on manners, deportment, and conduct in desperate attempts to control the class and almost to the exclusion of concern with the cognitive material. Thus, these lower class black children experience in school the demeaning social discrimination which they may face in the larger society, and by the same means are denied access to the cognitive skills which are needed to acquire higher status.

In addition, the middle class bias to school content presents a real handicap to the lower class child. On the simplest level, these children are asked to learn cognitive skills through a content which is based on an unfamiliar picture of reality. Dick and Jane do not live in plums, their family is intact, and there is no sign of anger among family members. Furthermore, these different perceptions of reality and the language which describes them are denigrated by the schools. Bernstein (1959) believes that the lower class environment leads to a different use of language, with the working classes using what he calls public language. Public language supposedly does "not facilitate communication of ideas and relationships which require precise formulation" (1959:312), among other drawbacks. Yet it is possible that these differences are due more to differences in perceptions of reality and their valuation by the observer than to an actual poverty of language. Bernstein unintentionally indicates that working class language can be very rich when it refers to lower class reality such as "a situation where the individual deliberately avoids an allotted task or duty." However, Bernstein, at the time a

teacher of working class boys, did not consider these as "elaborations" of language, but rather as examples of

a type of euphemism which disguises or blurs the implications of the intention . . . certain sociological and psychological associations which would follow from the appropriate descriptions of the act--avoiding work deliberately--are neutralized. Perhaps one of the most important is that experiences of guilt are minimized. (1959:318)

This richness of language is invalidated for "moral" reasons, with little consideration given to its qualifications as a representation of lower class reality.

Ashton-Warner notes that the words that a child learns to read quickly are those that have the most meaning for that individual child. When she writes for the child the name of whatever frightens or especially interests him, she seldom has to repeat it (1963:28-37). Kozel found that black children were intensely interested in adult poems by Langston Hughes, especially one that was about their own ghetto situation. These held their attention when nothing else had, but they were not considered proper reading for these students (1967:178, 194-204). In these cases the cognitive learning of words was easy because they were important to the child in his real world outside the school. However, they weren't the words that are normally part of the classroom and were even considered "improper" in the school setting. (Kozel was fired.) The lower class child has not merely to come to terms with an unfamiliar cognitive content, but also with a moral content which actively disparages the home situation.

The larger society also downgrades the lower class culture. Of course, this congruence between socialization to school and to the larger culture is to be expected. Parsons notes that an agent of

socialization must be "a differentiated subsystem of a society, and not itself a "little society," (1955:19) and must represent the larger structure in such a way that the child by successively learning its roles will be learning also the structure of the larger society. In discussing the family as an agent of socialization, Parsons says:

First the parents, as socializing agents, occupy not merely their familial roles, but these articulate, i.e. interpenetrate, with their roles in other structures of the society . . . Secondly, the child is never socialized only for and into his family of orientation, but into structures which extend beyond this family, through interpenetrating with it. (1955:35)

These same statements could be made of teachers and the school. The depreciation of the ghetto culture is an attitude that teachers bring into the schools from the larger culture, and the classroom management techniques which seek to control the behaviour of these children are also based on the values of the dominant culture. The effects of this socialization are isomorphic with the structure of the society as a whole.

SOCIALIZATION AND ACHIEVEMENT

If there is conflict between the rational, cognitive activities which school personnel (and, indeed, many sociologists and parents) believe the schools are doing, and the latent functions which the schools perform as instruments of society, then there should be evidence of this in the shape or amount of learning that takes place. There is no reason to suppose, a priori, that the moral functions will take precedence over the cognitive ones. However, the evidence in the equality studies mentioned above seems to indicate that this may be the case.

Two British studies indicate that there is no necessity for

cognitive achievement to suffer as a result of emphasis on the school's socialization function. Jackson and Marsden (1966) describe the schooling of eighty-eight working class grammar school children whose educational achievements were high. The rewards for these chosen students were high enough so that they were willing to learn even when it meant accepting socialization to middle class life styles, a cost that was difficult for working class children (see Jackson and Marsden, 1966; Hoggart, 1957). Students in Jackson and Marsden's sample seemed addicted to work beyond what was necessary for getting grades, and yet most found the affective socialization the most difficult aspect of school. A small group of these students at one school rejected re-socialization to middle class life styles by forming an intellectual clique with anti-school values (1966:148-149). Their conflict was with the school and its demands for conformity in dress and deportment, not with cognitive learning. Indeed, much of the conflict which Greer (1968) finds endemic in schools may be resistance to teacher demands for behavioural conformity rather than the resistance to new ideas which Greer postulates. Himmelweit and Swift (1969) also report that the school can induce cognitive achievement in children "selected" for both grammar school and elite stream. These "strong" schools emphasized academic excellence and the students, having been chosen for the elite streaming, responded.

Breton's (1972) study supports Himmelweit and Swift in showing that program and school expectations have effects on adolescent aspirations which are independent of background variables. Breton argues that the adolescent is engaged in choosing a vocation which involves a process of understanding both self and social structure and of

"matching self and environmental characteristics." Academic experiences provide "clues about the goals that can be pursued in life" both by indicating the kind of demands which will be made at various levels of occupational position and by clarifying the individual's self-image. In the British case, the "strong" school and elite placement seem to define these students as high achievers. In Breton's Canadian schools, on the other hand, placement in a low status program or a failure seem to define limits to potential, especially for students of high mental ability. In both cases the experience results in the development of a self image more in keeping with school experience. As Berger put it, "the sane child is the one who believes in what it says in the school records" (1963:67). Rosenbaum (1975) also finds that school tracking has a socializing effect, increasing the variability among IQ scores of students in higher tracks and decreasing variability in lower tracks.

The process may be considered to be an aspect of defining the situation, wherein the student uses program assignment and marks (both relative to others in the school and in a more absolute sense) to delineate an image of what he is and what he can expect to accomplish in life. This process seems to be operative, also, in the studies by Rosenthal (1968, 1973) and Goodacre (1968) where teacher expectations, whether manipulated by experimenters or growing out of cultural stereotypes, exert a pull on student behaviour for better or worse. The teachers' expectations are communicated to the student, who may accept this definition of himself.

Stebbins explicitly uses the concept of definition of the situation as a framework to look at teachers' perception of disorderly

behaviour:

Because of their dislike for misconduct, teachers have a disorderly behaviour set: a readiness to act to avert or arrest misconduct among students . . . Yet, as with other psychological sets, the disorderly behaviour set leads to action only upon perception of certain cues in the environment. In short, when activated, it becomes one of the predispositions in the teacher's definition of the situation . . . Still, these cues often are insufficient to activate the disorderly behaviour set. Much depends upon how the teacher further defines the situation, especially, how he identifies the students concerned (e.g., below average, poorly behaved, or not working to expectations); how he views their intentions, evaluations and plans of action (e.g., low motivation); and what the nature of the behaviour is (e.g., awayness). (1971:232-233)

In this defining of the student and the classroom situation, the features most salient to the teacher are likely to be those related to the task of classroom management. The cognitive ability and achievement of a child are, no doubt, important, but these qualities will tend to be evaluated for their contribution to the running of the class (see Geer, 1968). Whether a child is a "good" child on whom the teacher can rely is more important than whether he is a good student. In this sense both cognitive and moral education are subordinated to the demands of classroom management. However, the defining of student roles closely follows the values and structures of the larger society. Therefore, classroom management tends to be supportive of moral education insofar as "moral" is equated with social values. (This does not mean, however, that the school is supportive of the higher, post-conventional stages of moral development, as Kohlberg, 1966, has pointed out.)

COGNITIVE CONTENT IN THE SCHOOLS

When cognitive learning is supported only as an adjunct to school roles, it lacks impetus to creative understanding, which is the cutting edge of cognitive development. Curiosity is "good" only when it fits into the curriculum plan; questions are welcomed only when they

are on the topic; answers are correct when the teacher says they are.

Indeed, if one looks at research into education one might believe that the content to be learned was of no importance at all. Schwab lists four aspects of the learning situation, "the learner, the teacher, the milieu, and the subject matter," and comments that "none has been so thoroughly neglected in the past half century as the last." (1964:4)

Teacher characteristics and behaviour have been studied. Boocock finds that some teacher background characteristics may be relevant to student performance, but that in general, "there does not seem to be any one type of teacher or teacher-student relationship that is "best" for all kinds of learning and all kinds of students."

(1966:9) In her book published a half-dozen years later, she finds little reason to alter her opinion. Classroom observation studies seldom include content categories, focussing instead on teaching style, mannerisms and methods. (See, for example, Good and Brophy, 1973; or Flanders, 1970.) Becker's studies of the teacher in Chicago schools may provide the best look at teachers from a sociological point of view. He examines their perceptions of students (1952b) and of their own role in the school (1952a, 1953). Averch et al, (1972) note that studies of teaching approaches and methods in the classroom show little variation in student outcomes. However, they note with interest that some laboratory studies indicate that organization and sequencing of content may make a difference in learning.

The milieu has also been studied. Organizational climate scales have been developed by Halpin and Croft (1962) and Likert (1967), but relationships between organizational climate and student outcomes

have not usually been drawn. Averch (1972) indicates that relationships are more generally made among organizational variables, than between organizational variables and learning. Ferge (1972) examined teachers' perception of the school, and found them to believe it is less powerful for student change than are friends, family or mass media. She did not investigate the relation of this perceived powerlessness with learning, although she does indicate that it seems to go with a weakened sense of responsibility for students. School variables such as class size, pupil teacher ratio, administrative ratio, or financial resources have been analysed as the inputs to an input-output model. Relationships found are weak and inconsistent. (See Averch, 1972:35-49 for a summary.) However, with respect to class size, at least, there is a persisting belief that it may make a difference depending on teacher approach or subject matter.

In general, however, studies which include consideration of content are rare. There have been few attempts to examine perceptions of the subject matter, especially those held by teachers. Yet it is possible that such definitions, indicating that the subject is easy or hard, worthwhile or impractical, fun or boring, may affect learning.

One is hard pressed to explain the lack of interest in subject matter on the part of researchers. It may be due to the methodology which emphasizes, on the one hand, macro-studies of resource inputs related to questions of inequality, and, on the other hand, micro-studies of interpersonal relations within the classroom. Concern with the quality of interaction and the nature of social sanctions diverts attention from the content of the information being exchanged.

Apathy towards the role of content, however, is consistent with the emphasis on modern education as "child centered." Teachers no longer "inculcate" or "instruct" but rather:

The modern professional teacher is a person who guides the learning process. He places the pupil in the centre of the learning activity and encourages and assists him in learning how to inquire, organize, and discuss, and to discover answers to problems of interest to him. The emphasis is on the process of inquiry as well as on the concepts discovered. (Ontario, 1968:122)

This trend was forecast twenty years ago by Reisman:

The teacher's role in this situation is often that of opinion leader. She is the one who spreads the messages concerning taste that come from the progressive urban centers. She conveys to the children that what matters is not their industry or learning as such but their adjustment in the group, their cooperation, their (carefully stylized and limited) initiative and leadership. Especially important is the fact that the cooperation and leadership that are inculcated in and expected of the children are frequently contentless. (1955:83)

... she herself is not interested in the intellectual content of what is taught, nor is this content apt to come up in a staff meeting or PTA discussion. These adult groups are often concerned with teaching tolerance, both ethnic and economic; and the emphasis on social studies that results means that intellectual content and skill become still more attenuated. (1955:84)

Coleman (1961) saw this intellectual apathy as part of the adolescent culture (which he believed to be in opposition to the adult culture) and he shows how this peer group socialization to depreciate being a "brain" tends to influence learning.

It is doubtful that intellectual apathy by adolescents distinguishes their culture from that of adults. Hofstadter admits that Americans have "persistent, intense, and sometimes touching faith in the efficacy of popular education" (1963:299), but he argues that they expect their education to be "practical":

The American college was complacently portrayed as a place designed to form character and inculcate sound principle rather than to lead to the pursuit of truth. The common school was thought to have been designed for a similar purpose.

"Little children," said Alice Cary in a selection used in a third reader of 1882, "you must seek rather to be good than wise." "Man's intellect," said another writer, "is not man's sole nor best adorning." The virtues of the heart were consistently exalted over those of the head. . . (1963:307)

Hofstadter argues that three aspects of American education make the schools instruments for the propagation of the anti-intellectualism of the society: the "invidious contrast between self-determining, self-directing growth from within, which was good, and molding from without, which was bad" (373); the selection, training and position of teachers; and the emphasis on the average student.

Lipset (1961) has pointed out that there is a sense in which Americans distrust achievement values, seeing them in conflict with equality, which is highly valued. If this distrust is less in Canadian education, it is not absent. The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario stated:

Separate classes for the intellectually superior, separate schools for vocational and academic students, and separate curriculum categories all tend to keep alive the idea that the academically endowed are in some way superior to their vocationally-oriented peers. The practice is sufficiently prevalent to cause the Committee to deplore such survival of class distinction, and to advocate schools that will accommodate students without invidious distinction. (Ontario, 1968:67)

COGNITIVE EDUCATION AND SOCIALIZATION

At the beginning of this chapter we examined studies on education and equality of opportunity in the United States. The American myth laid upon education the function of smoothing out the inequalities of birth so that every child would have a "fair" chance

of achieving an adult status commensurate with his "native" abilities. Studies revealed that education did not, in actuality, perform this function. A second wave of studies tried to find out which school inputs made a difference so that these inputs could be increased to compensate for the disadvantages of low socio-economic status. However, no school variables seemed to override the entering status characteristics of children. Recent studies argue that this finding is to be expected, because the real function of schools is to support the existing social structure and not to overthrow it.

The chapter also indicates that a similar argument may be made with respect to cognitive education. There is a belief that a major function of the schools is to teach cognitive skills and impart factual knowledge. The dependent variables used for most equality studies are some type of achievement tests--reading scores, math scores or tests of basic skills. It is because scores on these measures vary by social class rather than educational input that the schools were said to have "no effect." Boyle says, "Clearly, one manifest function of the educational system is to bring about learning. . ." (1969:71), and Parsons (1964) sees cognitive achievement as one side of the school's socialization function. Cognitive achievement goals are often tacitly assumed by people such as Holt (1964) and Friedenberg (1963) as they deplore the failure of the schools to achieve them.

It is difficult to evaluate the extent to which the schools fulfill the function of cognitive education, in part because different standards are implied by different people. When economists such as Vaizey praise the schools for their contribution to upgrading the

labour force, it is one thing. When humanists like Friedenberg condemn the system for failing to convince high school students that thinking is as much fun as football, that is something else.

However, there is one theme emerging from educational research: The variables of school systems do not seem much related to differences in student achievement. The production functions tend to look at financial inputs, class size variables and teacher education and experience, but none of these seem to explain excellence or its absence. Observation studies look at various facets of teacher behaviour and class interaction, but these do not seem to be consistently related to achievement. Among variables describing the teacher, the school milieu, and the learner, only characteristics of the learner are consistently related to how much is learned.

We have presented evidence to indicate that perhaps cognitive education is not the main function of the schools. Parsons sees this function sharing the spotlight with moral education or socialization of the roles and values of the society. In the vignettes of Holt (1964) and Herndon (1968), we see the school concerned more with teaching proper responses to social cues and the propriety of behaviour, than with cognitive learning. In Kozel (1967) the vignettes show children being taught their place, not arithmetic. Breton (1972) uses statistics to prove that the school effectively defines for the adolescent the limits to his aspiration.

The main function of the school seems to be a socialization function which teaches the child about himself, his place in the world, and social skills. The school bridges the gap from family to society

by teaching him the social evaluation of his family. It also teaches the child the values and roles of a bureaucratic society.

This socialization is done by the teacher largely as a function of her management of the class. She defines behaviour and misbehaviour. She also evaluates the child's intellectual endeavours, both as to correctness and appropriateness. Since her prime concern is to manage the class, it can be assumed that much of her evaluation of cognitive achievement is based on its contribution to her management of the class. Finally, it was argued that in an anti-intellectual social climate, such as ours, the teacher is not obligated to support any content or cognitive skills which are disruptive to her management of the class or in opposition to the values of the society.

In this chapter the school has been presented as having two functions, that of developing cognitive skills and that of socializing children to the beliefs and values of the larger culture. It has been suggested that, because classroom management is considered a necessary precondition for cognitive learning and because classroom management is so similar to socialization for adult roles, the socialization function may take precedence over the teaching of cognitive skills.

The next chapter discusses a situation where the teaching of a cognitive skill was attempted in a community in which vocal segments of the community held beliefs and values opposed to such teaching. This study will be concerned with examining the extent to which these values held in community have interfered with the learning of cognitive skills.

II. THE SETTING

The last chapter indicated that in a pluralistic society the school may be called upon to perform conflicting functions--particularly that it might be caught between demands that it socialize students to certain roles and values and that it teach certain cognitive skills. It was suggested that the importance of classroom management and the downplaying of content in education would contribute to the saliency of socialization and the inculcation of values. Usually such conflict is covert, as appeared to be the case with respect to the school's function in preserving the status quo of the hierarchical social system. It may happen, however, that the social values come into open conflict with cognitive content to be taught.

Finding a situation where the conflict between cognitive content and social values taught in the schools is more or less open would enable research to evaluate the effects of such conflict on cognitive learning. In this chapter a situation will be described in which boards of education implemented a program aimed at teaching cognitive skills in a minority language. Although there was support from the federal and provincial governments for the program, and presumably from the majority of the voters as well, evidence will be presented to show that some segments of the community strongly opposed the programs. Thus, a conflict between socialization of values about the minority culture and the teaching of the language skills of that culture was generated, and provides an opportunity for research into this problem.

A number of programs expanding the teaching of French in schools of the National Capital Region of Canada were begun in September, 1973, funded by the federal government (through the province which added funds for research) as part of its program to encourage bilingualism. Although aimed at clear educational goals, the introduction of the programs brought into the open some anti-bilingualism, anti-French feelings that the schools shared with their community setting. Thus, these programs, requested by school administrators and trustees and supported by both federal and provincial governments, confronted cultural attitudes shared by a conspicuous portion of the population which sent its children into those school systems.

BILINGUALISM IN THE NATIONAL CAPITAL REGION

The educational program could be legitimized on several grounds. The first is that "foreign" language study is traditionally an acceptable academic discipline. The fact that Canada is officially a bicultural/bilingual country adds a value dimension, that of promoting national unity. A third legitimization is to be found in the function of the schools as trainers of skills needed in the job market. To the extent that Ottawa is a breeding place for future civil servants (as well as being a residence for present civil servants), and to the extent that bilingualism will be an increasingly necessary skill for civil servants, there is a need for the schools to "produce" potential employees with this skill. These points were made by the boards in their briefs requesting the original grants.

In many other parts of Canada and Ontario, the Official Languages Act has few direct implications at the moment. For many it is only an abstract statement of the linguistic rights of the minority founding people. The study of French seems to be of interest and value merely because of the general linguistic and cultural background it affords, or for occasional use at home or abroad.

In the National Capital Area, the Act has implications which are direct, practical, immediate, widespread. Some apprehension is being felt by people who are directly affected. The hiring policies of the Federal Government, for example, have created widespread concern. Parents of many children within the Ottawa area school systems are fully aware, sensitive and understandably concerned lest their children encounter language problems which adults, because of insufficient training, are meeting with great difficulty.

It is a fact that many of our graduates will seek employment in the Federal Civil Service. Bilingualism, either actual or potential is becoming an important requisite for employment and promotion. This demand extends as well increasingly to service industries and other occupations in the area. This fact requires that second-language teaching be considered a priority programme. The Boards' failure in this regard would place their students at a serious competitive disadvantage in the Ottawa-Hull region.

. . . The Boards recognize a serious responsibility to encourage understanding, to contribute positively to the National Capital as a symbol of that National unity upon which the well-being of the country, as a whole, depends. (Ottawa, 1973:2-3)

Despite these positive statements by the school authorities, evidence for the presence of anti-French, anti-bilingualism attitudes is not hard to find. These are alluded to in the Boards' briefs cited above. Fundamentally, the surfacing of such attitudes represents the response of the English-speaking majority to threats to its traditional dominance of Canadian economic and political life. The Official Languages Act brought this threat home to civil servants in Ottawa.

The conduct of government business had been directed by Anglophones. In 1972 the Royal Commission on Bilingualism and Biculturalism reported that "apart from the legal career, Francophones are

relatively scarce in the more powerful and prestigious careers in the federal administration, but they do have a sizeable presence among the routine, non-creative positions in the lower ranks" and "in most work settings Francophones are involved in duties more peripheral to the main goals of the department than Anglophones." (Canada, 1972:78,80)

French tended to be used only in the lower status occupations and even here English was used to communicate with those higher up the ladder. There was little incentive for an Anglophone to speak French and many Anglophones felt that to be forced to speak French was to suffer a loss of status. Thus, although Canada had been a "bicultured" nation since Confederation, Canadians generally, and civil servants in particular, did not hold bilingualism nor the bilingualist in much esteem.

The moving force for change in this situation came from Quebec. The quiet revolution and the separatist movement (abetted by the growing concern with civil rights, an awareness fostered by the movement in the United States and books like John Porter's The Vertical Mosaic, 1965) prodded a government already dedicated to the federalist principle into an active program of bilingualism, especially in the public service. In practice this meant expanding the use of French, since English was the working language of most government offices and "bilinguals" tended to be French-Canadians who also spoke English. Public servants were offered a massive program of language instruction which, in practice, tended to be French for Anglophones, rather than the other way around.

The program was not without opposition, however. This is perhaps most graphically illustrated by the two elections which bracketed the initiation and first year of the French programs. Among the issues which came to the fore in the 30 October, 1972,

election was the language issue. In its review of the election, the New York Times said:

Although Mr. Trudeau denies it, the voting upset is partly attributable to an English backlash against "French power in Ottawa" and against Liberal emphasis on programs to upgrade the status of the French language as one of Canada's two official languages. (N.Y. Times, The Week in Review, 5 Nov. 1972:5)

The language issue was not dead by the election of 8 July, 1974, although the bitterness, like the implementation of the act, had been muted. Commenting on his victory, John Turner, Member of Parliament for Ottawa-Carleton, saw the language issue as being on a par with inflation and wage and price control. Turner said, "I found people talking to me more, the subterranean issues came out for the first time. The people sent me a message that they are concerned about the application of bilingualism in the public service and the cost of living." (Ottawa Citizen, 9 July 1974:25)

In the period between the two elections, at the time when French programs were introduced into the schools and our data gathered, the issue of bilingualism in the public service had become a fact of life, less salient perhaps, and less of a rallying cry, but still an issue.

Perhaps the reasons for the problem, and some inkling of the tone of the discussion, can be best illustrated by a couple of stories from Ottawa papers about language training and bilingualism in the civil service. The first, under the headline "New CS French tests causing high failure rate" appeared on the front page of the Ottawa Journal, on 16 January, 1974:

An abnormally high initial failure rate in a new French-language knowledge examination is spreading consternation and fear among English-speaking public servants enrolled in French immersion courses.

Their teachers at the Carson Road language school, operated by the public service commission, are discouraged and dispirited by the results.

Some of the students have been on the course for almost the allowable year--and their future careers depend on passing the language examination within the time limit so they can be declared officially bilingual.

Only two of 22 students who took the exam recently passed. It was the second try for both. Teachers at Carson Road normally expect to get six or seven out of every 10 students through the exam.

The catastrophic results with the new exam, introduced in early December, have resulted in a spate of special one-to-one teaching as the instructors try to get students ready.

The second appeared over a year later, again on the front page of the Ottawa Journal:

Unilingual Canadian? Don't bother to apply for a position as a federal government information director. There is hardly a ghost of a chance that you will get the job.

In the past 13 months only two unilingual information directors have been appointed. And both are on short-term assignments in the public service . . .

A knowledgeable source in the public service claims the Public Service Commission is making desperation appointments to meet the demands of federal departments and agencies for bilingual officials. The source says that reason and good sense are overlooked in many information service appointments.

Good men and women are being passed over for promotion because they are not bilingual and not francophone, according to this same individual.

Federal departments and agencies are apparently willing to take less than the best, because deputy ministers are unwilling to wait the six, eight or 12 months it takes to turn out a bilingual information director.

Language is not supposed to be a factor in hiring, provided a candidate agrees to and is able to undergo language training. But it very obviously is a major hidden factor in determining who is appointed to information posts, according to available evidence. (10 Feb., 1975)

Articles such as these, together with letters to the editor, meant that the language issue remained before the general public as well as facing civil servants on the job. Career people in the civil service felt that they were forced to take language training whose value they doubted, and that even then their chances for promotion might be impaired.

It was in this climate that the Carleton and Ottawa School Boards made their requests for funds to develop programs which would give to children a chance to become more proficient in French while still in school. The Boards recognized that existing programs did not provide the French skills now demanded of graduates. The federal government responded to these requests by making grants totaling more than \$2 million in 1973-74 to four boards¹ in the Ontario portion of the National Capital Region. The expanded programs began with the school year in September, 1973.

From the beginning of these programs it was apparent that some members of the school staff resented the increased emphasis on French, particularly in the light of spending ceilings which made money scarce for other school activities. The popularity of immersion programs seemed also to pose a threat to the jobs of English teachers in the classroom. Those in charge of expanding the programs mentioned this hostility as a concern in the implementation of the programs. Some members of the school community expressed their resentment of the whole experiment, including the research, either directly or indirectly.

1. Although this paper will deal only with the Carleton and Ottawa Boards of Education, grants were also made to the Ottawa and Carleton Separate Schools.

Comments that the French programs are "just politics" or that they are "such a hot potato that you will never report what is really going on," were made early in the study to researchers.

Thus the expansion of French teaching in the schools of the National Capital Region provides us with the location in which we may clearly see conflict between the official educational aims of the school and the attitudes of a conspicuous portion of the members of the system. We may use this location to examine the effect of such conflict on the learning of children.

THE EXPERIMENTAL PROGRAMS

The federal grants enabled the two Boards to instigate several experimental programs in the teaching of French. In addition to this money, the Ontario Ministry of Education provided additional funding for research to evaluate the effectiveness of the programs. In this section, we will first look at the programs in French offered by the Boards, and then outline the entire research project, of which this study is only a part.

In instituting experimental French programs, the Boards selected² two dimensions as being of primary consideration: amount of time devoted to French instruction and the teaching of French as a subject in its own right versus the teaching of French by using it as a medium of communication in teaching another discipline (Stern, Swain & McLean, 1976:38). These two dimensions are interdependent in that the more time is devoted

2. It cannot be over-emphasized in discussing this research project that the "experimental" educational programs were chosen, developed and installed by the Boards. The research staff was called in to evaluate the relative effectiveness of programs that often lacked specific goals or real comparability.

to French the more necessary it becomes to make French periods do double duty in the school economy of time and subjects.

The programs are best described by linking them to levels of French proficiency expected of graduates. At the top level are programs aimed at producing students who are bilingual or close to it. At the least are programs aimed at giving students somewhere between a smattering and a modicum of language skills together with positive attitudes to the language and culture of French-speaking people. There is also an in-between level which offers a good deal more than the modicum but which will not lead to bilingualism without further study.³

Programs aimed at bilingualism are immersion programs, or to be more accurate, home-school language switch programs, in which students take 50 per cent or more of their work through the medium of the second language. Both Boards offered primary immersion programs, beginning in kindergarten, at the time of getting the grant. These programs begin with 100 per cent French and have a 60-minute dose of English added in grade two or three. In September, 1973, the leading edge of these reached grade three. Grant money was used to augment these programs. In addition both Boards used federal funding to institute

3. It is difficult to fault these programs for being overly rigid and specific with respect to aims. The three levels of proficiency described in the Report of the Ministerial Committee on the Teaching of French (Ontario, 1974) seemed to be inferred from examination of the programs in Ottawa and elsewhere, rather than a restatement of given aims. In the fall of 1974, the Carleton Board of Education approved a statement of aims which were very similar to those of the Ministerial Committee. Furthermore, although it appears here as though Board administrators institute programs with only educational goals in mind, it is quite clear that political considerations enter into program decisions. In particular, there was an effort with these programs to spread the money around so that as many children as possible would get a piece of it. This was, apparently, an important consideration in the French for a Single Subject experiment. In this case goals of fairness and equality came first and the educational goals were stated later.

another entry point into the immersion program, that of the intermediate years. Carleton Board began three classes of 80 per cent immersion at grade seven in September, 1973, and these became grade eights the following year, with new grade seven classes coming in as well. Ottawa instituted three years of intermediate immersion, 100 per cent at grade six, and 50 per cent at grades seven and eight, with the intention that after the first year the sixes and sevens would move up through the program and be replaced by students coming into grade six. A bilingual high school program shared by the two boards also is intended to give entry to immersion programs, as well as take graduates of elementary immersion who wish to continue their education in French.

At the modicum level of French proficiency both Boards had offered programs of 20 minutes daily of French instruction in grades one through eight (15 minutes in kindergarten). The Ottawa Board had decided several years earlier that this program was inadequate for the needs of the children of the area, and had doubled the time, beginning in kindergarten. In 1973 this 40-minute program entered grade two. The funds for experimental programs were also used to increase the basic program in the intermediate grades, so that all Ottawa students in grades seven and eight received 40 minutes per day and students in grades six, seven and eight in six Carleton schools received 30 minutes per day. These changes in basic French program affected the largest number of students.

In Carleton Board attempts to reach the in-between level took the form of adding time by teaching an academic subject using French

as the language of instruction. French for a Single Subject (FSS) was offered to some 32 classes at 20 schools in grades one through eight. Subjects taught included ecology, mathematics, social studies and art. Students in these programs received the basic 20-minute dose of French language, together with about 40 minutes of the subject taught in French. The curriculum was expected to follow closely the guidelines offered for the English curriculum.

Another experimental program was the reducing of some language classes at the high school level to see if class size would affect the learning.

THE FRENCH PROJECT RESEARCH

Research into the programs was designed to compare the effectiveness of the program variations⁴ in teaching French language skills and in either producing or maintaining positive attitudes. The design is pre-test, post-test, with control groups for intermediate immersion classes and comparison groups for these and FSS classes. The basic French programs which differed in terms of time, were compared with each other.

All groups of students received standard tests of French listening comprehension, and, in addition, an opinion questionnaire. For students in immersion and FSS programs, testing other than French was appropriate, since subject content was taught in French. Reading and mathematics tests were administered to immersion students and

4. The term program variation will be used to refer to different programs which have the same level of proficiency as their aim. The term program alternative will be used to refer to different programs which have different goals.

their controls. A subject achievement test was given as a post-test to FSS students and their comparisons. In all, over 25,000 children were given nearly 70,000 tests in the Fall of 1973 and again in the Spring of 1974. These tests were directed at measuring the dependent variables--learning and attitude change.

The major part of the study was intended to answer the question "Which program variation in an alternative is more effective?" Beyond that aim, however, the research was able to look at the resources, especially dollars, used by programs and at some other variables of interest to educators. Parents and students received questionnaires, which asked about reasons for selecting special programs, exposure to French other than the programs in school, and expectations of and satisfaction with the programs. Background of teachers, some aspects of pedagogical approach, place of French in the school organization and use of materials were all considered relevant. To investigate these areas questionnaires were sent to principals and teachers of French.⁵

THE SCHOOL CLIMATE SUBSTUDY

Although not a part of the original research proposal, it became obvious early in the study that the school climate for French might have an influence on the learning taking place within the school. Administrators in charge of the French programs expressed the concern to researchers that the hostility of teachers to French and the implementation of the programs would affect their success. Some of

5. For a more complete picture of the research which constitutes The FRENCH Project, see Halpern and Kirby (1973); Kirby (1974).

this hostility was believed to be simply a reflection of the antagonism which existed in the community. However, administrators also recognized that the implementation of French programs, particularly immersion, had implications for English teachers and their careers. Immersion programs had begun at both Boards in the Fall of 1970. By the Fall of 1973 approximately 20 per cent of students entering kindergarten chose immersion, and planning officials predicted that as many as 30 per cent might ultimately choose this program. Since the teacher of the immersion class had to have a fluent command of French--most immersion teachers are native French speakers--the popularity of the French program meant that the number of jobs for Anglophone teachers was shrinking. The job threat was acerbated by the declining enrolments due to lowered birth rates, and in Ottawa city due to movement to the suburbs. Enrolments in kindergarten to grade eight in the Ottawa Board schools were dropping by about 1,000 per year, from 26,080 in 1970 to 22,945 in 1973. French immersion removed another 1,225 from the regular programs enrolment.

Another reason for annoyance over French was financial. The Boards were operating under cost ceilings imposed by the provincial authorities in 1973 and their impact was felt on things like school supplies and bus trips. In spite of the fact that money for French programs came from the federal government for experimentation, teachers resented it as extravagance in a time of stringency. Although administrators made some attempts to counteract these feelings, they were still concerned about them.

Researchers heard other complaints from class teachers, that immersion students weren't learning regular subjects as they should, and that basic French was a waste of time, especially for non-Anglophones and poor students. These complaints might not have been important if there were a strong belief that French was an essential part of the elementary school program. Although Board administrators might believe in the need for French they questioned whether teachers did so. Researchers heard, as administrators must have, that the programs were simply a political game and were not sound programs either in teaching French or in relation to the total school programs. Yet, at the same time that these rumblings were heard, it was also said, "You can't criticize French; nobody dares say a word."

Administrators of both Boards recognized that the concerns about jobs were justified, but they felt that French was a necessary part of the school curriculum. French learning was justified on pedagogical grounds as well as being important in a bilingual country. They wanted to know if hostility did exist and, also, what effects it was having on learning.

In order to examine this issue, additional items were added to the questionnaire that went to principals and the one to teachers of French. A questionnaire was designed to be sent to regular class teachers. These questions were designed to examine the extent to which the school staff were supportive of a French program which was received with rather mixed feelings in the community, but which was supported by administration.

Most of the opposition to French language instruction stemmed from two sources, the vague anti-French (or perhaps "Keep the French in their place") prejudices in the community and the effects of implementing extensive French instruction in the school system itself. As a strictly cognitive skill, French would seem as valid a subject for study as, say, environmental studies or music. It seemed reasonable, therefore, to use the data gathered from school staff, together with achievement data from students, to examine the influence of social values on cognitive learning.

This chapter has examined the community setting wherein the present study was carried out. It described the programs implemented in the schools of the study, gave an overview of the entire research project. Finally, it indicated the reasons for including a study of school climate in that project. In the next chapter the general research design for the school climate study is described.

III. RESEARCH DESIGN

The research to be described in this chapter is designed to investigate what happens to the learning of a particular subject in schools when some members of the staff are antagonistic to it. Two tasks of the school have been described earlier as teaching a cognitive content or skill and teaching a moral content (or socialization). It was indicated that the teacher defines many aspects of school for the children in her class, including the worth or importance of the subject to be learned. It seems reasonable that if children are taught that a subject is unworthy, their learning of the subject will be affected. It was shown that the implementation of French programs in Carleton-Ottawa schools might face negative evaluations because of general social prejudice about French and because of the circumstances of its being offered in these schools. Thus, in the Spring of 1974 the schools of the Ottawa-Carleton region seemed to present a situation in which the learning of French would be likely to be affected by community and school downgrading of it. The proposal here is to measure a number of variables which can be subsumed under the heading of school climate for French and to see how these affect the learning of French by children in the school.

In this chapter the dependent and independent variables will be described, and the hypotheses will be stated in terms of the specific variables. Finally, the population and techniques for sampling and obtaining the data will be delineated.

SCHOOL CLIMATE FOR FRENCH DEFINED

The idea of a school "climate" may be somewhat of a poetic way of describing the ambiance, the milieu, the culture, the tone of a school. However, this climate may be of importance in the educational process. "...schools do vary in effectiveness, but the specific school characteristics that produce results are somewhat elusive," wrote the staff of Project Talent (1967), "...one of the crucial differences between an effective school and an ineffective one may be something as vague as the school's atmosphere." The poet, Adelaide Crapsey (Untermeyer, 1919:251) wrote on seeing weather-beaten trees, "Is it as plainly in our living shown, by slant and twist, which way the wind hath blown?" and educators are still sometimes disposed to remark, "as the twig is bent, so grows the tree." The variables included in school "climate" delineate the wind direction and temperature range in the school, the atmosphere that is hypothesized to make the school more or less effective in bringing about student learning. The nature of this elusive climate in any study is ultimately defined by the instruments used by the researcher to measure it.

In sociology, the word has been used to cover many variables, but it is not generally used to include classroom behaviour or ambiance. It is the environment that surrounds the classroom, affecting it in the same way as the outside temperature affects the inside temperature of a house. Although climate may refer to neighbourhood variables such as aggregate measures of the SES of the school sending area, context seems a more usual term for these variables (e.g., Sewell and Armer, 1966). Thus, generally school climate describes the weather

between the school gate and the classroom door. Furthermore, the physical aspect of the school--size, age of building and state of repair, for example--are not usually considered as climate, even though they are included as resource variables which are expected to influence learning (see Averch, 1972:167-206).

What remains, then, is the social climate of the school. Perhaps the most effort in this field has been to examine peer group influences. Coleman (1961) indicated that the values of students in high schools created a climate which affected learning. Student rejection of intellectual values turned their attention away from academic pursuits. McDill, Meyers and Rigsby (1967, 1969), using concepts of "student press" and "faculty press" developed initially by Pace and Stern (1958), found that high school environments characterized by high levels of "academic emulation" were associated with high levels of mathematics achievement. Although McDill et al. tend to emphasize the peer group influences (see also Rigsby and McDill, 1972), their measures also include information from teachers about both "press" variables. Indeed, of the thirteen variables loading on the academic emulation factor, eight come from teacher questionnaires and five of these also refer to "faculty press" scales or faculty "dedication."

Another aspect of climate that has been considered is the organizational climate. This aspect has to do with intra-faculty relationships and especially the managerial style of the principal. Likert (1967) measured organizational climate using a scale adapted from work he did in industrial organizations. Halpin and Croft (1962) developed a scale based on the open and closed mind concepts formulated

by Rokeach (1960). Of eight factors, four--esprit, intimacy, disengagement and hindrance--refer to teacher behaviour; and four--thrust, consideration, production emphasis and aloofness--refer to principal behaviour. Organizational climates of schools are defined by combinations of high or low scores on these factor items.

One might hypothesize that there are two climates in a school, a student, peer-influence climate and a faculty climate, which interact in different ways in different schools. Investigation of a "student climate" is beyond the scope of this study, which will be concerned with the faculty climate. At the public school level, considered in this paper, student academic values may be derived from home values rather than being a function of peer-group interaction as they seem to be in high school. Organizational climate was not included because of objections by teachers federations that it was "irrelevant to the French study."

School climate for French in this study examines the faculty definition and evaluation of the particular subject, French, the learning of which constitutes the dependent variable. These definitions and evaluations are measured in two ways, directly through the responses of class teachers about their attitudes, and indirectly through information from principals and teachers of French about the French-related behaviour and school activities occurring in the school. In addition, one attitude-type question will be asked of principals.

It should be noted that what is being measured here is the school climate for French. Items are measuring definitions and evaluations of a single academic subject and do not measure either the general academic value climate studied by Coleman (1961) and McDill et al. (1967, 1969, 1972), or the organizational climate, the interaction among teachers and between teachers and the principal, that was studied by Likert (1967) or Halpin and Croft (1962). The reason that this climate for French is of interest is that community attitudes to the teaching of this subject were ambivalent, that is, French was taught in a situation "in which the actor's perception and valuation of a social object (French) contains conflicting elements" (Zielyk, 1966). It was expected that this ambivalence would affect the learning of students.

• Another difference between the present study and those mentioned above (Coleman and McDill et al.) is that in this study the entire weight of the proof will rest on correlations between data gathered from different school groups, from faculty for the independent variables and from students for the dependent variables. The next section will examine the measurement of the dependent variables, before returning to consider the items measuring school climate for French.

THE DEPENDENT VARIABLES

Of the three aims for French programs stated by the Ontario Ministry of Education curriculum guide, attitude development with respect to French-speaking Canadians and second language learning, competence in direct communication in French, and cultural awareness (Ontario, N.D.), The FRENCH Project elected to test two: attitudes and competence in French. It should be noted that these two aims correspond to the commitments and capacities which Parsons indicates are the goals of schooling (cf. pp.13-14 above). In terms of concepts presented earlier, they are the moral and cognitive sides of education.

The initial and primary concern of this thesis is with cognitive competence, the development by students of French language skills. The learning of these skills has been hypothesized to be inhibited to the extent that the community disvalues them. However, a similar argument can be made with respect to the development of attitudes. Socialization of positive attitudes toward French-speaking Canadians and toward second language learning cannot proceed in the face of negative community attitudes. Such a phenomenon would be a kind of "anti-socialization." It might occur if a strong subgroup held divergent views and was in a position to isolate and socialize members, but this situation is certainly not the case with the public schools. Thus, we may expect attitude formation to reflect the community opinions. Because both skills and attitudes were tested, both facets of schooling can be examined.

Measures of linguistic skills had to meet several criteria: They had to be given to large numbers of children over a range of eight

grades. They had to be independent of the specific curricula taught by either Board. They had to be applicable to children who had been taught through aural-oral methods with minimal training in reading and writing skills. Since students had only aural-oral training they could be tested only for listening or speaking skills. The cost, in time and money, of testing large numbers in speaking skills would be prohibitive, so tests of listening comprehension were selected.¹

The use of standard tests of proficiency would measure French communication ability rather than the learning of a specific curricula, thus providing comparability between the two Boards and various programs. However, no single test would be suitable for such a wide grade range, so three tests were selected which were appropriate to smaller grade ranges.

Research personnel, together with coordinators of French from the two Boards, selected three tests of French listening comprehension that seemed to meet these needs and be appropriate to the French taught in the two systems: OISE K, OISE I, and IEA II.² The two OISE tests were developed by the Ontario Institute for Studies in Education (OISE) for the evaluation of several primary immersion programs in Ontario which its Modern Language Centre has been investigating. The OISE French comprehension test, level K, was designed to test students in these immersion programs at the end of their kindergarten year. Project staff

1. In subsequent years of The FRENCH Project, speaking tests were given to samples of children in the various French programs. For samples of 30 or more grade three children at each Board, correlations between scores on a speaking test given in Spring, 1975, and the listening test given in Spring, 1974, were +.61 in Carleton and +.38 in Ottawa. See Kirby, 1976.

2. For further information about the tests, see Tourigny, 1974.

and the coordinators felt that the test would be suitable for basic French program children in grades one and two. The OISE French comprehension test, level 1, was designed for students in grade one immersion, that is, after somewhat less than two full years of immersion. The FRENCH Project used this test in grades three, four and five.

Both OISE tests have four parts, testing vocabulary, sentences, questions and comprehension of short stories, and both have a total of 65 questions. The words, sentences or questions are on tape and the child marks the appropriate picture in his answer booklet. Instructions, also taped, are in English and include sample items.

The test selected for the upper three grades was developed by the International Association for the Evaluation of Educational Achievement for cross-cultural testing in second language acquisition. IEA II is a listening comprehension test designed for students having had two to three years of a standard French course. The test contains forty items and is divided into five parts. The administration is similar to that of the OISE tests, taped with English instructions, although for this test answers are verbal rather than pictorial except for part one. Classes were tested in their home rooms by testors from the Research Centre. The class teacher was present, the French teacher was not.

Following administration of the tests in the Fall, 1973, results were examined to see whether the tests were, in fact, suitable for the grade levels which received them. They seemed to be so, with means consistently above chance and well below the ceiling levels.

The FRENCH Project had two reasons for measuring attitudes of students in French programs. The first is that the development of attitudes favourable to French-speaking Canadians and to the learning of the French language is one of the objectives of the French programs. The second reason is that research indicates that attitudes are correlated with French language learning. The measurement of attitudes was done with an instrument which was a modified version of one developed by R.C. Gardner and W.E. Lambert (1972). It tests the attitudinal dimensions that they found to be important.

Since this paper is concerned with learning as a dependent variable, it will consider only attitudes toward French Canadians and toward learning French in the analysis. These are the only two attitudes specifically mentioned as learning objectives of the French programs in the Ontario curriculum guide (Ontario, N.D.). Furthermore, factor analysis of the results of Fall testing show that these two factors (together with an attitude toward English Canadians) emerge by grade three. No other factors emerged until after grade four (Halpern, Kirby and Tuong, 1975).

R.C. Gardner and W.E. Lambert have been exploring the role of attitudes in second language learning since the late 1950s and have developed measures of nine attitudinal variables which are subsumed under the concept of integrative motivation which they found to be correlated positively with proficiency in French. These nine characteristics are attitudes toward French Canadians, attitudes toward European French (group specific attitudes); attitudes toward learning French, toward the French course, toward the French teacher (course related

characteristics); integrative orientation, motivational intensity, desire to learn French (motivational indices); interest in foreign languages (generalized attitudes). The integrative motivation is a predictor of success in second language learning which Gardner and Lambert found to be independent of aptitude. It seems to be inversely related to measures of ethnocentrism and authoritarianism, so that the integrative motivation for French may be seen as a specific instance of generally favourable attitudes to outgroups and openness. (Gardner and Lambert, 1972; Gardner, 1973.)

The attitudinal measure used in the French project included items from scales measuring attitude toward French Canadians, attitude toward learning French, and integrative orientation from the Gardner and Lambert integrative motivation measures. In addition, because of the orientation of the French experimental programs to the employment situation in the public service in the National Capital region, items measuring an instrumental orientation, also developed by Gardner and Lambert, were included. The resulting opinion measure, (Opinion Questionnaire, Form C, Appendix A), was used in grades six, seven and eight, and had ten items about learning French, ten on French Canadians, and four each on integrative and instrumental orientations. The response format was a seven-point agree/disagree scale.

Gardner and Lambert used these instruments for students in grades seven and above in the London, Ontario, and Montreal areas. In The FRENCH Project modifications of these were made for use from grade one through grade five. Because researchers felt that students in the early years might have a very strong positive response bias, it was

decided to include, for these grades, an attitude toward English Canadians scale paralleling the French Canadian items. Furthermore, it was felt necessary to simplify the language and the response format. For grades four and five a five-point agree/disagree scale was used, and in grades one through three a simple yes/no response form was used. Simplification of language included both use of shorter words and easier structures, and most importantly, for the primary grades, the substitution of the concept of French (or English) speaking people for French Canadians. It was thought necessary to shorten the test for children in these grades, especially since the test statements were read to the younger students in order to avoid reading difficulty contamination. The test given to these grade levels is a nineteen item instrument (Opinion A for grades one through three, and Opinion B for grades four and five) which contained five items each respecting attitudes toward French Canadians (or speakers), English Canadians (or speakers), and learning French, and two items each on the integrative and instrumental orientations.

The attitude measures were administered to classes of students at the same time as the listening comprehension test. The French teacher was not in the room. Lists of the items are included in Appendix A.

THE INDEPENDENT VARIABLES

The independent variable is the good will or, conversely, the antagonism of school staff towards French in the schools. French was not a neutral issue in the community at this time. The implementation of the government's bilingualism program was headline news, and strong

views were held on both sides. Furthermore, the extension of French programs, such as immersion, intensive French, and 40-minutes-a-day basic French, affected the teaching conditions both directly and through the use of resources which then could not be used elsewhere. Negative feelings might well be acerbated by these in-school issues.

Furthermore, the school is a community within the larger community. The school staffroom is a place where teachers talk about these issues. Questions of working conditions are raised formally at faculty meetings. Problems of teaching, scheduling and discipline are subjects for discussion among teachers and between teacher and principal. It is to be expected, therefore, that shared opinions would become known. Social processes would encourage the formation of areas of consensus wherever there existed such a base. Perhaps the effects of French within the system, on the teaching of pupils, on working conditions, and on jobs, would be most subject to definition by this process. Teachers already share relatively common attitudes toward their work. Definitions and evaluations of problems created by French for teaching, getting supplies, and careers of Anglophones would be likely to find support within the school network. The tendency of such shared opinions to be group consensus is well known. (See Aronson, 1972, chapter 2, for a clear statement of the process and a review of some of the literature.)

While these processes would operate more strongly in some schools than in others and will differ among schools in whether they lead to positive or negative evaluations, they can be expected to occur in most school situations. It is this body of shared opinions towards French, the general attitudes of good will or antagonism which will be

called the school climate for French. It should be noted that there is no expectation that all members of a school community will participate equally in this consensus. One tends to feel that the teacher of French will not negatively evaluate her own discipline, no matter what the opinions of others at the school. If she is French, she is unlikely to denigrate Francophones. Furthermore, even among class teachers there may be those who do not share the common opinions, whether for good or ill.

The school climate will tend, then, to be an averaging out of opinion. It includes the attitudes and opinions of class teachers and principals about French as a suitable or needed discipline in elementary schools and about the French programs as they are implemented in the schools. Teachers of French were asked for their perceptions of class teachers' use of French and about French displayed at the school--that is, about behaviour related to French which could be interpreted as evidence of favourable or unfavourable attitudes.

These attitudes and opinions may be seen as the definitions and evaluations made by non-French staff about French programs. They may be either attitudes which staff bring into the school from their lives in the community or those which arise within the system from perceptions of working conditions and interaction with pupils. In any case, through discussion and other social pressures within the school network, there develops a general consensus which may be termed school climate.

The general hypothesis is that the school climate for French will be an important force in the learning and socialization processes for students. The staff attitudes provide the definition of the situation

as it related to French and evaluations of French as a worthwhile or not worthwhile subject to learn.

It is apparent, however, that school climate for French is not a single set of attitudes or activities, but rather a collection of attitudes related to different aspects of the situation. Four of these aspects will be examined:

- 1) The benefits of French as an academic discipline at the elementary school level. That is, the extent to which faculty not involved in the teaching of French accept French as a legitimate and beneficial part of the elementary school pupil's program, irrespective of the particular curriculum used to teach it. (Beneficial aspect.)

- 2) The evaluation of the French programs in the system and of their effects on the students of the respondents and on the respondents' job and working conditions. (Conditions aspect.)

- 3) The perceptions of the presence of French as an integral part of school life as opposed to its being isolated to the time the French teacher is in the classroom. (Integration aspect.)

- 4) The orientation of the principal towards cognitive education rather than with school management or the socialization of values. (Cognitive aspect.)

Each of these aspects will be discussed and the operational measures described.

Beneficial Aspect: the Benefits of French

Although in Ontario French has a tradition of acceptance at the secondary level, the introduction of second language study in the elementary schools is of more recent, and controversial, origin. The value of an early start for second language learning has been debated

since the movement to teach second languages at that level began in the 1920s, and some of the early arguments for their inclusion in elementary curricula have been somewhat discredited. However, the amount of learning accumulated over the school years was expected to be roughly correlated with the amount of time during those years spent on the task of learning (Carroll, 1963). The logic is that an early start can enable a student to accumulate more time, and hence more learning of the language (Smythe, Stennett and Gardner, 1974). (However, for evidence that this may not be the case, see Burstall, 1974.)

This argument is not of much import, however, if the value of learning a language at all is questioned. Of the three reasons given by the Boards for emphasizing French in the school--for its utility in career training, for its virtues as an academic discipline, and for its integrative value in a bilingual nation--the first is most cogent at the secondary level, and the last is a politically sensitive issue that is hotly debated. For these reasons, the academic value of French was considered to be the most fruitful area for questions examining the benefits of French. Such items would be seen by teachers to concern educational issues about which their opinions would be expected. However, since these would be asking for general opinion rather than specific facts, it was felt that answers would reflect any underlying antagonism which might exist as a result of the political issues.

Five items related to the benefits of French as an academic discipline were presented to class teachers who were asked to agree or disagree on a six-point scale. (The class teachers questionnaire

is presented in Appendix B.) The statements were:³

Learning French is a good intellectual discipline and a student can gain a lot from it. (2, +, Good Discipline)

One needs a good knowledge of at least one foreign language to be a cultured person. (5, +, Cultured Person)

Taking academic subjects in the French language presents a needed challenge for topnotch students. (7, +, Needed Challenge)

The French spoken in Quebec is a dialect and therefore of little use to a student learning French. (10, -, Quebec Dialect)

Learning a language like French helps students to understand their own language better. (14, +, Understand Own)

In addition, a question was asked of principals which was closely related to the benefits of French. (The principals questionnaire appears in full in Appendix C.)

How much French do you think most children in Ontario schools need to learn? (A2, How Much French)

- a) I feel that it is not necessary for most children to learn any French.
- b) I feel that most children should learn a little French, enough to read signs and call for help if necessary.
- c) I feel that most children ought to be able to understand some French (about what is learned in the 20-minutes-a-day Core program).
- d) I feel that most children ought to be able to understand most of a conversation in French and to speak the language a little.
- e) I feel that most children ought to become fully bilingual (French and English).

3. In parenthesis following each item will be found the item number from the questionnaire and a short form which will be used to refer to the item variable throughout the remainder of the paper. For items from the teachers questionnaire, a plus sign will indicate that an agree answer was expected to be favourable to French, a minus sign that a disagree answer was expected to be favourable to French.

Conditions Aspect: Effects on Teaching and Career

However much teachers and principals might feel that French is a legitimate area for study in the elementary schools, there may be problems with the way the French programs fit into the school system. These are problems of the relation of French to the rest of the program and they may reflect a number of concerns.

7 In the elementary grades class teachers are responsible for what is, significantly, called the "core" program--the teaching of skills of reading, spelling, writing, mathematics and arithmetic, as well as science and social studies. Teachers indicate that subjects such as art, music or French may make a useful contribution to the student program, but they should not be allowed to infringe on the time and resources needed for the core subjects. The scarcity of time for the student to learn and of financial resources (and so of material resources and staff time) are facts of life for teachers. Even if they accept French as a legitimate discipline, they may still resent its use of resources which they feel are more urgently needed elsewhere. Furthermore, French is taught by another teacher who comes into the classroom every day at a time which may or may not be convenient. For most elementary teachers this is the only part of the day which she cannot switch around to suit her convenience.

For principals the basic French program means scheduling the French teacher's time, supervising a curriculum which most principals do not understand, and occasionally ironing out difficulties between the itinerant French teacher and the class teacher.

The items asking about the teaching of French in the school and its effects on classes, careers and working conditions were directed both to teachers and to principals. Because they related to staff experiences in the school these items were more specific than those pertaining to the benefits of French. Some of the topics were suggested by teachers at a meeting with teacher federation representatives to discuss the questionnaire.

Five of the items to teachers asked about the allocation of time and other resources:

The extension of the French core program from 20 minutes to 40 minutes a day is detrimental to the regular classroom program. (3, -, Extension Harms)

The current emphasis on French is hard on low ability students who need the time to learn basic English skills. (9, -, Low Ability)

The financing of the French programs is using money that is more needed in other areas of the school curriculum. (12, -, Financing)

The core French program is useless because students do not have enough time to really learn French. (13, -, Core Useless)

One of the greatest advantages of the core French program is that it gives the classroom teacher a needed break. (15, -, Gives Break)

Because the French program is taught by specialist teachers other than "regular class" teachers, it may create friction in the schools because of the relation of one group of personnel to another. The class teacher may be unhappy with the French program in the school because of her feelings about the teachers of French or because she sees the hiring of more French teachers and the placing of more emphasis on French as a threat to her place in the school (Campbell, Taylor and Tucker, 1973).

We asked four questions to get at this aspect:

The ability to speak French has become more important in our school system than the ability to teach. (4, -, Ability to Speak)

Teachers of French immersion are not as demanding academically of their students as the regular class teachers. (6, -, Demanding)

There would be more criticism of the French-for-a-second-language programs if people were not afraid this would be considered "anti-French." (8, -, More Criticism)

The current emphasis on French language teaching poses a threat to the jobs of English-speaking teachers. (11, -, Job Threat)

Principals, too, were asked about the fit of the French program into the school. Two of these questions asked about his use of time:

Ignoring any characteristics of the particular teachers in your school this year and knowing that there can be administrative problems associated with any school subject, do you find those problems associated with Core French to be . . .

- a) greater than for other subjects
- b) about the same as for other subjects
- c) lower than for other subjects (A8, Admin Problems)

Considering the administrative time that you spend on Core French, do you feel that its benefits to the school and students are proportionate to the time spent?

- a) No, there are very few benefits
- b) Yes
- c) Yes, but the time could more beneficially be used in other ways. (A9, Benefits/Time)

Another question asked directly for the principal's perception of disadvantages of the basic French program at his school:

A number of disadvantages have been suggested with respect to the Core French program. For each item on the list, indicate the extent to which you see it as a disadvantage. (A23, Disadvantages)

- a) Teacher rotates among many classrooms. (Teach Rotates)
- b) Having classes come and go. (Classes Move)
- c) Sheer number of students seen by French teacher each day. (Students Seen)
- d) Negative attitude toward French in our area. (Area attitude)
- e) Lack of time for French teacher to see children with difficulties. (Lack Time)
- f) Disruption of French program by regular program activities. (Reg Disrupts Fr)
- g) Disruption of regular program by French periods. (Fr Disrupts Reg)
- h) Hostility of some staff towards French program. (Staff Hostility)
- i) Shortness of time provided for each French period. (Short Period)
- j) Low ability students lose time needed for other subjects. (Low Lose)
- k) Amount of administrative time required. (Principal's Time)

Response categories were "not a disadvantage," "somewhat of a disadvantage," "a great disadvantage" and "not applicable at this school."

Integration Aspect:

It is thought that the more relevance to every day life a subject has, the more children will be disposed to learn it. This idea is behind many school trips and extramural activities. A study by Gardner and Kirby (1972) found that the motivation of a group of Ontario students towards learning French improved as a result of a trip to Quebec City. Similarly, within-school activities and displays are designed to promote interest in and learning of a subject. The inclusion of French activities on a par with those related to mathematics, English language studies or art should generate improved learning. Hearing French spoken around the school should be particularly useful since the curriculum at both boards uses the aural-oral method of instruction. These demonstrations of French as a means of communication, a living language, are an aspect of school climate for French which will be called integration of French.

French teachers were asked about the extent to which they found French present in the school either spoken or on display. (The complete questionnaire for teachers of French is shown in Appendix D.) Three questions were asked about French spoken at the school on the questionnaire to French teachers:

Outside of French class, how often do students hear French spoken by teachers in your school? (17, Hear French)

How often do staff members (other than teachers of French) greet you in French? (18, Greetings)

How often is French spoken in the staff room at your school? (19, Staffroom)

Response categories were "frequently," "seldom," and "never."

A question about display material in the school asked for a yes or no response for each category of material:

In your school during the past week were any of the following displayed around the school (excluding classrooms used exclusively or mostly for French)?

Posters or similar display material about France

Posters or similar display material about Quebec

Posters or similar material in French

Student work in French

French books for leisure reading

Books or magazines about Quebec or French Canadian culture

Books or magazines about France or French culture.

(16, Displays)

The principal was asked to describe the extent to which French played a part in the extra-curricular activities at the school. He was asked a series of questions (A12 to A19) from which the proportion of assemblies (Assemblies), parents' nights (Parent Nights), and special events or "days" (Events) which had a French element in them could be determined. An item also asked whether there were French clubs (French Club). These data were keypunched to indicate whether

these activities took place and, if so, what per cent contained a French element.

Principals were also asked about the participation of French teachers in staff meetings as a measure of their integration into the decision-making processes of the school:

To what extent do Core French teachers participate in discussion and decisions at staff meetings in your school?

- a) more than other teachers
- b) about the same as other teachers
- c) less than other teachers
- d) generally do not attend staff meetings.

(A10, Participates)

Cognitive Aspect

The final aspect of school climate for French is the intellectual orientation at the school. The more the principal bases his decisions on academic values, as opposed to moral or school management values, the more likely French is to be accepted, or at least insulated from negative social values. The rationale is that where strictly cognitive education is stressed, French is more likely to be accepted regardless of the political and career considerations. To attempt to measure this aspect of the school climate, three long questions asked about criteria important in making decisions with respect to class grouping, in giving advice about French programs to students, and in examining the French program itself.

The first question listed thirteen criteria which might influence the sorting of students into classes. The principal was asked to rate each of these as very important, important, somewhat important or of little or no importance.

How important do you consider each of the following criteria to be when grouping children for instructional purposes? (A6, Grouping Criteria)

It was thought that the criteria might fall into three groups when factored, as follows:

Academic (cognitive)

- a) years of schooling (Years of School)
- b) modules of work completed (Modules of Work)
- c) score on intelligence tests (IQ Score)
- d) score on achievement tests (Achievement)

Administrative (management)

- h) keeping class size fairly even (Class Size)
- i) a teacher's ability with certain types of children (Ability/Types)
- j) a teacher's capacity to handle larger or smaller groups (Handle Sizes)
- k) special needs of some groups of children (Needs of Groups)
- m) maintaining pupil-teacher ratio (Maintain PTR)

Social (moral)

- e) teacher rating of ability (Teacher Rating)
- f) social maturity of child (Social Maturity)
- g) keeping a child with his friends (With Friends)
- l) idiosyncratic needs of the child (Idiosyncratic)

The principals were also asked to consider "nine phrases which may be used as criteria when deciding whether a particular child should be encouraged to take a special program . . . in French" and perform a Q-sort placing "the latter for each phrase in the box that best describes how important you think it is as a factor in deciding whether a particular child should enter a special French program." The boxes were labeled most important (1), next most important (2), middle importance (3), next least important (2) and least important (1), on a five-point forced choice scale. It was expected that the items would fall into three groups similar to those for the grouping criteria. (A7, Advice Criteria)

Academic (cognitive)

- a) the French ability of the child (French Ability)
- b) the general scholastic ability of the child (General Ability)
- f) the challenge or difficulty of the special French program (Program Challenge)

Administrative (management)

- h) the number of students who could be accommodated in the French program (Space in French)
- i) the number of students who would be left in the English program (Students Left)

* Social (moral)

- c) the child's desire to take the French program (Child's Desire)
- d) the parents' desire to have the child take the French program (Parents' Desire)
- e) whether the child's friends were taking the French program (Child's Friends)
- g) whether the child would need French in the future (Would Need)

The final long question which was expected to yield similar factors was the one asking about the disadvantages of the Core French program (Disadvantages). While the individual items would represent responses to the organizational problems of the basic French programs, factoring of the items was expected to produce a pattern similar to the academic, administrative, and social categories of the other questions.

Because all the items on the questionnaires measure attitudes pertaining to French, it is expected that there will be correlations among them. Indeed, this is what the concept of school climate means. However, these correlations may be fairly low, perhaps no more than $+ .3$, since different questions are being asked of different groups of people. (Cohen, 1969:72-104)

THE HYPOTHESES

A review of studies on educational achievement indicated that various school variables, such as expenditure, teacher characteristics, class size, or teaching styles, did not predict cognitive achievement of children. Recent studies on equality in education argue that providing equality of opportunity is only one function of the schools and that other functions, such as selection and socialization of class styles, are incompatible with the equalizing function and, at minimum, no less salient. Similarly, the argument can be made that although cognitive education is clearly one function of the schools, another function is socialization to non-intellectual roles, conforming beliefs, and awareness of social, rather than logical, cues. It is argued that this socialization is likely to interfere with cognitive learning whenever social values abase or are ambivalent towards the content to be learned.

The social situation in the Ottawa region in 1973-74 seemed to present an opportunity to study the influence of negative evaluation of a subject on the learning of that subject. Extensive experimental programs for teaching French were instituted in the Ottawa and Carleton systems at a time when substantial elements of the community were antagonistic to governmental bilingual programs. However, it could not be said that the community sentiments about French were negative, because a substantial part of the community favoured the increased use of French and the renewed commitment to French instruction in the schools.

The hypotheses are based on the belief that this ambivalent community climate for French will carry over into the schools, and will, in some cases, be acerbated by school conditions created by old and new French programs. Group processes within the schools will tend towards developing these views into a school climate.

It is expected then that attitudes of the school staff toward the French program will vary and that, where negative, they will tend to depress the cognitive achievement of students, and where positive they will tend to promote achievement. Similar effects are expected for the socialization of student attitudes toward French and Franco-phones.

Questionnaires for staff were designed to measure four aspects of school climate: the generalized benefits of learning French, attitudes toward the teaching and career conditions related to French programs, the integration of French into the school life, and the cognitive orientation of principals. Student cognitive achievement was measured by a test of French listening comprehension. An attitude inventory measured opinions of students about French Canadians (or French-speaking people) and about learning French.

The combination of the four independent variables and three dependent variables results in ten correlational hypotheses:

- 1) Staff opinions about French as a beneficial subject will be positively associated with the acquisition of French listening comprehension skills by students.
- 2) Staff attitudes relating to teaching and career conditions related to French will be positively associated with the acquisition of French listening comprehension skills by students.

- 3) Perceived integration of French in school life will be positively associated with the acquisition of French listening comprehension skills by students.
- 4) A cognitive orientation on the part of the principal will be positively associated with the acquisition of French listening comprehension skills by students.
- 5) Staff opinions about French as a beneficial subject will be positively associated with the development of favourable student attitudes toward learning French.
- 6) Staff attitudes relating to teaching and career conditions related to French will be positively associated with the development of favourable student attitudes toward learning French.
- 7) Perceived integration of French in school life will be positively associated with the development of favourable student attitudes toward learning French.
- 8) Staff opinions about French as a beneficial subject will be positively associated with the development of favourable student attitudes to French Canadians.
- 9) Staff attitudes relating to teaching and career conditions related to French will be positively associated with the development of favourable student attitudes to French Canadians.
- 10) Perceived integration of French in school life will be positively associated with the development of favourable student attitudes to French Canadians.

No relation is predicted between the cognitive orientation of the principal and the student attitudes.

POPULATION AND SAMPLING

The population consists of classrooms in schools in the Ottawa and Carleton Boards of Education which offer basic French programs (either 20, 30, or 40 minutes per day) to students in grades one through eight. There were, in all, 107 schools, 47 in Ottawa, and 50 in Carleton. Since the unit of analysis of this study will be the school, the entire population of 107 schools was included in the analysis. The

dependent variables were measured at the classroom level, and the study includes a 50 per cent sample of the classrooms of these schools.

The basic French classes spend most of their time with teachers of subjects other than French. In elementary grades most of the program is given by a single teacher, and the French teacher is the only one who comes in on a daily basis to teach a subject. The influence of the attitudes of non-French class teachers should be much greater in these classes than for children in immersion who spend almost all of their time with a teacher of French. Another advantage of examining the basic French program is that it was offered at every elementary and intermediate school in 1973-74, whereas immersion was offered in only a few classrooms.

In selecting the classrooms to be tested it was originally intended to test even grade levels in 50 per cent of the schools and odd grade levels at the rest. This plan proved impractical, however, in view of the large number of combined grade classes, especially at the Ottawa Board. There 40 per cent of the classes from grade one to grade six contain more than one grade level, while in Carleton 20 per cent of the classes have two grade levels.

The final selection of classes for testing was made by clustering the schools according to type, as determined by the grade levels offered at the school, and randomly selecting half the schools from each cluster to be tested at grades one through four, and the other half at grade five and above.

Table 1 compares the number of classes tested at each grade level with the number of classes at that grade level for each type of school and for each Board. For the Ottawa Board as a whole, the classes tested comprise 50 per cent of all classes. At each grade level the tested classes are close to 50 per cent of the classes at the grade level, except for grade four/five. This grade was tested in both the kindergarten to four sample and the five and up sample, which explains the high proportion. Somewhat more than 50 per cent of the classes were tested in Carleton Board, with the large middle and intermediate schools accounting for the discrepancy. This occurred because there were so few of this type of school that all schools were tested. Two schools in Carleton had no classes in the sample because the grades that should have been in the sample at these schools were taking extended French rather than basic French. The classes were tested with a French listening comprehension test and the attitude measure at the same sitting.

Data on the independent variables were gathered from questionnaires sent to principals, teachers of French and the class teachers. Questionnaires were addressed to respondents by name and sent through the school courier service. Respondents were assured of the confidentiality of their replies, and class teachers' returns were anonymous. Prepaid return addressed envelopes were provided so respondents could return them by regular post if they wished.

All principals and all teachers of basic French were included in the groups to receive the questionnaires. Pre-testing of the principals' questionnaire was done by a vice-principal in one of the

TABLE 1

The Sample: Number of Classes and Classes Tested at Various Types of School, by Board
Ottawa Carleton Public Schools, Fall, 1973, and Spring, 1974

	CLASSES TESTED AT GRADE														All Grades	Schools
	1	1/2	2	2/3	3	3/4	4	4/5	5	5/6	6	6/7	7	7/8		
CARLETON																
K-4 Total	3	-	3	-	3	-	3	-	-	-	-	-	-	-	12	1
Tested	1	-	1	-	3	-	3	-	-	-	-	-	-	-	8	1
K-5 Total	22	7	19	11	20	8	21	14	23	1	-	-	-	-	146	13
Tested	10	6	7	5	10	5	13	5	7	0	-	-	-	-	68	11
K-6 Total	27	6	23	5	23	7	26	4	27	8	27	-	-	-	183	15
Tested	20	3	16	3	15	2	16	3	13	4	16	-	-	-	111	15
K-8 Total	16	9	15	7	17	5	17	7	22	5	21	3	24	9	203	14
Tested	11	3	8	5	7	1	8	4	10	2	9	1	9	6	93	14
5-8 Total	-	-	-	-	-	-	-	-	-	-	6	-	3	-	12	1
Tested	-	-	-	-	-	-	-	-	-	-	5	-	2	-	9	1
6-8 Total	-	-	-	-	-	-	-	-	-	-	27	-	27	-	80	4
Tested	-	-	-	-	-	-	-	-	-	-	27	-	25	-	78	4
7-8 Total	-	-	-	-	-	-	-	-	-	-	-	-	23	1	45	2
Tested	-	-	-	-	-	-	-	-	-	-	-	-	19	1	38	2
ALL SCHOOLS																
K-4 Total	68	22	60	23	63	20	67	25	72	14	81	3	77	10	76	50
Tested	42	12	32	13	35	8	40	12	30	6	57	1	55	7	55	48
Percent	60%	54%	53%	56%	55%	40%	60%	48%	42%	43%	70%	33%	71%	70%	72%	96%
OTTAWA																
K-4 Total	2	-	-	2	-	2	-	-	-	-	-	-	-	-	6	2
Tested	2	-	-	2	-	2	-	-	-	-	-	-	-	-	6	2
K-6 Total	33	25	22	21	22	24	28	22	29	24	38	-	-	-	288	37
Tested	15	13	8	12	9	11	15	20	11	14	17	-	-	-	145	37
K-8 Total	13	15	7	8	12	13	13	9	23	9	23	-	68	2	288	16
Tested	6	7	3	3	5	5	7	9	14	3	12	-	23	2	126	16
7-8 Total	-	-	-	-	-	-	-	-	-	-	-	-	10	-	24	2
Tested	-	-	-	-	-	-	-	-	-	-	-	-	10	-	24	2
ALL SCHOOLS																
Total	48	40	29	31	34	39	41	31	52	33	61	-	78	2	87	57
Tested	23	20	11	17	14	18	22	29	25	17	29	-	33	2	41	57
Percent	48%	50%	38%	55%	41%	46%	54%	93%	48%	51%	47%	-	42%	100%	47%	100%

schools and two principals on the project advisory board. Four French teachers on this committee acted as pre-testers for the French teachers' questionnaire.

The class teachers' questionnaire went only to the teachers of those classes which were tested, that is, about 50 per cent of the teachers in the schools. These questionnaires were pre-tested with eight teachers at two schools, one in each Board. In addition, the questionnaires were read by representatives of the teachers' federations. Suggestions from both groups were incorporated into the final draft.

The teachers' federations were asked for their support for the questionnaires. This support was forthcoming in Ottawa. However, in Carleton initial agreement went sour and the federation asked members not to respond. This federation request went out some time after the questionnaires and many Carleton teachers had returned theirs before they got the word. The main effect of the federation request was to lower drastically the return rate on the questionnaires from teachers of French in Carleton. This questionnaire went out later than that for class teachers. It had not been shown to the federations. The main aim of the French questionnaire was to obtain information on curriculum and scheduling. The four items on the questionnaire which are used in this study were not expected to be offensive, or even controversial. The long questionnaire to principals carried a covering letter from the appropriate director of education urging co-operation in the study.

A total of 756 teachers were included in the class teachers sample. Of these 464 (61.4 per cent) returned questionnaires from the

first mailing. There were no significant differences in background characteristics (French ability, education or experience) between respondents to the first and second mailings. A higher percentage of the returns from the second mailing did not answer these background questions. For experience, the only characteristic for which the difference reached significance, only 3.8 per cent of first mailing questionnaires failed to respond to the item, while 12.8 per cent of second mailing respondents failed to do so. Return rates by Board are indicated on Table 2. While theoretically it would have been possible to compare the characteristics of teachers as indicated by respondents with the Boards' records, this was practically impossible because of the confidentiality of employment records, teacher concern about anonymity, and the time and cost involved in collecting data from such records. The difference in rate between the two Boards might be laid to two factors. First, the Research Centre has operated as a part of the Ottawa Board for several years and may have built up a feeling of trust on the part of its teachers, whereas The FRENCH Project is the Centre's first work in the Carleton Board. The second factor is the opposition to the survey on the part of the teachers federation.

Because the questionnaires are directed at measuring school climate return rates at each school are as important as overall response rates. A return rate from a school was considered acceptable if a) all teachers in the sample returned questionnaires (that is, if the number returned from a school equalled the number sent) b) three or more questionnaires were returned from a school and this number

TABLE 2
RETURN RATES FOR CLASS TEACHERS' QUESTIONNAIRE
OTTAWA-CARLETON PUBLIC SCHOOLS, 1974

A. Return rates by teacher

	<u>Carleton</u>	<u>Ottawa</u>	<u>Total</u>
Sent	470(=100%)	286(=100%)	756(=100%)
Returned			
with school identified	242 (51.5)	200 (69.9)	442 (58.5)
without school identified	52 (11.1)	27 (9.4)	79 (10.4)
without Board identified	-	-	21 (2.8)
Total returned	294 (62.6)	227 (79.3)	542 (71.7)

B. Return rate by school

All schools	50(=100%)	57(=100%)	107(=100%)
with acceptable rate	26 (52.0)	41 (71.9)	67 (62.6)
with too few returns	24 (48.0)	16 (28.1)	40 (37.4)

was 60 per cent or more of the questionnaires sent; c) only three questionnaires were sent to a school and two were returned (one school in Carleton and six schools in Ottawa); and d) four or more returns were received and these were 50 to 59 per cent of the number sampled (four schools in Carleton and one in Ottawa). By these standards, 62.6 per cent of the 107 schools could be included in the analysis, representing

71.9 per cent of the Ottawa schools and 52 per cent of those in Carleton. These proportions are very similar to the proportion of total teachers making identifiable returns from each Board.

There were only 104 principals at the 107 schools since some principals were responsible for two schools. Of the two principals for whom this was the case and who returned questionnaires, both indicated that the responses would be the same for both schools. Ninety-two principals returned questionnaires for a return rate of 88.5 per cent of principals and 87.8 per cent of schools. By Board, the return rate was 44 of 49 principals in Carleton (89.8 per cent), and 48 of 55 principals in Ottawa (87.3 per cent).

Only thirty-five teachers from Carleton returned the questionnaire for teachers of French, which is a rate of only 33 per cent. The eighty-three returns from Ottawa represent a response rate of 66.9 per cent. The overall return rate, including some questionnaires which did not include Board identification, was slightly over 50 per cent. In the light of this rate, the representativeness of responses is doubtful. The extremely low response rate in Carleton was undoubtedly due to the action of the teacher federation there.

Although their criticisms were directed only at the class teachers' questionnaire, a French teacher would receive only one questionnaire which, to her, would be "the teachers' questionnaire." Because of the delay in sending out the French teachers' questionnaires, it was most affected by the federation ban. However, the low rate for the teachers of French in the Ottawa Board may indicate that other factors were operating to depress the return rate for this questionnaire. It was quite long and this may have discouraged some respondents.

Application of the French teacher data to classes was done according to the following rules: Where there was only one teacher at a school, her reporting of the level of French present was used. (She would, of course, have taught the tested classes.) When two or more teachers reported and their reports were in agreement, this level was also accepted as the value for that school. Where teachers disagreed and where the teacher for the classes in our sample could be identified, her responses were used for her classes. Where two teachers agreed but a third did not, and the responses could not be identified with specific classes, the agreed-upon responses were used for the tested classes. Other cases of disagreement were counted as missing data.

In this chapter the research design was outlined. French learning and attitudes of students were measured by pre-tests given in the classrooms in October and by post-tests given in late May or June. School climate was measured by items from questionnaires sent to class teachers, principals and teachers of French. Favourable responses are expected to be positively correlated with students' learning and attitudes. Response rates from class teachers and principals were acceptable, but returns from teachers of French were very low and in Carleton Board were probably biased by federation affiliation.

In the next chapter, the results of the student learning and attitude measures will be discussed, and the school climate measures will be discussed in Chapter V.

IV. FRENCH LEARNING IN THE SCHOOLS

Learning is defined by psychologists as a "modification of a response" (Drever, 1964) with emphasis on behavioural aspects. In sociology "learning" tends to lose behavioural strictness and to lean more toward the dictionary sense of "acquisition of knowledge or skill or a behavioural tendency." Boocock says, "Strictly speaking, learning consists of a cognitive change leading to a measurable increase in knowledge or skills" (1972:4). The concept of "cognitive change" is emphasized in this paper, although attitudinal change will also be considered. Boocock lists three components of learning: a change in the learner, "substance" to be learned; and some kind of interaction between the learner and an instructor (not necessarily human).¹ However, only the first two of these are essential to make an inference that learning has occurred. The specification of the "substance" to be learned narrows the field by defining the nature of the changes to be considered.

The research design of The FRENCH Project was based on the student change model (Dyer, 1972). This model says that learning can

1. Boocock later qualifies this, saying "the point here is that school learning takes place in a social setting. . ." The problem of what is "instruction" is relevant to the larger question of socialization, but not to this paper which is concerned with the learning of something which is being taught in school. However, the kind of changes which are generally thought of as "learning" do not always or even usually require an instructor, unless the concept of instructor is defined so broadly as to include all human interaction and those physical objects and forces, such things as gravity and the permanence of the object, with which we must all come to terms.

be inferred from changes in student knowledge, skill or attitudes, as measured from pre-test to post-test, which are in the direction of program goals and attributable to school program. For the basic French alternative, the cognitive learning expected is of French language skills, especially listening comprehension. In addition, attitudes were expected to become more favourable to French-speaking Canadians and the learning of French. Student knowledge of these areas is measured by a French listening comprehension test and an opinion inventory.² These instruments were administered twice, near the beginning and end of the school year. Change (and, therefore, learning) will be inferred from differences between pre-test and post-test. The learning at issue here is that which occurred over most of a school year, from October to late May or early June, during a time when pupils were taught French as an academic subject for 20 or 40 minutes a day by a French specialist.

In this chapter we will examine three questions: Did learning occur over the year? Are there differences among classes in the amount of learning which occurred? How are the learning of cognitive skills and attitude change related to each other?

FRENCH LISTENING COMPREHENSION

In 1973-4 a 20-minutes-per-day (15 minutes in kindergarten) program of basic French was given to all Carleton students in grades one to five and to most Carleton students in grades six through eight.

2. The selection of these tests and the procedures used in their administration are described in Chapter 3.

(Some Carleton students in six middle schools received 30 minutes per day. They are not included in this analysis.) In Ottawa the 40-minutes per-day (30 minutes in kindergarten) program had started in 1971. Thus all Ottawa students in grades one and two in 1973-74 had received twice as many minutes of French as students in the same grades in Carleton. Ottawa students in grades three, four, five, and six, who had started school before the 40-minutes program was introduced, received a 20-minutes-per-day program similar to the Carleton students in these grades. A 40-minutes program was presented to Ottawa grades seven and eight for the first time in 1973.

Results from the test of French listening comprehension, presented on Table 3, show an increase from Fall to Spring in the number of test items which students answer correctly. Thus, we may infer that learning of listening comprehension skills has occurred. This change occurs for every grade at each Board, although the amount of change measured varies depending on the testing instrument and the amount of time per day devoted to French. Furthermore, where the same test is given across grades, the Fall score of students at each grade is very similar to the Spring score of younger students in the grade below.

A series of three graphs has been drawn to illustrate the relation between programs (defined in terms of cumulated minutes per day per year), grade levels and scores. Since scores on different instruments are not comparable, separate graphs are presented for each test. At the beginning of grade one (see Figure 1) Carleton students had 15 minutes per day of French in kindergarten, and their mean score

TABLE 3
FRENCH LISTENING COMPREHENSION: RESULTS FOR STUDENTS BY BOARD AND GRADE
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

TEST ^a	BOARD GRADE	FALL			SPRING			Fall to Spring	
		MEAN	S.D.	N	MEAN	S.D.	N	r ^b	(N)
CARLETON.									
OISE K	1	18.0	6.8	(1041)	24.9	7.7	(992)	-	-
	2	24.5	7.3	(858)	31.4	9.2	(855)	+.69	(94)
OISE 1	3	21.8	7.4	(1089)	24.8	6.8	(1048)	+.52	(120)
	4	24.6	7.3	(1151)	29.4	7.9	(1144)	+.64	(139)
	5	26.5	7.1	(992)	30.5	7.3	(901)	+.66	(140)
IEA II	6	11.9	4.4	(1040)	14.1	4.7	(1026)	+.40	(121)
	7	13.4	4.9	(735)	15.0	5.3	(743)	+.70	(132)
	8	14.8	5.3	(757)	16.5	6.0	(713)	+.73	(134)
OTTAWA									
OISE K	1	21.6	8.2	(571)	30.3	9.8	(416)	-	-
	2	29.6	9.3	(328)	39.5	10.2	(304)	+.70	(92)
OISE 1	3	21.6	7.2	(412)	26.4	7.0	(430)	+.55	(87)
	4	23.8	6.7	(620)	27.1	7.3	(571)	+.68	(125)
	5	27.3	7.9	(682)	29.8	8.1	(660)	+.74	(152)
IEA II	6	11.7	4.1	(833)	12.7	4.5	(820)	+.61	(110)
	7	13.0	5.7	(1008)	14.8	6.4	(1007)	+.75	(118)
	8	14.0	6.4	(1166)	15.7	6.5	(1125)	+.79	(134)

a. OISE K and OISE 1, maximum score = 65; IEA II, maximum score = 45.

b. Correlations are for a random subsample of about 100 students at each grade level in each board. Correlations are significant, $P < .001$.

24

OF/DE

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

FIGURE 1
COMPARISON OF FRENCH LISTENING COMPREHENSION SCORES OF STUDENTS IN 20 AND 40 MINUTES
PER DAY FRENCH PROGRAMS BY CUMULATIVE TIME, OTTAWA AND CARLETON SCHOOLS, 1973-4

FIGURE 2
COMPARISON OF FRENCH LISTENING COMPREHENSION SCORES OF STUDENTS IN TWO 20 MINUTES PER DAY
FRENCH PROGRAMS BY CUMULATIVE TIME, OTTAWA AND CARLETON SCHOOLS, 1973-4

FIGURE 3

COMPARISON OF FRENCH LISTENING COMPREHENSION SCORES OF STUDENTS IN 20, 30, AND 40 MINUTES PER DAY FRENCH PROGRAMS BY CUMULATIVE TIME, OTTAWA AND CARLETON SCHOOLS, 1973-4

17

I.E.A. II mean scores

on OISE K was 18. By the end of grade one, Carleton students had added another 20 minutes per day over the year to their cumulative time, for a total of 35 minutes. Their mean score on OISE K had risen to 24.9.

Ottawa students began the year with 30 minutes accumulated in kindergarten and a mean score of 21.5. By Spring these Ottawa children had accumulated an additional 40 minutes per day, for a total of 70 minutes, and had attained a mean score of 30.3. It will be noted that, in both Boards, grade one students tested in the Spring of 1974 received a mean score that is a bit above, but very similar to the score that the grade two students had received in the Fall of 1973. This pattern generally holds whenever the same test is given across grade levels, and therefore may indicate that there is some loss or forgetting over the Summer.

However, longitudinal testing of a single cohort would be needed to support such a hypothesis. Figure 1 indicates that the higher scores of Ottawa students are due to the increase in time spent on French. The Figure indicates that no advantage in the rate of learning was gained from longer periods at these grades; indeed, if anything, the opposite is the case. Figure 2 shows the patterns at grade levels where the two Boards have devoted the same amount of time to French. This graph presents two features that are anomalous in the patterns shown on the series of three graphs. One is the height of the Ottawa grade three scores relative to the Carleton scores, and the other is the poor Fall scores of Carleton grade five students. Grade three is the only grade in which Ottawa students do better than Carleton students relative to time per day over the year. One might speculate that some of these grade three students had been receiving 40 minutes of French

rather than merely twenty. This might happen if a teacher of French in a school had extra time or if she taught the 40 minutes to a class that was labeled grade three but had some grade two students in it. Grade designations at the schools were not particularly firm. The poor showing of the Carleton grade five students has no such obvious explanatory hypothesis.

Figure three shows the scores for the Carleton 30-minute students as well as those included in this analysis. At these grade levels, as in others, Carleton students seem to be more efficient learners of French than Ottawa students. Two possible hypotheses have been proposed to explain the apparent difference. One is that Carleton Board curricula were better suited to the French ability of the students. This seemed especially salient in the intermediate grades (Halpern, 1976:166). The other hypothesis is that Ottawa, with its inner city schools, had more students from lower socio-economic levels than did Carleton (Morrison, 1976:13-14; MacNab, 1976). Since higher SES is usually associated with better scholastic achievement, this fact might be invoked as a factor contributing to these results.

The relative scores of students are fairly stable over time as indicated by correlations in the +.6 to +.7 range (somewhat less in grade 3 and Carleton grade 6. See Table 3). However, these correlations still leave more than 50 per cent of the variance on Spring score to be explained by factors other than Fall score.

This analysis will use class means as the measure of the dependent variables, since the independent data are based on the class or school. Therefore, the variability among classes is of concern.

That there are differences among classes is indicated on Table 4. The standard deviation of the mean of class means falls below one-third of that of the student mean for only six of the thirty-two means. This indicates a fair amount of variance among classes. In examining Table 4, it should be remembered that not all classes at the same grade level across Boards have had the same amount of French instruction.

ATTITUDES TOWARD FRENCH

The development of favourable attitudes toward learning French and French Canadians is stated as one of the aims of French programs by the Ontario curriculum guide lines (Ontario, N.D.), and this aim is also mentioned in a statement by the Carleton Boards of Education (1974). Two scores, one measuring attitude toward learning French (Att LF) and the other measuring attitude toward French Canadians (Att FC) were obtained by summing a student's responses to the appropriate items on the student opinion questionnaire (Appendix A).

The results for each of the attitude scales, presented on Tables 5 and 6 indicate differences between cognitive skill learning and the attitude change that took place over the school year 1973-74. Although Spring scores are generally higher for both Att LF and Att FC than Fall scores, differences are very slight. Furthermore, grade seven students at both Boards became slightly less favourably disposed towards learning French over the year. The same is true for Carleton grade seven scores on Att FC. It is worthy of note also that the amount of increase over the year is roughly the same for all grades and does

TABLE 4

FRENCH LISTENING COMPREHENSION: RESULTS FOR CLASSES BY BOARD AND GRADE
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

TEST ^a	BOARD GRADE	FALL			SPRING		
		MEAN OF CLASS MEANS	S.D.	% ^b	MEAN OF CLASS MEANS	S.D.	% ^b
CARLETON							
OISE K	1	18.1	2.48	36.5	25.0	2.89	37.5
	2	24.5	2.63	36.0	31.4	4.93	53.6
OISE 1	3	21.8	3.34	45.1	25.2	3.70	54.4
	4	24.7	2.72	37.3	29.0	3.78	47.8
	5	26.6	2.54	35.8	30.1	3.41	46.7
IEA II	6	12.0	1.47	33.4	14.2	1.94	41.3
	7	13.4	1.39	28.4	15.6	1.80	34.0
	8	14.9	1.69	31.9	17.1	2.53	42.2
OTTAWA							
OISE K	1	21.1	3.95	48.2	30.2	5.49	56.0
	2	30.7	3.71	40.0	39.5	3.66	35.9
OISE 1	3	22.7	3.93	54.6	26.4	3.11	44.4
	4	24.0	2.65	39.5	27.2	3.05	41.8
	5	27.3	3.39	42.9	29.8	2.54	31.3
IEA II	6	11.6	0.90	21.9	12.7	1.04	23.1
	7	13.0	1.55	27.2	14.7	2.12	33.1
	8	13.9	2.36	36.9	15.3	2.60	40.0

a. OISE K maximum score = 65; OISE 1 maximum score = 65.

b. Standard deviation of mean of class means as a percent the standard deviation of student mean.

TABLE 5

ATTITUDE TOWARD LEARNING FRENCH: RESULTS FOR STUDENTS BY BOARD AND GRADE
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74.

FORM ^a	BOARD GRADE	FALL			SPRING			Fall ^b to Spring r (N)	
		MEAN	S.D.	N	MEAN	S.D.	N		
CARLETON									
A	1	----	----	----	12.7	3.3	(1147)	----	----
	2	11.9	3.7	(835)	12.5	3.5	(880)	+ .19 ^c	(93)
	3	11.7	3.7	(1161)	12.3	3.5	(1168)	+ .51	(120)
B	4	18.1	5.9	(1287)	19.1	5.9	(1267)	+ .46	(138)
	5	18.2	5.9	(1362)	18.8	5.8	(1330)	+ .59	(139)
C	6	47.5	15.5	(1691)	47.9	16.4	(1580)	+ .42	(117)
	7	46.5	15.2	(1975)	45.6	15.5	(1923)	+ .64	(130)
	8	43.6	15.6	(1924)	45.0	15.9	(1804)	+ .68	(134)
OTTAWA									
A	1	----	----	----	12.9	3.1	(413)	----	----
	2	11.7	3.6	(326)	12.5	3.4	(303)	+ .42	(92)
	3	11.5	3.6	(434)	12.4	3.4	(515)	+ .61	(84)
B	4	17.7	5.8	(617)	19.4	5.5	(565)	+ .33	(124)
	5	18.2	5.9	(681)	18.9	5.6	(664)	+ .58	(152)
C	6	46.6	15.8	(985)	47.5	16.6	(977)	+ .57	(110)
	7	45.6	15.7	(1065)	44.6	17.4	(1064)	+ .73	(116)
	8	45.5	14.7	(1221)	45.8	15.5	(1186)	+ .60	(132)

a. Opinion Form A can range from 5 to 15 and has a neutral score of 10;
Opinion Form B can range from 5 to 25 and has a neutral score of 15;
Opinion Form C can range from 10 to 70 and has a neutral score of 40.

b. Correlations are significant, $P < .001$, unless noted. Correlations
are for a random subsample of about 100 students at each grade level.

c. $P < .05$.

TABLE 6

ATTITUDE TOWARD FRENCH CANADIANS: RESULTS FOR STUDENTS BY BOARD AND GRADE
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

FORM ^a	BOARD GRADE	FALL			SPRING			Fall to Spring ^b	
		MEAN	S.D.	N	MEAN	S.D.	N	r	(N)
CARLETON									
A	1	----	----	----	13.0	2.6	(1148)	----	----
	2	11.8	3.2	(832)	12.5	3.1	(874)	+ .39	(92)
	3	11.8	3.2	(1159)	12.3	3.2	(1148)	+ .20 ^c	(116)
B	4	17.3	3.9	(1276)	17.7	3.8	(1256)	+ .52	(135)
	5	16.7	3.8	(1361)	17.1	3.6	(1329)	+ .35	(139)
C	6	46.6	12.2	(1696)	46.7	12.8	(1589)	+ .38	(121)
	7	44.8	12.5	(1977)	44.7	12.8	(1927)	+ .60	(132)
	8	43.0	12.7	(1925)	44.4	12.8	(1809)	+ .72	(134)
OTTAWA									
A	1	----	----	----	13.0	2.6	(416)	----	----
	2	12.0	3.1	(326)	12.5	3.0	(302)	+ .42	(92)
	3	11.5	3.3	(424)	12.3	3.1	(508)	+ .56	(81)
B	4	16.8	4.0	(618)	17.5	3.9	(567)	+ .55	(125)
	5	16.9	4.1	(680)	16.9	3.9	(663)	+ .54	(150)
C	6	45.2	11.8	(994)	45.5	12.6	(978)	+ .57	(109)
	7	43.9	12.6	(1072)	44.5	13.9	(1063)	+ .64	(116)
	8	44.8	12.6	(1227)	45.7	12.8	(1185)	+ .71	(134)

a. Opinion Form A can range from 5 to 15 and has a neutral score of 10;
Opinion Form B can range from 5 to 25 and has a neutral score of 15;
Opinion Form C can range from 10 to 70 and has a neutral score of 40.

b. Correlations are significant, $P \leq .001$, unless noted. Correlations
are for a random sample of about 100 students at each grade level.

c. $P \leq .05$.

not vary as a function of the instrument form or differences in the total possible range of the scale, as was the case with the cognitive measure. Finally, there is no systematic improvement in attitudes among cohorts at successive grade levels. Indeed, older students are usually less favourable in attitudes than younger students giving opinions at the same time of year.³

Another difference between scores on the cognitive measure and those for attitudes is the higher proportion of classes which became less favourable in attitudes. Although some classes failed to improve very much in their mean comprehension score over the year, only 5 per cent actually regressed. For attitudes, however, 40 per cent of the classes became less favourable on Att FC, and 37 per cent became less favourable on Att LF.

The results of attitude measurement indicate that the basic French programs do not have a strong influence on attitude improvement. This does not signify that school-related variables do not influence attitudes. It merely means that the fact of taking a year of basic French does not imply better attitudes (as it seems to imply more listening comprehension skill). Improvement of attitudes does not appear to be cumulative, since students having taken more years of

3. The measurement of intermediate students the following year (Morrison, 1976:23-24) supports the idea that attitudes become more negative, or nay-saying more prevalent, over time. The following table shows Spring scores of three cohorts of students over two years:

Spring scores			1974	1975
Att LF	Carleton	grades six to seven	47.9	45.1
		grades seven to eight	45.6	43.0
	Ottawa	grades seven to eight	44.6	44.1
Att FC	Carleton	grades six to seven	46.7	43.3
		grades seven to eight	44.7	41.8
	Ottawa	grades seven to eight	44.5	42.4

the program are no more favourable than students with less time in the program.

Failure to find the positive change in attitudes expected may reflect the inadequacy of the instrument, a real failure on the part of the basic French curriculum or teachers to influence attitudes, or the influence of some other factor, ~~such as~~ a greater willingness on the part of older students to say "no." With respect to curriculum, Halpern reports, "After an examination of the teaching materials and interviews with the teachers, it was concluded that attitude formation was not a planned part of the teaching in any of the variations" (1976:167). The hypotheses proposed earlier predict that negative staff attitudes toward French will influence student attitudes, and would depress positive change. This possibility will be examined in Chapter VI.

The possibility that school climate variables influence attitudes would be strengthened if attitudes vary among classes. This seems to be the case, although the standard deviation for the mean of class means for attitudes indicates slightly less variance relative to the standard deviation for student means than is the case with comprehension (Tables 7 and 8). Most of the standard deviations for class means fall between one-third and one-quarter of the standard deviations for students. For Att LF 16 of 28 fall in this range with one below it. For Att FC 19 of 28 fall in this range with two below. The variation is adequate to enable an analysis of school variables which might influence attitudes.

TABLE 7

ATTITUDE TOWARD LEARNING FRENCH: RESULTS FOR CLASSES BY BOARD AND GRADE,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

TEST ^a	BOARD GRADE	FALL			SPRING		
		MEAN OF CLASS MEANS	S.D.	% ^b	MEAN OF CLASS MEANS	S.D.	% ^b
CARLETON							
A	1	----	----	----	12.7	1.15	34.8
	2	11.7	1.30	35.1	12.4	1.39	39.7
	3	11.6	1.09	29.5	12.3	1.59	45.4
B	4	18.1	1.71	29.0	19.1	1.89	32.0
	5	18.0	2.17	36.8	18.3	2.22	38.3
C	6	48.0	4.72	30.4	48.3	5.55	33.8
	7	46.0	4.85	31.9	44.8	4.95	31.9
	8	43.5	4.97	31.9	45.1	5.68	35.7
OTTAWA							
A	1	----	----	----	12.9	0.89	28.7
	2	11.9	0.82	22.8	12.5	0.86	25.3
	3	11.6	1.16	32.2	12.5	1.15	33.8
B	4	17.7	2.09	36.0	19.4	1.76	32.0
	5	18.2	1.99	33.7	18.9	1.45	25.9
C	6	46.0	4.83	30.6	47.0	5.85	35.2
	7	44.8	4.80	30.6	43.7	6.27	36.0
	8	45.0	4.29	29.2	44.7	4.39	28.3

- a. Opinion A can range from 5 to 15 and has a neutral score of 10;
Opinion B can range from 5 to 25 and has a neutral score of 15;
Opinion C can range from 10 to 70 and has a neutral score of 40.

- b. Standard deviation of mean of class means as a percent the
standard deviation of student mean.

TABLE 8

ATTITUDE TOWARD FRENCH CANADIANS: RESULTS FOR CLASSES BY BOARD AND GRADE,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

FORM ^a	BOARD GRADE	FALL			SPRING		
		MEAN OF CLASS MEANS	S.D.	z^b	MEAN OF CLASS MEANS	S.D.	z^b
CARLETON							
A	1	----	----	----	12.9	0.87	33.5
	2	11.7	1.07	33.4	12.4	0.99	31.9
	3	11.7	1.07	33.4	12.3	1.26	39.4
B	4	17.4	1.02	26.2	17.6	0.93	24.5
	5	16.8	0.96	25.3	16.9	0.85	23.6
C	6	46.9	3.53	28.9	47.1	3.80	29.7
	7	44.4	3.47	27.8	44.2	3.64	28.4
	8	42.9	3.90	30.7	44.1	4.91	38.3
OTTAWA							
A	1	----	----	----	13.0	0.85	32.7
	2	12.1	1.12	36.1	12.5	0.82	27.3
	3	11.5	1.05	31.8	12.3	1.09	35.2
B	4	16.8	1.06	26.5	17.4	1.04	26.7
	5	16.8	1.08	26.3	16.9	1.07	27.4
C	6	45.0	3.21	27.2	45.5	4.81	38.2
	7	43.4	3.70	29.4	43.5	4.77	34.3
	8	44.4	3.26	25.9	45.5	3.93	30.7

a. Opinion A can range from 5 to 15 and has a neutral score of 10;
Opinion B can range from 5 to 25 and has a neutral score of 15;
Opinion C can range from 10 to 70 and has a neutral score of 40.

b. Standard deviation of mean of class means as a percent the
standard deviation of student mean.

The two attitudes seem to be somewhat less stable than linguistic skills. The correlations between Fall and Spring attitude scores for a subsample of students range from under +.4 to just over +.7 and are generally .1 or .2 below those for comprehension (Tables 5 and 6). The differences are particularly marked below grade 6, and raise questions about the validity of the instrument, which had not been used before at these grade levels. Items about English Canadians, paralleling those about French Canadians, were included at these grades as a check for relative validity. Means for attitudes to English Canadians (Att EC) are one or two points higher but follow a similar pattern as those toward French Canadians.

Patterns of association among attitude variables may also be used to shed light on the validity of measuring instruments. A fairly strong association is to be expected between scores on Att LF and Att FC, since these associations were found by Gardner and Smythe (1975). These scales are united by the common element of "French." The new emphasis in 1973-74 on French learning was legitimized, both in the schools and in the wider community, as a means of assuring national unity and the linguistic rights of French Canadians. Att FC and Att EC share the common element of attitudes toward people. Rokeach (1960) found that the attitudes of people high on ethnocentrism (that is, with negative feelings about out-groups), were less favourably disposed towards in-groups as well. He noted, "Prejudice toward a specific out-group takes on a new significance when it is seen to be but a special case of a more general misanthropy, which often includes one's

own group" (1960:392). Thus, correlations between Att FC and Att EC may be expected to be positive, although probably somewhat lower than those between Att FC and Att LF. There seems to be no theoretical reason to expect much correlation between Att LF and Att EC, other than one based simply on a positive response bias or an optimism-pessimism personality bias. This set of correlations may be expected to be lower than those between Att LF and Att EC or Att FC and Att EC. The correlations between attitudes scales are presented in Table 9.

Zero-order correlations between Att LF and Att FC indicate that these are quite closely related, particularly at grades six, seven and eight. In these intermediate grades the correlations are significant and generally above +.6. Correlations between Att EC and the other attitude scales also follow expected patterns. The r 's between Att EC and Att FC are generally significant and are somewhat lower than those between Att LF and Att FC, but greater than those between Att EC and Att LF. These latter wobble around zero. The relationship between Att FC and Att EC reach about the same level for grades three, four and five in the Spring as those between Att FC and Att LF, but they are somewhat lower in the Fall. Thus, the patterns of association among attitudes seems to approximate expectations.

ATTITUDES AS A FACTOR IN LEARNING

Although attitudes were measured principally because attitude change is a stated objective of the basic French program, attitudes are also interesting as a predictor variable for the learning of cognitive skills. It is a truism in the schools that positive attitudes toward learning a subject are strongly associated with, and may be a prerequisite for, learning in the subject. "You learn best, actually only, when you are personally motivated. . ." is a typical sentiment

TABLE 9
CORRELATIONS* AMONG ATTITUDES:
CARLETON AND OTTAWA PUBLIC SCHOOL STUDENTS, 1973-74

BOARD GRADE	Att LF - Att FC		Att FC - Att EC		Att LF - Att EC		N
	Fall	Spring	Fall	Spring	Fall	Spring	
CARLETON							
2	+.54 ^a	+.45 ^a	+.30 ^b	+.07	+.13	+.02	(93)
3	+.46 ^a	+.52 ^a	+.25 ^b	+.48 ^a	-.09	+.07	(120)
4	+.48 ^a	+.46 ^a	+.18 ^a	+.33 ^a	-.04	-.01	(138)
5	+.26 ^a	+.33 ^a	+.26 ^a	.45 ^a	-.09	-.06	(139)
6	+.63 ^a	+.76 ^a	---	---	---	---	(119)
7	+.53 ^a	+.61 ^a	---	---	---	---	(131)
8	+.63 ^a	+.62 ^a	---	---	---	---	(134)
OTTAWA							
2	+.51 ^a	+.52 ^a	+.02	+.19	-.01	-.06	(92)
3	+.41 ^a	+.47 ^a	+.23 ^c	+.32 ^a	-.11	+.06	(84)
4	+.29 ^a	+.32 ^a	+.31 ^a	+.44 ^a	-.08 ^b	+.12 ^b	(124)
5	+.48 ^a	+.51 ^a	+.34 ^a	+.58 ^a	+.19 ^b	+.19 ^b	(152)
6	+.61 ^a	+.58 ^a	---	---	---	---	(110)
7	+.60 ^a	+.72 ^a	---	---	---	---	(116)
8	+.69 ^a	+.66 ^a	---	---	---	---	(133)

a. $P \leq .001$.

b. $.001 < P \leq .01$.

c. $.01 \leq P \leq .05$.

* Pearson's r for a random subsample of students at each grade level.

(expressed by a teacher respondent on the questionnaire).

If such association exists, it would show up in correlations between Att LF and French listening comprehension scores. In fact, these correlations never exceed +.4 (Table 10) and exceed +.2 for only 4 of 14 subsamples in the Fall and 8 of 14 subsamples in the Spring. Thus, there seems to be a modest association between Att LF and achievement. Because beginning and end of year data exist for both attitudes and comprehension, the question of whether favourable attitudes induce learning or successful learning induces favourable attitudes can be explored. Correlations between Fall Att LF and Spring comprehension are about the same as those between comprehension and Att LF measured at the same testing session. They are generally higher than correlations between Fall comprehension and Spring Att LF. Thus, Att LF seems to precede, and possibly induce, comprehension scores.

However, raw achievement scores do not measure learning. Regression analysis was employed to indicate the effect of attitudes on changes in these scores (see Cronback and Furby, 1970). This technique was used to remove the variance in Spring listening comprehension score which can be explained by Fall score. The variance in the residual which is explicable by attitudes is then determined. The results of this analysis are shown in Table 11 and Figure 4. Attitudes are most efficient in accounting for residual variance in comprehension at grade three and Carleton grade six--those subsamples where Fall score is least efficient. Even in these samples, attitudes explain 8 per cent or less of the variance. It should be noted, of course, that the Fall score would also contain some variance which would be due to the

TABLE 10
CORRELATIONS* BETWEEN FRENCH LISTENING COMPREHENSION AND
ATTITUDE TOWARD LEARNING FRENCH,
CARLETON AND OTTAWA PUBLIC SCHOOL STUDENTS, 1973-74

BOARD GRADE	FALL COMP FALL LF	SPRING COMP SPRING LF	FALL COMP SPRING LF	SPRING COMP FALL LF	(N)
CARLETON					
2	+.12	-.00	+.08	-.09 ^b	(93)
3	+.16 ^c	+.29 ^a	+.15 ^c	+.23 ^b	(120)
4	+.34 ^a	+.14	+.07	+.35 ^a	(138)
5	+.19 ^b	+.33 ^a	+.19 ^c	+.26 ^a	(139)
6	+.18 ^c	+.28 ^a	+.24 ^b	+.26 ^b	(119)
7	+.31 ^a	+.37 ^a	+.30 ^a	+.36 ^a	(131)
8	+.38 ^a	+.37 ^a	+.30 ^a	+.33 ^a	(134)
OTTAWA					
2	+.18 ^c	+.16	+.17 ^c	+.07	(92)
3	+.14	+.31 ^b	+.20 ^c	+.29 ^b	(84)
4	+.13	+.13	+.18 ^c	+.09	(124)
5	+.12	+.23 ^b	+.18 ^c	+.12	(152)
6	+.15	+.12	+.12 ^c	+.23 ^b	(110)
7	+.30 ^a	+.29 ^a	+.16 ^c	+.37 ^a	(116)
8	+.20 ^b	+.14	+.18 ^c	+.20 ^b	(133)

a. $P \leq .001$.

b. $.001 < P \leq .01$.

c. $.01 < P \leq .05$.

* Pearson's r for a random subsample of students at each grade level.

TABLE 11

PROPORTION OF VARIANCE IN SPRING FRENCH LISTENING COMPREHENSION SCORE
EXPLAINED BY ATTITUDES AND FALL COMPREHENSION SCORE,
CARLETON AND OTTAWA PUBLIC SCHOOL STUDENTS, 1973-74

	GRADE						
	2	3	4	5	6	7	8
CARLETON							
ALL ATTITUDES - FALL	.057	.032	.023	.038	.034	.025	.005
Att Learn French	.006	.030	.000	.012	.022	.016	.001
Att French Canadians	.045	.001	.005	.004	.012	.009	.004
Att English Canadians	.006	.000	.018	.022	NA	NA	NA
ALL ATTITUDES - SPRING	.003	.042	.004	.028	.030	.013	.026
Att Learn French	.000	.032	.000	.021	.021	.013	.022
Att French Canadians	.002	.007	.000	.000	.009	.000	.004
Att English Canadians	.000	.003	.004	.007	NA	NA	NA
FALL FRENCH COMPREHENSION	.490	.282	.403	.427	.165	.483	.528
TOTAL VARIANCE EXPLAINED	.550	.356	.430	.492	.229	.522	.559
OTTAWA							
ALL ATTITUDES - FALL	.007	.043	.008	.018	.032	.023	.004
Att Learn French	.001	.037	.001	.008	.032	.011	.003
Att French Canadians	.005	.006	.007	.009	.000	.012	.001
Att English Canadians	.001	.000	.000	.001	NA	NA	NA
ALL ATTITUDES - SPRING	.027	.038	.002	.015	.007	.008	.004
Att Learn French	.005	.011	.000	.015	.000	.006	.002
Att French Canadians	.010	.018	.002	.000	.007	.002	.002
Att English Canadians	.012	.009	.000	.000	NA	NA	NA
FALL FRENCH COMPREHENSION	.483	.305	.454	.539	.377	.561	.624
TOTAL VARIANCE EXPLAINED	.516	.386	.464	.572	.417	.592	.632

* Regression Analysis performed on a random subsample of students at each grade level. The analysis used SPSS. See Norman Nie, D.H. Bent, and C.H. Hull: Statistical Package for the Social Sciences, New York: McGraw Hill, 1970.

FIGURE 4
PERCENT OF VARIANCE IN SPRING SCORES EXPLAINED BY ATTITUDE AND FALL SCORE
BY OTTAWA AND CARLETON PUBLIC SCHOOL STUDENTS, 1973-74

influence of attitudes on previous testing, and thus this analysis underestimates the influence of attitudes somewhat.

SUMMARY

The results indicate that learning of French listening comprehension skills did occur over the year and that there were differences among classes in the amount of skills measured. Furthermore, Fall score explains no more than 50 per cent of the variance in Spring score. Results also indicate that cumulative attitude change related to the amount of French instruction received did not occur. It may be inferred, therefore, that attitudes did not change as a result of the formal basic French teaching. Nevertheless, there is variation among classes. Variation in Spring measures of attitudes are not explained away by Fall scores since the correlation between the two is generally below +.6. Therefore, the class data for both the learning of cognitive comprehension skills and changes in attitudes may be used as dependent variables to test the hypotheses that school climate variables influence cognitive learning and attitude change.

Correlations confirm an expected positive relation between attitudes toward learning French and attitudes toward French Canadians. Attitudes can also be looked upon as predictors of comprehension skill acquisition and a regression analysis was performed treating them in this fashion. The analysis found they explain 8 per cent or less of the variation in Spring comprehension after Fall score effects were removed.

In this chapter the dependent variables, changes in French listening comprehension scores, and in scores on the measures of attitudes toward learning French and toward French Canadians have been discussed. In the next chapter the school climate variables will be discussed.

V. SCHOOL CLIMATE FOR FRENCH

Earlier chapters argued that the school has two parallel functions, that of teaching cognitive skills and that of socializing children to the beliefs, values and other prerequisites for the performance of adult roles. It was argued that where the community beliefs disparage a cognitive skill being taught in the school, the socialization of this value and the teaching of the skill would conflict. The National Capital Region seemed to present a situation where community values of Anglophones were ambivalent towards the teaching of French language skills, with some very vocal elements of the community opposed to the cultivation of the minority language.

The last chapter discussed the learning of these French skills and of attitudes toward learning French and French-speaking Canadians by students in basic French programs in the Ottawa-Carleton area. It indicated that there is learning of French listening comprehension skills which may be related to time in the program, but that attitude change appears not to be related to years in the program. Furthermore, the analysis indicated that there was considerable variance among classes on these measures of the dependent variable which was not explained by Fall scores or attitude measures.

This chapter will look at the data gathered to measure the attitude toward French and French programs on the part of the school staff. In order to act as a socializing agent, the school, or more accurately, the personnel of the school, must present these beliefs

and values to the student. That is to say, these attitudes must be present among the school staff before it can be said that they are agents for socializing others to them. In Chapter III the instruments used to measure this school climate for French were described (see also Appendices B, C and D). In this chapter the responses to the school climate items from these instruments will be examined. The first of the three questionnaires to be considered will be those sent to class teachers who teach various subjects using English as the language of instruction. The items for teachers of basic French (who teach classes for 20, 30 or 40 minutes per day) and for principals will be considered in turn, and then inter-relationships among respondent groups will be discussed. The chapter will conclude with an analysis of the responses in relation to the four aspects of school climate for French, that is, general benefits, teaching and working conditions, integration into school life, and cognitive orientation of the principal.

THE CLASS TEACHERS

The regular teachers of all tested grade one to eight classes comprised the sample of class teachers. These teachers have the responsibility for instructing the class during the 85 or 90 per cent of the time when the students are not being taught French. Because of the amount of time and the face-to-face contact between these teachers and their classes, their definitions and evaluations of French are expected to have a major effect on the socialization of values with respect to French.

Of the sample of 756 class teachers, 542 or 71.7 per cent responded. The rate differed by Board, with 62.6 per cent of the Carleton sample responding, and 79.3 per cent of the Ottawa sample responding. The questionnaire included a page which asked for "comments on the French program, or on this questionnaire, which would aid in our evaluation." One-third of the respondents made comments, many filling the legal-sized page provided. In addition, some teachers made comments on specific questions. Some of these comments will be used here to provide illumination of the items and teachers' responses.

Teachers were asked about their French ability, education and teaching experience. Less than 10 per cent of respondents said they could speak French easily, as well as, or better than they could speak English (Table 12). When asked about how well they could understand French, 14 per cent placed themselves in the upper three categories. Whether for ability to speak French or ability to follow a conversation in French, about 50 per cent indicated that they had little or no ability in the language.

Reporting on education (Table 13), about half the respondents said they had a university degree. Only 16 per cent had no exposure to university training. In addition, 85 per cent indicated that they had one year of teacher training, 7 per cent had two years and one per cent had three years. The modal category of teaching experience (Table 14) was five to nine years. Only 2.5 per cent of respondents indicated that 1973-74 was their first year of teaching and about one-third indicated that it was their tenth year or more.

TABLE 12

STATED ABILITY IN FRENCH OF RESPONDENTS,
OTTAWA AND CARLETON PUBLIC SCHOOL TEACHERS, 1974

Stated Ability Level	Ability to Speak French	Ability to Understand French
French better than English	0.8%	0.6%
French just as well as English	1.4%	3.1%
Speak or follow conversation easily	7.1%	10.1%
Speak or follow conversation with difficulty	42.9%	34.0%
Say a few things/understand small part of what is said	40.4%	44.4%
Cannot speak/do not understand	7.5%	7.8%
N	(508)	(514)

Although it was not possible to check these proportions against Board employment records for teachers, there is nothing in these figures to indicate that the 70 per cent return rate resulted in a biased sample. The levels of French ability were in the range expected on the basis of informal observation, and the skewed experience curve is approximately what can be expected in terms of attrition and declining enrolment patterns. It was impossible to ask more extensive background questions of teachers (such as sex of respondent) since these would have enabled identification of individual teachers. In any case, the study was not directed at the relation between teacher background and their attitudes, but rather at the relation between attitudes and student learning.

TABLE 13

EDUCATIONAL BACKGROUND OF RESPONDENTS
OTTAWA AND CARLETON PUBLIC SCHOOL TEACHERS, 1974

No university	16.0%
Some university	33.4%
Bachelor's degree	34.1%
Post graduate work	16.4%
N	(499)

TABLE 14

TEACHING EXPERIENCE OF RESPONDENTS,
OTTAWA AND CARLETON PUBLIC SCHOOL TEACHERS, 1974

Years of teaching	
one	2.5%
two to four	20.0%
five to nine	46.3%
ten to fourteen	17.7%
fifteen and over	13.4%
N	(514)

TABLE 15

RESPONSES OF CLASS TEACHERS TO SCHOOL CLIMATE QUESTIONS (IN PER CENTS),
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

	Mean	% Agree Strongly 1	% Agree Moderately 2	% Agree Slightly 3	% Disagree Slightly 4	% Disagree Moderately 5	% Disagree Strongly 6	N
Benefits of French								
Good Discipline	2.4	27	35	23	4	3	8	(512)
Understand Own	3.0	19	26	24	9	9	11	(516)
Needed Challenge	3.0	23	26	19	6	10	16	(513)
Quebec Dialect	4.2	11	12	12	13	21	32	(494)
Cultured Person	4.3	9	12	17	8	11	43	(518)
Teaching Conditions								
Low Ability	2.1	48	22	15	5	6	4	(528)
Job Threat	2.6	35	23	20	4	7	11	(519)
Financing	2.8	31	21	18	8	12	10	(513)
More Criticism	3.1	23	22	17	9	15	13	(488)
Core Useless	3.5	14	19	21	13	19	15	(507)
Extension Harms	3.6	20	15	14	12	15	23	(518)
Ability to Speak	3.8	18	15	15	7	12	33	(477)
Demanding	4.0	12	14	16	12	14	32	(351)
Gives Break	4.2	12	9	18	6	12	42	(512)

THE BENEFITS OF FRENCH ITEMS

The percentages of class teachers agreeing and disagreeing with the items asking about the benefits of French and about teaching conditions are shown on Table 15. The teachers tend to support French as a beneficial academic discipline in the elementary schools. There are more responses favourable to the French programs than unfavourable on four of the five benefit items.

Good Discipline drew some agreement from 85 per cent of respondents, making it the second (by a whisker) most agreed-with statement. Needed Challenge was supported by 68 per cent of respondents, although several teachers commented that "this statement implies that a challenge is not being provided in other areas," or "needed-- no way!" Other teachers noted that the statement was misleading because "the challenge is not in depth of learning the subject, but in learning French." Two-thirds of the respondents disagreed with Quebec Dialect, and many of them said in comments that the French which should be taught in Ontario schools is the French that is "spoken in Canada." A few class teachers also said that French Canadians should be teaching French since only they would be able to contribute to a rapprochement between the two cultures.

While teachers accepted French as a useful subject in the schools, they did not agree that one needs to know a foreign language to be a "cultured person." This was the least agreed-with statement, a fact which conforms to the idea that these largely unilingual respondents would be reluctant to define themselves as "uncultured." Indeed, only 36 per cent of 45 respondents who indicated that they could speak French easily or better disagreed strongly or moderately with this item, while 57 per cent of 447 respondents who speak French with difficulty or less well disagreed moderately or strongly. (Chi square significant, $p = .02$.) Such selective responses make psychological sense. However, with this exception, respondents showed attitudes generally favourable to these global benefits of French.

THE TEACHING CONDITIONS ITEMS

Such supportive sentiments were less typical of responses to items about the effects of French on teaching and working conditions. For all of these items disagreement with the statement was considered to be favourable to the French programs.

Teachers generally believe that the French programs are hard for low ability children. Only 15 per cent disagreed with Low Ability and many teachers made comments to the effect that: "The slow learners could benefit from extra work in English subjects during French time." "I feel that students who have some serious problems in English should spend extra time correcting these problems." "Some students are not able to handle more than their mother tongue."

Seventy-eight per cent of respondents agreed that the French programs threaten jobs of English-speaking teachers (Job Threat). One teacher commented:

I feel that the French immersion program is endangering the jobs of English-speaking teachers. In a school where French immersion expands a grade a year, there is an uneasy feeling among English teachers about who will lose their jobs this year or be shifted to another school to make more room for French classes. As the French immersion program expands in the Ottawa area, there will be fewer and fewer jobs for English-speaking teachers.

The Financing item also drew agreement from 70 per cent of respondents. Although the experimental programs were especially financed by the federal government, only two teachers mentioned this fact. Most comments from respondents indicated that teachers see money for education as money for education; when a slice of the pie goes for French, there is less pie for other subjects.

More than half the respondents expressed some degree of agreement with More Criticism (62 per cent) and Core Useless (54 per cent). Comments on the value of the core program indicated that the question may not have elicited agree responses even when the respondent felt the basic or core French programs to be quite inadequate. For instance, teachers said: "Useless is too strong. . .but most do not learn any meaningful French in core programs." "There may be a problem, but the programs are not useless." "It's better than no French at all."

Thus, a majority of respondents agreed with five of the nine negative items measuring opinions about the effect of French on teaching conditions. Two other items, Extension Harms and Ability to Speak, drew nearly 50 per cent agreement (49 and 48 per cent, respectively). The Ability to Speak item was apparently ambiguous and drew a high rate (12 per cent) of non-codable responses. Typical of the dilemma was the statement:

In what way? If you mean as far as getting a job is concerned, I would agree. However, I think teaching ability is of much greater importance to the child.

The two remaining items drew more disagree responses (which were favourable to French) but both had methodological flaws. Sixty per cent of respondents disagreed with Gives Break. However, examination of comments on this item revealed that many of those who disagreed did so because they do not get a break when the French teacher comes into the class. Although board policies allowed this time to the teacher for a break or planning, some teachers stayed in the class to maintain discipline or because the French teacher gave separate instruction to each level of a class with two grade levels. Eight of 28 comments on the

item made this point. Demanding was not answered by 35 per cent of respondents, a great many of whom felt that they had no knowledge of what went on in immersion classrooms and so could not make a judgement. Forty-eight teachers wrote comments to this effect: "I couldn't possibly judge." "I don't know any." "No grounds for an opinion." Because this question seemed to be asking for a judgement about other teachers, it was said to be "unethical" or "unprofessional" by several respondents. However, two or three of these same teachers wrote in their comments that the statement was true "of necessity" since academic demands cannot be made on students taking a subject in a second language until they have sufficient vocabulary in that subject area. Because of the high non-response rate this question was removed from the remainder of the analysis.

TEACHERS' BACKGROUND AND OPINIONS

The tendency for responses on the attitude questions to vary by French linguistic ability, by education, or by experience was weak (Kendall's tau does not exceed $+ .15$) and is not usually significant. However, there are some significant relationships between benefit of French items and these background characteristics. The chi-squares between the ability to speak French and Good Discipline, Cultured Person, and Needed Challenge were significant ($P < .05$) and the relationships were positive. For instance, 40 per cent of native or fluent French speakers agreed strongly with Good Discipline, while only 32 per cent of those who speak French with difficulty and 19 per cent of those who can say nothing or a few words agreed strongly. Only 24 per cent of teachers who speak French fluently or better

disagreed strongly with Cultured Person, whereas 46 per cent of teachers who speak French less than fluently disagreed strongly. The pattern for teachers' rating of their ability to understand the French spoken by others was somewhat similar. The chi-squares with the benefit items Good Discipline, Needed Challenge and Understand Own were significant ($P < .05$) and the relationships were positive. Forty per cent of teachers who could follow a conversation in French easily (includes native French) agreed strongly with Good Discipline and only 24 per cent of other teachers agreed so strongly. Sixty-two per cent of teachers who understood French easily or better agreed strongly or moderately with Understand Own, while only 44 per cent of other teachers did so.

It is the less experienced teachers who were more apt to agree with Good Discipline and Understand Own, the two items for which chi-squares with experience were significant. Twenty per cent of teachers with ten years or more experience disagreed strongly with Good Discipline and only 12 per cent of less experienced teachers did. Strong disagreement with Understand Own was expressed by 18 per cent of teachers with ten or more years; 10 per cent of teachers with five to nine years; and 5 per cent of teachers with less than five years experience teaching. Education seems related to Understand Own and Quebec Dialect. Sixty per cent of teachers without a degree agreed to some extent with Understand Own, while 78 per cent of teachers with a degree expressed agreement. The only background variable which showed a significant relationship with Quebec Dialect was education (chi-square significant, $P < .001$). Seventy-six per cent of teachers with degrees disagreed, while only 55 per cent of teachers without degrees disagreed.

The items expected to measure attitudes toward teaching and working conditions did not interact with background characteristics to a significant extent, except for Financing with Ability to Speak French and Extension Harms with Education (chi-squares significant, $P < .05$). Fifty-five per cent of teachers fluent in French disagreed with Financing, while 29 per cent of the other teachers did so. Fifty-nine per cent of teachers without degrees agreed with Extension Harms and 39 per cent of teachers with degrees agreed with this item.

Thus, the teacher's rating of her French ability seemed to be positively, but weakly, related to the items (other than Quebec Dialect) measuring the global benefits of French, while education and experience were more apt to be negatively related to these benefit items (that is, more positive towards French). The measures of teaching and working conditions did not seem to be related to background of the respondents, however.

ANALYSIS OF COMMENTS

Comments indicated even more strongly than responses to items that feelings about French in the schools did run high. Although a thorough analysis of the comments from the questionnaire is beyond the scope of this paper, some of them are worth citing in order to indicate both the hostility and the good will for French that was expected to exist in the schools. Perhaps the negative comments were the most forceful. One, submitted on lined notebook paper, without a questionnaire returned, read, "Let's try English immersion classes in Quebec for a few years. Displace some of their teachers for a while. Spread the headaches around. Personally, I'm fed up." Another comment touched on both the financial issues and the threat to jobs:

The only reason French is being pushed down our throats is political. Having been raised with French people I thought nothing of languages. My thoughts were in terms of people. Due to the present surge of French at an extremely high cost to taxpayers I have become increasingly aware of the terms French and English and begun to feel a stranglehold of pressure being placed on Anglophones. One is beginning to feel that he might have to fight to be English. Even present with French immersion is the hold it takes upon a school as it creeps forward grade by grade engulfing the building in its grasp. . . Teachers of English kindergarten are being pushed out of their schools by hypnotized parents who feel their children must learn French.

However, many comments expressed at least prima facie support for French:

Certainly twenty minutes of core French is very poor for grade three as the period passes far too quickly without much being accomplished, that is, getting into it. Forty minute periods would provide a more satisfactory and realistic approach to accomplish and progress in French.

I feel that the best way to learn French is to live with it and have to use it. I try to use French as much as possible in my room in giving directions such as "close the door," "your pencil is on the floor," "pick up the paper," etc.

Despite such overt statements of support, there was in the wording or tone of many comments a feeling that the support was less than wholehearted. A pattern running through many of the comments was that the writer does or did accept the French cultural aspirations and does or did support the French teaching program, but that others do not or that the implementation of the programs is forcing a change in thinking on the part of self and others. The theme was "I'm all for it, but. . ."

As a person who studied French in high school for the joy of learning an extra language, I am concerned that it is now being studied by many because parents feel their children may be economically (job) disadvantaged in the future without it. In other words fear, not desire, is the motivation for the great French push. . . I think that the large amounts of money presently spent are creating more resentment than results.

I have serious doubts about French immersion. While it is a good ideal and I favour bilingualism of Canada, it really makes me stop and think. As a classroom teacher in the primary grades, I see the children of today--often little robots who cannot relate to much except the television set. And the classes are including an increasing number of children with problems. In my own class right now (a regular grade two) I might recommend at the most perhaps four children who could cope with a second language full time. I think that the children should be screened for French immersion and should have at least up to grade two in English.

Most students ought to become bilingual, but not at the expense of missing skills and material taught in core subjects. You can't learn a language and a subject at the same time.

Many people are commenting on the shockingly poor quality of French teachers in many of the Board's schools--poorly qualified, no control of the children. This situation helps to foster the growing negative attitude towards French by non-French-speaking people.

Many teachers felt that, as a teacher respondent said, one would be called a "bigot" if one disagreed with the aims of the French programs. Many teachers have been exposed to concepts like "authoritarian personality," "ethnocentrism" and "dogmatism" by university courses and were aware of the negative connotations of these concepts. They were also familiar with the type of items used to measure such personality traits. (One teacher said, good-naturedly, that the questionnaire "sounds like someone is working on a thesis.") They knew enough to agree with the benefit of French items. However, education did not change the fears that French was a threat to jobs, was using money which, under spending ceilings, could be better used for the subjects that the class teacher taught, and drained off the "better" students who are more pleasant to teach. Items asking about the specific effects of the French programs in the schools were, perhaps, seen as within the teachers' expertise and less tainted by academic personality concepts. Saying that

"immersion is only for a few superior students" would not appear to define the writer as anti-French. Yet this belief would justify limiting the immersion program--so that it would pose much less of a threat to Anglophone jobs--and continuing the regular program unchanged. It takes an "open" personality to face the full challenge that the French immersion program poses for regular class teachers.

If the French program assumes that children can learn the basic skills, e.g., mathematics, completely in French and still be as capable as children doing the same thing in their mother language, English, then I wonder what we are doing in the vital years between five and eight for our English speaking children? Are we wasting their time?

Thus, the grouping of items into two categories, one the global "benefits of French" and the other related to effects on specific teaching and working conditions, may express the two sides of teachers' feelings about French: the benefit items measuring the "I'm all for it" side, and the teaching conditions items measuring the strength of the "but. . ."

FACTOR ANALYSIS OF CLASS TEACHER ITEMS

A factor analysis was performed to test whether the items, in fact, represented two different dimensions of teachers' attitudes toward French teaching in the schools. A two factor, oblique solution¹ did separate the items into a Benefits Factor and a Career Factor, almost as predicted. Of the five items expected to define the Benefits Factor, four fall on this dimension with loadings of about .5 or better:

1. Factoring was done using the SPSS (Nie, Bent and Hull, 1970) oblique rotation, specifying a two factor solution. This followed examination of an initial unlimited solution which resulted in four factors, two of which accounted for 28.6 per cent of the total variance explained by the items. The factor pattern of the four factor solution and the two factor solution finally used, together with a three factor solution are presented in Appendix E, Table E-1.

Good Discipline	.54
Cultured Person	.60
Needed Challenge	.59
Understand Own	.49

The fifth item expected to load on this factor, Quebec Dialect, did not load highly on this dimension. This may have been because teachers responded to the items as questioning whether Parisian or International French should be taught rather than Canadian or "Quebec" French. The comments seem to indicate that this was the distinction perceived in relation to the item. If so, the question asked "What kind of French should be taught in your school?" rather than asking a legitimation question "Is the teaching of Quebec French (rather than International French) in your school a good thing?"

The item Extension Harms loaded equally on both the Benefits Factor and on the Career Factor, with a loading of little more than .3 on both. This dual loading was not expected.

Of the nine items originally expected to load on the Career dimension, Demanding had been eliminated because of low response rate and Gives Break did not load on any factor (perhaps because responses depended on whether respondent did, in fact, get a break). Two other items loaded lightly: Extension Harms had a loading of .34 on the Career factor, but nearly as much on the Benefits factor. Core Useless had a loading of only .28 on Career Factor and near zero on Benefits. The five expected items which did load on Career Factor at about .5 or better were:

Low Ability	.49
Financing	.62
Ability to Speak	.60
More Criticism	.52
Job Threat	.60

In addition, the item Quebec Dialect had a moderate loading on the Career dimension of .45.

Since the factors seemed to measure the two dimensions hypothesized to be facets of school climate salient in influencing the learning of French by students at the school, factor scores were computed and used as measures of the teachers' contribution to these aspects of school climate. The factor score for each teacher was the sum of the factor coefficient for each of the thirteen items times the teachers' z-score on the item. (The coefficients are shown in Appendix E, Table E-2.) The school value on the factor was the mean for all teachers responding from that school. Schools with insufficient numbers of teachers responding were given a missing value on the factor variable (see Chapter III, pages 70-73, for the criteria used in determining whether the number of teachers was sufficient). Scores on the Benefits Factor ranged from +1.31 to -1.91 with a mean of +0.03 and a standard deviation of 0.86. On the Career Factor the range was from -1.36 to +1.85 with a mean of +0.14 and a standard deviation of 0.95. There was a negative correlation between the two factors of .33.

The responses from the class teachers indicated an ambivalence in their attitudes toward French in their schools. On the one hand, they tended to agree with the general idea that French was a useful subject for their students to study, but, on the other hand, they also agreed with items indicating that the implementation of the programs had adverse effects on their teaching conditions. This ambivalence was brought forward in comments and was supported by the two factors that emerged from a factor analysis of the responses.

THE TEACHERS OF FRENCH

Surprisingly, many of the teachers of French raised issues similar to those mentioned by class teachers. They were concerned about the difficulties of teaching French to students who were having problems with regular subjects or for whom French was a third language. They were unhappy over the negative attitudes to French that children brought from home to school, a problem that some class teachers also mentioned. Some teachers of French even questioned the value of the basic French program as a whole:

What is learned by most children in years of oral French twenty minutes does not seem worth the effort or cost. After five years they know a few songs, phrases and words. They can usually not apply them to new circumstances or understand words in new context. . . I know that this is not only true of my classes.

When it comes to their position in the school and relations with other teachers, they often presented the same picture as class teachers, only from the opposite point of view:

Teachers need training in how to cope with the verbal abuse toward "French" one must contend with from other teachers and the public in general. . . as French teachers we should be able to justify (1) why so much time is being spent on French in our schools when other subjects are more important, i.e., math and reading, (2) why so much money is being spent on equipment, visual aids, curriculum, etc., for the French classroom when budgets have been cut back drastically for everyone else, (3) why French immersion teachers get aides if their class numbers exceed thirty and our grade one teacher must struggle with thirty-one children and five reading groups, (4) why French teachers are so secure about their jobs when others are being forced out of positions they love because of larger classrooms and lower enrolments. It is sometimes difficult to face everyone's angry questions. One begins to feel guilty of the enjoyment one might get from teaching French. I realize that most of these unfair comparisons arise out of jealousy and prejudice but I think that young people coming into the system should be prepared to face the poor attitudes and should have answers ready at their fingertips--answers filled with facts and diplomacy, not anger, embarrassment or frustration; answers that may promote good will and tact in others.

In addition, teachers of French complained about being a visiting teacher, sometimes finding that no blackboard had been left for them by the class teacher, unable to "decorate another teacher's room with the children's French projects or work" and unable to maintain discipline in the face of the regular class teacher's "ho-hum attitude toward French."

In considering the responses from the teachers of French, it must be kept in mind that the response rates from one Board were extremely low and that the over-all representativeness of the responses is, therefore, doubtful. Results are presented "for what they are worth" and will be separated from data from other sources in analyses of school climate effects on learning.

English was the mother tongue of 40 per cent of the respondents, French of 45 per cent, and 5 per cent reported a bilingual (French and English) upbringing. Another 10 per cent reported a language other than French or English as their mother tongue. Of those whose mother tongue was French, 34 per cent reported learning it in Quebec, 38 per cent in Canada outside Quebec, and the remainder were evenly divided between Europe and other places. Carleton respondents were more apt to report being native French speakers, but this may represent a bias in the returns. Of Ottawa residents, 50 per cent had English as their mother tongue, 32 per cent reported French, and 18 per cent first learned some other language.

Of all respondents, 46 per cent reported speaking French "as their native tongue," one-third spoke French "fluently in conversation with Francophones," 18 per cent spoke French "fairly well," and 2 per

cent could "usually make myself understood in French." Taking Ottawa alone, the proportions were more evenly divided: 39 per cent native, 36 per cent fluent, and 25 per cent fairly well or less. In respect to English, 82 per cent of all respondents reported speaking it as their native tongue or fluently, and 3 per cent said they had difficulty.

Somewhat less than half (45 per cent) had a degree, 20 per cent had no university and 35 per cent had one or two years of university. Teachers whose mother tongue was French differed from English native speakers in the amount of formal education that they had. These differences are shown on Table 16.

In the main these were experienced teachers, with more than half having taught from four to nine years. Another 25 per cent had been teaching for ten years or more. Only 7 per cent were finishing their first year of teaching at the time of the survey and another 7 per cent were ending their second year. It should be noted that, as a group, the teachers of French were not as experienced as class teachers.

TABLE 16

EDUCATION OF TEACHERS OF FRENCH BY MOTHER TONGUE
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

	Mother Tongue	
	French	English
No university	29%	16%
Some university	40%	21%
University degree	19%	44%
Some postgraduate	12%	19%
N	(48)	(43)

The length of time they had been teaching French tended to be somewhat shorter than total experience, with 14 per cent in their first year of French teaching, 12 per cent in their second year and 16 per cent ending their third year. Differences between Boards or between French and English native speakers in experience were not significant. Eighty per cent of the respondents were female.

Four questions to teachers of French looked at the extent to which French was present and integrated into the life of the school, as opposed to being an isolated daily period of instruction. The per cent of responses to the three items about amount of French spoken around the school is shown on Table 17. French was not reported spoken frequently at the majority of schools. However, the sometimes, seldom and never categories each received about one-quarter to one-third of the responses. One teacher criticized the relevance of this type

TABLE 17

AMOUNT OF FRENCH REPORTED SPOKEN AROUND THE SCHOOL
BY TEACHERS OF FRENCH IN CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

	Frequently	Sometimes	Seldom	Never	N
Hear French	7%	30%	28%	35%	(115)
Greetings	11%	34%	33%	22%	(115)
Staffroom	20%	16%	25%	39%	(113)

of question: "It is true that teachers do not speak French in our school. The same point could be made about any subject. Outside of music class, how often do children hear music played by teachers, or mathematics

discussed, etc.?" The question did not ask who spoke French in staff-rooms and this may occur only between teachers of French, a practice that was criticized by one of the class teachers.

Display material around the school also helps to create a French presence. The per cent of teachers who reported that a particular type of display had been on view in their school in the week prior to the filling out of the questionnaire is shown in Table 18. Teachers could report several types and for the statistical analysis the number of different types reported was entered as the variable Displays. It should be noted that the non-response rate to this item was about 15 per cent of the total respondents.

Comments from the teachers of French provided support for the finding of an ambivalent, "Yes, but..." school climate reported by class teachers. On the items measuring use of French by staff, they indicated that French was spoken "sometimes" or "Frequently" at about a third of the schools, and that display material relating to French was fairly common.

TABLE 18

PER CENT OF TEACHERS OF FRENCH IN CARLETON AND OTTAWA PUBLIC SCHOOLS WHO REPORTED FRENCH DISPLAY MATERIAL IN THEIR SCHOOL, 1974

TYPE	PCT.	N
Posters about France	10.5	(95)
Posters about Quebec	19.4	(98)
Posters in French	30.3	(99)
Student work in French	35.0	(100)
French books for leisure reading	49.5	(103)
Books or magazines about:		
Quebec or French Canadian culture	24.7	(97)
France or French culture	15.2	(99)

THE PRINCIPALS

Researchers concerned with organizational climates in the schools are inclined to put the principal in center stage as the leader; the person who sets the tone. Likert (1967), who began his studies of organizational climates with studies of management in industry, considers the principal's role as the crucial one. Most of the items on his scale are directly related to the principal, either alone or in relation to teachers. Halpin and Croft (1962) define school organizational climate as being equally produced by the principal on one side, and teachers on the other.

In this study, too, the principal is seen as playing a central role in creating the climate for French by defining its importance in the student program and by being the mediator between French and the French teacher and the other elements of the school. However, it was thought that attitudinal questions to principals (of the type presented to class teachers) would be resented. Principals, according to the advisors to the French project, see themselves as carrying out the academic programs desired by the Board as professionals, and they take the stance that their opinions about the program directives of the Board are irrelevant to the way these programs are implemented. Certainly, the principals, unlike the teachers, made few comments on the questionnaires. Therefore, questions to the principals were mostly directed at the actions in the school as they perceived them. Only one question, How Much French, openly asked for opinions.

Most of the principals did not speak French well. None claimed to be bilingual, three said they could speak French easily, 42 per cent

checked "Can usually make myself understood in French, but it is difficult for me," 45 per cent could say a few things in French, and 10 per cent could not speak French. Such differences as there were in speaking ability did not seem to affect responses to questions relating to school climate for French, since the chi-squares between principals' French ability and school climate variables were not significant.

Principals supported the idea of developing French linguistic ability in elementary school children. In response to the only Benefits question asked of Principals, How Much French, 69 per cent of respondents indicated that they believed students should understand most of a conversation in French, a degree of learning somewhat greater than was offered in basic French at the time. Another 9 per cent wanted full bilingualism for most children. Only 19 per cent selected the amount now being offered, and 4 per cent indicated less. There were differences between principals of the two Boards that approached significance (chi-square, $P = .07$) with Ottawa principals favouring more French. Since Ottawa was implementing an increased time basic French program, the difference may reflect merely the different circumstances in the two Boards. These figures indicate that the principals perceived French as a beneficial subject in the school curriculum, perhaps worth a larger place than it occupied in 1974.

PROBLEMS WITH FRENCH PROGRAMS

Since the principal's role as an administrator gives him an over-all view of the structure of his school, his concerns about the French programs were expected to pinpoint some of the organizational strains. At the beginning of The FRENCH Project there were indications

that the basic French program had special difficulties in the schools. In part, this was due to its being a subject taught by a specialist, in elementary schools often the only such program element in the student's day. Hostility toward French, in the school and in the community, had also been mentioned as a problem. The questionnaire to principals attempted to get some idea of the problems of administration which were unique to French, and to find out if the basic French program was, indeed, a "weak link" in the school program. There were a number of items examining the teaching conditions related to French.

Two direct questions were posed to principals concerning administrative problems and the benefits of time spent on French. Of 92 principals answering Administrative Problems, 52 per cent said that the problems associated with basic French were about the same as for other subjects, 42 per cent indicated that the problems were greater and 5 per cent indicated that they were less than for other subjects. To Benefits/Time, 71 per cent of 90 principals gave an unequivocal "Yes," 17 per cent circled "Yes, but the time could be more beneficially used in other ways" and 12 per cent indicated that there were "very few benefits." One of the principals checking the latter response, qualified it, "only because the time allotment is not sufficient to develop fluency." It would seem that the core or basic French program did present somewhat more problems than other program elements for many principals, but that as a group principals felt these problems were not out of proportion to the benefits.

TABLE 19

DISADVANTAGES OF BASIC FRENCH AS PERCEIVED BY PRINCIPALS IN
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974 (IN PER CENTS)

	not applicable or not a disadvantage	somewhat of a disadvantage	a great disadvantage	N
Teacher Rotates	38.7	33.3	28.0	(93)
Classes Move	52.8	44.0	3.3	(91)
Students Seen	18.5	52.2	29.3	(92)
Area Attitude	42.2	44.4	13.3	(90)
Lack Time	14.1	46.7	39.1	(92)
Reg Disrupts Fr	82.6	17.4	0	(92)
Fr Disrupts Reg	66.3	31.5	2.2	(92)
Staff Hostility	85.8	13.2	1.1	(91)
Short Period	36.9	45.7	17.4	(92)
Low Lose	28.3	44.6	27.2	(92)
Principal's Time	85.0	14.0	1.1	(93)

Principals were presented a list of possible disadvantages of the basic French program and asked to "indicate the extent to which you see it as a disadvantage."² The per cents of principals responding to the categories are presented in Table 19. The greatest drawback was Lack of Time, which was seen as a great disadvantage by 39 per cent of respondents, and somewhat of a disadvantage by another 47 per cent. The number of students seen by the French teacher was a great disadvan-

2. The question originally had three response categories: "not a disadvantage," "somewhat of a disadvantage" and "a great disadvantage." After the pre-test the principals asked that a fourth category, "not applicable at this school," be added. Insofar as the items measure the "trouble" with French in the school organizational structure, this category seems to be equivalent to "not a disadvantage" and in the analyses it has been so treated.

tage to 29 per cent and somewhat of a disadvantage to 52 per cent. That low ability students "lost" time was a disadvantage to almost three-quarters of the respondents. A majority of respondents found Short Period at least somewhat of a disadvantage. Thus, the most disadvantageous items tended to be those related to the quality in, and "quality control" of French programs.

Although more than half (58 per cent) found negative attitudes in the area somewhat or a great disadvantage, very few indicated that Staff Hostility was a problem. About a third of the principals found that French Disrupts Regular was a problem, but very few felt the reverse was a disadvantage. Principal's Time was not considered a problem.

There was considerable agreement that the movement of classes and rotation of the French teacher were both disadvantageous, at least to some extent. These items, however, presented some difficulty in interpretation. Only 25.8 per cent of principals indicated that Teacher Rotates was not applicable at their schools, yet 41 per cent indicated that all French teachers had classrooms, and hence would not rotate. Similarly, only 16.5 per cent indicated that Classes Move did not apply, yet 37 per cent of schools have no classroom for French and so classes would not move. These items were removed from the remainder of the analysis,

This list did not, of course, exhaust the problems with the French program and principals volunteered several more. Four principals added discipline problems and two others mentioned the difficulty of finding experienced staff. Four other principals found the program

itself inadequate and/or not relevant to the rest of the program and the students. Two principals objected to French being compulsory, feeling that this created problems. (The same comment was made with respect to How Much French.) The number of classes the French teacher must teach, the lack of supply teachers in French, and the difficulty of the French teacher being part of the teaching teams that make up the staff organization were all mentioned as disadvantages.

Because the questions were concerned primarily with the French part of the school program, and because this was a "French study," it is difficult to place these answers in perspective. It would be unfair to infer from this recital of woes that French is more plagued by troubles than other subject areas. In the first place, the question itself stressed the negative aspects of the French programs. In that light it is worthy of note that of eleven items five were considered a great disadvantage by less than 5 per cent of the respondents, and only four were a great disadvantage to 20 per cent or more. None were a great disadvantage to more than 40 per cent of the respondents. It is true that some of these items are peculiar to French by virtue of its mode of being taught in the schools. However, other subjects might have their own problems, as unique to them as these were to French.

FRENCH IN SCHOOL ACTIVITIES

Several items on the principals' questionnaire were intended to look at the integration of French into the life of the school. Nearly two-thirds of the schools offered some French elements at school assemblies, and a similar proportion offered French presentations (or

TABLE 20
FRENCH AT ASSEMBLIES AND PARENT NIGHTS
IN CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

	<u>Assemblies</u>	<u>Parent Nights</u>
No French element	34.8%	37.3%
Some French at less than 25 per cent of such events	29.1%	9.6%
Some French at 25 to 50 per cent of such events	31.4%	38.6%
Some French at more than 50 per cent of such events	4.6%	14.4%
(Number of schools with such events)	(86)	(83)

presentations about French programs) at parents' nights (Table 20).

Of schools with some kind of special events or "days," 31 per cent had a French event. It should be noted, however, that "events" or "days" were commonly reserved for activities outside the strictly academic realm--for sports, family nights, or student council activities, for example. Somewhat fewer than one school in three had a French club although most (90 per cent) had clubs of some sort.

Most principals (80.4 per cent) reported that basic French teachers participated in discussions and decisions at staff meetings "about the same as other teachers." Fifteen per cent said the French teachers participated less and only one principal said "more than other teachers."

These responses were evidence that French can be integrated into the school milieu, and that this was more the case at some schools than others.

PRINCIPAL'S CRITERIA FOR GROUPING CHILDREN

The final aspect of school climate investigated was the principal's cognitive orientation. The principals were asked two questions about the criteria used, first, in making decisions about sorting children into groups for instruction and, second, in giving advice to individual students about taking special French programs.

In grouping students for instruction, the most important consideration was the special needs of groups of students (Table 21). Of principals responding, 56 per cent considered this very important and another 34 per cent rated it important. Individual needs were deemed much less important. The second most important consideration was the teacher rating of ability, which was considered "of no importance" by none of the principals. The teacher's ability to cope with certain types of students and her capacity to handle larger or smaller groups, the modules of work a student has completed, and the social maturity of the child were all about equal in importance as criteria for grouping students, all being considered important or very important by about 80 per cent of principals.

Of less importance, but still of concern to more than half the principals, were the idiosyncratic needs of the child, scores on achievement tests, years of school (all more than 60 per cent important or very important), and maintaining the pupil-teacher ratio (53 per cent). Keeping class size even was of importance to 42 per cent, keeping a child with his friends to 24 per cent. The least important criterion was IQ score, of importance to only 13 per cent. Items expected to indicate a cognitive, rather than social, orientation were not chosen frequently by the respondents.

TABLE 21
GROUPING CRITERIA RESPONSES (IN PER CENT OF PRINCIPALS RESPONDING),
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

	Very Important	Important	Somewhat Important	Little or no Importance	Mean	N
Years of school	11.0	50.5	33.0	5.5	2.67	(91)
Modules of Work	24.2	58.2	16.5	1.1	3.05	(91)
IQ Score	2.2	11.0	65.9	20.9	1.94	(91)
Achievement	9.9	52.7	33.0	4.4	2.68	(91)
Teacher Rating	36.7	48.9	14.4	0	3.22	(90)
Social Maturity	22.0	59.3	15.4	3.3	3.00	(91)
With Friends	3.3	20.9	51.6	24.2	2.03	(91)
Class Size	8.7	33.7	40.2	17.4	2.34	(92)
Ability/Types	42.9	38.5	14.3	4.4	3.20	(91)
Handle Sizes	31.1	47.8	18.9	2.2	3.08	(90)
Needs of Groups	56.5	33.7	8.7	1.1	3.46	(92)
Idiosyncratic	20.2	43.8	27.0	9.0	2.75	(89)
Maintain PTR	17.6	35.2	36.3	11.0	2.59	(91)

A factor analysis of the grouping criteria produced an acceptable three factor solution.³ However, the factors were not those that had been predicted. The predicted factors were an academic or cognitive factor, consisting of IQ and various objective measures of achievement; a social factor, incorporating subjective measures of ability and individual needs and friendship; and an administrative factor, in which class size, teacher abilities and group needs were balanced. Instead, the factors which emerged were split along organizational dimension of the school--students, teachers, or administrative considerations:

3. The factoring was performed using an SPSS varimax rotation and specifying a three factor solution. This followed an initial factoring with the number of factors unspecified. See Appendix E, Table E-3.

I. Administrative Factor

Years of school	+ .51
Class size	+ .79
Maintain PTR	+ .66
With Friends	+ .35
Achievement	- .35
IQ Score	- .23

II. Student Concerns Factor

Needs of Groups	+ .80
Modules of Work	+ .57
Social Maturity	+ .49
Idiosyncratic	+ .44
Teacher Rating	+ .29
Years of School	+ .28

III. Teacher Concerns Factor

Ability/Types	+ .95
Handle Sizes	+ .64
Social Maturity	+ .26

The Administrative Factor made sense as a concern with the mechanics of running a school, class size and pupil teacher ratio, and a lock-step approach to organizing classes.⁴ The Student Concern Factor stressed student variables, with the emphasis on those that categorize common needs. The two items which refer to differences among teachers defined the third factor. Although not the factors predicted, these factors seemed strong enough to be used as the basis of indices. School indicators were constructed for the three factors using the factor coefficient multiplied by the principal's z-score for the item, using only those items with a coefficient of + .1 or more. Since none of these factors seemed to represent the cognitive orientation hypothesized to affect learning, the

4. A member of the project staff, a former teacher, pointed out that "keeping a child with his friends" would result in lock-step promotion, but without the pejorative connotations.

importance ranking of IQ Score was retained as a measure of the principal's cognitive orientation.

It was possible to examine whether the grouping criteria orientation of the principal made a difference in what was actually done in the school. Principals were asked whether students were organized into different groups for French instruction than for other subjects.⁵ Principals were divided into three groups, those scoring high, average or low on each grouping criteria factor, and these ranks were cross-tabulated with whether or not students were regrouped for French. There is no difference in amount of regrouping with respect to Administrative or Teacher Concerns, but principals who were high on Students Concerns regrouped for French significantly more than did those who were lower in Student Concerns (chi-square, $P < .05$).

In addition to the grouping criteria listed for choice, principals added other criteria as important. Related to the special needs of some groups of students were criteria such as the ethnic background of students (in a school with many immigrants), sex of pupils, and rural/urban differences. The "interest of the student" and his "choice of option" were also mentioned. Related to teacher concerns were "attitude of staff toward subject," "teacher maturity" and "teacher expertise." All these reflected a concern with the fit between teaching style and learning style, mentioned specifically by one principal.

5. Such regrouping is reasonable since there is little correlation between language aptitude and general scholastic ability. See Carrol, 1962. Whether principals are aware of this independence is, of course, unknown.

GIVING ADVICE

The criteria the principal used in organizing classes seem to be of a different nature than those used to give advice to individual students. First, principals were far more unanimous in choosing criteria for giving advice. Second, these were related to the individual student's desires and ability, rather than to group or school needs. The child's desire for the program was the most important consideration for 55 per cent of principals and was chosen second by another 40 per cent. (Table 22.) The French ability of the child and his general scholastic ability were considerations of second most importance in encouraging or discouraging a child with respect to special French programs. Together these three reasons made up 90 per cent of all "most important" and 76 per cent of both "most" and "next most important" choices. There was similar unanimity on the least important reasons. Students Left, Child's Friends, and Space in French took up 78 per cent of "least" and "next least important" choices. The middling choices were Program Challenge, Parents' Desire and Would Need.

Factoring of the Advice items produced no cleanly defined factors, none with groups of high-loading (.5 or more) items loading on a single factor. The groupings that did occur lacked coherence and would be difficult to interpret (Appendix E, Table E-4). The low variability of the items made them doubtful as measures of the climates of schools, although this low variability may tell us something about schooling in general. The three middling choices were retained in the analysis. Program Challenges was considered to best represent a cognitive orientation.

TABLE 22

PRINCIPALS' CRITERIA FOR GIVING ADVICE ABOUT FRENCH PROGRAMS
(IN PER CENTS), CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

	Importance					mean	N
	most		middle		least		
French Ability	20.0	41.1	33.3	3.3	2.2	3.75	(90)
General Ability	15.2	57.6	23.9	2.2	1.1	3.84	(92)
Child's Desire	54.9	39.6	5.5	0	0	4.50	(91)
Parents' Desire	4.4	16.5	54.9	16.5	7.7	2.39	(91)
Child's Friends	0	3.4	19.1	46.1	31.5	1.94	(89)
Program Challenge	1.1	21.3	69.7	3.9	0	3.16	(89)
Would Need	2.2	12.2	58.9	18.9	7.9	2.82	(90)
Space in French	0	4.5	22.5	62.9	10.1	2.21	(89)
Students Left	0	2.3	12.5	40.9	44.3	1.73	(88)

The attempt to find underlying dimensions to the Disadvantages question through factoring was also not successful. The varimax solution is shown in Appendix E, Table E-5. It might be possible to interpret the first factor as tapping problems related to hostility to French, both inside and outside the school. The other two factors have only a single high loading item which makes their interpretation as factors difficult. These items were left as separate items measuring the Teaching Conditions aspect of school climate.

Principals' responses to questionnaire items indicate that they favour the amount of French now offered in the schools or a bit more, and that the time constraints for basic French are its greatest disadvantage. Whatever the problems with basic French, the principals seem to accept them as part of the job. The questions to principals

which were expected to produce factors either did not produce clearly defined factors or did not produce the expected factors. Instead of producing factors related to the type of changes expected in the students, the factor analysis of the grouping criteria produced factors related to the type of people in the schools--students, teachers and administrators. Generally, then, the principals seemed to be reporting a professional attitude of an administrator who sees French as a subject like any other.

INTERRELATIONSHIPS AMONG VARIABLES

A tendency toward consensus was predicted as a characteristic of opinions of staff within a school. Because of the continuous interaction over a year (the questionnaires were sent out late in the Spring) it was expected that shared attitudes would be emphasized and divergent views would tend to be repressed. Thus, the climate for French of a school should tend to have coherence, with staff views re-enforcing one another.

In this study various segments of staff were asked to respond to different types of questions. Class teachers were asked to express attitudes or opinions. Teachers of French were asked about the behaviour of other teachers, whether they used French and whether French material was displayed in the library and halls. Principals were asked an opinion question about the amount of French, about problems related to implementing the French programs, and about French in various school activities--assemblies, parent nights and staff meetings. It was expected that favourable attitudes to French would result in favourable behaviour.

They would speak French, would include French elements in activities and school displays, and would co-operate with the implementation of French teaching. On the other hand, unfavourable attitudes and behaviour would also be expected to be found together.

To indicate the extent to which there was such coherence in school climate for French, the extent of association among variables was examined, using correlations and cross-tabulations. This examination revealed very little consensus among school staff groups.

The correlation (Pearson's r) between the Benefits Factor and the Career Factor by schools was significant at $-.33$. However, there were no significant associations (either for chi-square or Kendall's tau) between the Benefits Factor and the principal's response to How Much French (expected to measure the same aspect), or to his responses on items measuring Teaching Conditions or Integration, except with Parent Nights where $\tau = +.22$ and is significant. This Factor was unrelated to the teachers of French responses to Hear French, Greetings and Staffroom.

The principals' responses to How Much French followed a similar pattern. They were not associated with any of the measures of teaching Conditions, and with indicators of Integration they were positively but weakly related only to Parent Nights ($\tau = +.14$, $p < .03$) and Hear French ($\tau = +.17$, $p < .03$). There was, however, a significant chi-square between IQ Score and How Much French. Ninety per cent of principals who considered IQ Score an important grouping criteria also wanted more than basic French, while only 78 per cent of principals who consider IQ Scores somewhat important, and 62 per cent of those who consider them of little importance did so.

Among relationships pertaining to Teaching Conditions measures, there were, again, very few significant associations. There was an association between principals' responses to Administrative Problems and Benefits/Time--only 58 per cent of principals who reported greater problems with French thought the time spent was worth it, while 77 per cent of principals who did not report greater problems thought so. An association is to be expected, but it is surprising that it is so low (chi-square not significant, $\tau = +.16, p < .01$). Teacher's Career Factor scores were not significantly associated with these variables. The only significant associations found between Conditions aspect variables and Integration was a significant tau of $+.18 (p < .01)$ between the Career Factor and Assemblies. At 44 per cent of schools where more than 25 per cent of assemblies had a French element, teachers expressed favourable attitudes to French on this factor. Where assemblies contained no French element, teachers at only 26 per cent of schools had favourable attitudes.

There were no significant associations between principals' reporting of integration of French through Participation, Assemblies or Parent Nights and Teachers of French reporting that French was spoken at the school. However, Hear French, Greetings and Staffroom were strongly associated among themselves with significant chi-squares and taus ranging from $+.31$ to $+.42 (p < .001)$. Whether these associations are due to the fact that certain teachers of French notice when French is spoken and others do not, that they have personalities that encourage others to speak, or to some other reason is not known.

A LACK OF CONSENSUS

This examination of relationships among the school climate variables has not turned up strong evidence for consensus. Indeed, what has been shown are merely a few weak relationships between indicators of Beneficial Aspects and Parent Nights, the Career Factor and Assemblies, IQ Scores and How Much French. Within aspects association between responses from different staff groups are few. The cohesiveness of school climate seems, therefore, to be weak.

There are three types of explanation for this finding: (1) the nature of the measures and the survey techniques, (2) the fact that the inquiry focused on French programs, and (3) the nature of the school as a consensus generating situation.

Whatever the results of an inquiry, it is appropriate (among other things) to question the measuring instruments and the research methodology. Since the majority of items on these questionnaires were used here for the first time, this question is particularly appropriate. Items were pre-tested, and their face validity seemed to be supported by the responses. Examination of the extensive comments on some questionnaires indicated that a few items were not getting at what was wanted, but most items seemed to be adequate. It may be the case, however, that some of the items do not measure what they were expected to measure. However, it should also be reiterated that the questions posed to different groups approached the problem of school climate from different directions. Thus, not only were three separate groups of school staff responding, but each group was responding to questions which were intentionally looking at different facets of the issue. Class teachers

were asked for opinions, teachers of French were asked to evaluate the amount of French present in the school but outside the French classroom or instruction time. Principals were asked about participation in school activities and about administrative problems related to the French program. Divergent questions from different groups can hardly be expected to exhibit cohesive points of view.

A second problem may be with the focus of the study on French. This area was chosen to test the idea that ambivalence over aims in education can depress the cognitive learning of students. The implementation of French faced a great deal of ambivalence, both because of its effects within the school and because of the strong feeling about it within the community. Within the school the attitudes of class teachers and French teachers toward the increasing emphasis on French could be expected to differ and these differences could well affect perceptions. Furthermore, French, especially the basic French program, may occupy a marginal niche in the school value system. As such, it may be very difficult for internal school pressures to override attitudes brought in from outside the school--whether from the community at large or, especially for the principal, the structure of the school system. Opinions and practices about French within the school may be more affected by divergent community views and roles than by intramural solidarity.

Finally, of course, the lack of consensus about French may be only one facet of a general looseness or lack of cohesion in the schools. Whatever the cause, it may be expected that the low level of agreement about French shown on the school climate items will work toward depressing the correlations with learning of students.

MEASUREMENT OF SCHOOL CLIMATE ASPECTS

The variables expected to measure climate for French were divided among four aspects: (1) those which pertained to the definition and evaluation of French as a beneficial subject to be offered in the elementary schools; (2) those pertaining to the teaching and working conditions as they are affected by French program implementation; (3) those pertaining to the integration of French into the day to day life of the school; and (4) the principals' cognitive orientation, which, if strong, was expected to insulate French from adverse evaluation due to negative attitudes in the school and community. Each of these aspects was measured by several items, and, except for the principal's cognitive orientation, these items came from questionnaires addressed to two staff groups. These items are listed on Table 23.

French as a beneficial subject. This aspect was measured by several items from the class teacher questionnaire which were combined into a single factor score (Benefits Factor) and a question to the principal on the amount of French he felt most children ought to learn (How Much French). These two variables were added together to form the composite Beneficial Aspect measure. The statistics for the composite variables are presented on Table 24.

Teaching and working conditions. This aspect is a composite of composites. It contains the Career Factor score from the teacher questionnaire and the mean of the principals' Disadvantage choices. The other items entering into the composite were administrative problems (with greater than other subjects equal to -1 and less than other subjects equal to +1), and Benefits/Time (also ranging from +1 to -1).

TABLE 23
COMPOSITE INDICATORS OF SCHOOL CLIMATE ASPECTS
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

Name	Source	Relation to French
Beneficial Aspect		
Benefits Factor	Class teachers	+
How Much French	Principals	+
Conditions Aspect		
Career Factor	Class teachers	-
Disadvantages (mean)	Principals	+
Administrative Problems	Principals	+
Benefits/Time	Principals	+
Integration P Aspect		
Participation	Principals	+
Assemblies	Principals	+
Parent Nights	Principals	+
Events	Principals	+
French Clubs	Principals	+
Integration FT Aspect		
Displays	French teachers	+
Hear French	French teachers	+
Greetings	French teachers	+
Staffroom	French teachers	+
Cognitive Orientation		
IQ Score	Principals	
Program Challenge	Principals	

TABLE 24
STATISTICS FOR COMPOSITE INDICATORS OF SCHOOL CLIMATE ASPECTS,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

	Mean	S.D.	Min	Max	Skew	Kurt
Beneficial	3.85	0.91	1.29	5.62	-0.61	+0.25
Conditions	2.50	1.28	-0.69	5.05	-0.51	-0.37
Integration						
Principal	0.67	2.62	-5.	6.	+0.05	-0.50
French teachers	9.21	3.13	4.	17.	+0.41	-0.02
Cognitive	4.83	1.06	2.	7.	-0.35	+0.15

The Disadvantages mean, Administrative Problems, and Benefits/Time were added together and Career Factor, which is negative when favourable to French, was subtracted.

Integration of French. This aspect was to be measured by items from both the principals and the French teachers. Because of the low response rate, and its probable bias, from the teachers of French, these two sets of variables were kept separate. Different techniques would have to be used to relate them to learning. Integration P consists of five variables from the principals questionnaire: Participation of French teacher in staff meetings; Assemblies, Parent Nights, Events and French Clubs. Integration FT comes from the teachers of French and consists of the three items indicating amount of French spoken at the school (Hear French, Greetings, and Staffroom) and Displays which indicates the number of types of French material shown in the school.

Cognitive orientation. Three questions posed to principals presented them with lists of decision criteria pertaining to problems related to French. It was expected that the responses to these lists would fall on three dimensions when factored. The expected dimensions would indicate the salience to the principal of academic (cognitive) criteria, social criteria, and administrative management criteria in meeting the decision situations. Factoring failed to produce any clearly defined factors for two of the three sets of responses. The factors produced from the third set of responses, the grouping criteria, were not the dimensions expected. Rather than abandon altogether the idea of testing for a cognitive influence, it was decided to use IQ Score from the set of Grouping criteria and Program Challenge from the set of Advice criteria as the composite indicator of the cognitive aspect. IQ Score, in the five factor solution had seemed to be a "factor" by itself, and Program Challenge had prima facie validity as a cognitive orientation.

Table 24 indicates that all of the five composite variables are distributed fairly normally without being excessively skewed. The measure of kurtosis, or peakedness, indicates that none of the curves is either flat or sharply peaked. Each ranges at least two standard deviations on either side of its mean. These five composite indices are the independent variables hypothesized to affect the learning of French comprehension skills and attitude change. Four of the five, Beneficial, Conditions, Integration P, and Cognitive were measured at the level of the school and related to the mean scores on the dependent variable of classes in those schools. The fifth, Integration FT, could usually be

determined for ~~the~~ specific classes which the French teacher taught, although in a few cases it, too, was a school level measurement applied to classes at the school.

Table 25, shows the correlations among the four school climate indices (Integration FT omitted). The correlation between Beneficial and Conditions reflects the level of association between the Benefits Factor and the Career Factor from the teachers. The addition of data from the principal to each does not seem to have changed this association. The negative correlation between Conditions and the principal's cognitive orientation is harder to understand.

TABLE 25

CORRELATIONS AMONG SCHOOL CLIMATE ASPECT INDICES,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1974

	Conditions	Integration P	Cognitive
Beneficial	+.32**	+.15	+.11
Conditions		+.07	-.24*
Integration P			-.02

* $P = .05$

** $P = .01$

SUMMARY

In this chapter, the responses of school staff to the questionnaire items measuring school climate were examined. The class teachers had responded to fourteen agree/disagree type questions and these responses were found to fall on two factors. Four items, Cultured Person, Needed Challenge, Good Discipline, and Understand Own, loaded highly on a single factor which seemed to measure a general attitude that French learning has benefits for students. The second factor included Financing, Ability to Speak, Job Threat, More Criticism, and Low Ability, all items which related to the teacher career and working conditions. The proportion of positive responses to both sets of items, the one favourable to French and the other critical of its effects, was interpreted to indicate ambivalent sentiments toward French, saying that "It's good in theory, but not in practice." Comments from the teachers of French who responded to the questionnaire, a low and probably non-representative proportion of the total, especially at the Carleton Board, indicated that they often faced a negative attitude from other staff members. Responses to the items measuring integration of French reported by these teachers indicated that while displays of books and posters in or about French were fairly common in their schools, the speaking of French was not usual. The responses from principals were generally supportive of French. Although there were disadvantages to French, the principals felt that the program was worth the trouble. They also indicated that French elements were not uncommon at assemblies and parent nights.

It had been expected that responses from all staff at a school would tend to be either generally favourable or unfavourable toward French. In fact, no such trend emerged. Items from various staff members at a school did not correlate with one another, and even items from the same questionnaires were, as a rule, only weakly and not consistently related. This lack of association was taken to indicate a lack of consensus about French which will tend to lessen the influence of the climate aspects on the students' learning of French.

Also discussed was the composition of the measures of the four aspects of school climate for French, the Beneficial aspect indicating the sentiment that French is a "good thing," the Conditions aspect which includes teachers' and principals' reporting of the effects of French programs on their working and administrative conditions, the Integration aspect indicating the amount of French students would be exposed to outside of French period, and the principals's cognitive orientation. In the next chapter, the relation between these aspects and learning will be discussed.

VI. SCHOOL CLIMATE AND LEARNING

It was argued earlier that the school has two functions which are not necessarily compatible: to promote cognitive learning on the part of students and to socialize them to the values and beliefs of the society. In the case of French, official policy at both Boards in the study set forth goals of cognitive French learning. In addition, there were aims of improving attitudes toward learning French and toward French Canadians.

An examination of the questionnaires returned from staff at the schools indicated that support of these aims was not uniform. Some staff at many schools seemed unfavourable to French or to the way it was implemented, and activities helpful to the French program were undertaken in varying degrees at different schools. Five composite indices of the four aspects of school climate hypothesized to be of influence in promoting or hindering French learning were constructed and these were found to be distributed approximately normally.

With respect to measures of learning, the mean scores on the listening comprehension tests rose from pre-test to post-test, indicating that this variable is strongly affected by schooling. Where the same instrument was given at several grade levels, each year of exposure to teaching resulted in better French comprehension scores. Furthermore, with the exception of the intermediate program in Ottawa, the devotion of more school time to French resulted in higher scores. This constitutes the evidence that French listening comprehension is learned at school.

Furthermore, in general, there were differences among classes at a grade level in the amount of French learned, so it makes sense to ask whether school climate indices affect this learning.

Results from the student opinion questionnaires indicated quite a different story. Although improvement of attitudes toward learning French and French-speaking Canadians was one of the aims of the basic French program, little change in attitudes occurred over the school year. The extent to which these attitudes change as a result of the program is, therefore, doubtful. However, classes do change over the school year, some improving and others declining. It is not unreasonable to ask whether these class changes are related to school variables, and if so, which ones.

This chapter examines two questions: whether the five school climate aspect indices are associated with learning French comprehension skills and whether they are associated with development of attitudes. The chapter begins by testing each of the hypotheses and then moves to an exploration of relationships between student learning and school variables.

TESTING THE HYPOTHESES

Ten correlational hypotheses were proposed linking aspects of school climate to student acquisition of French skills and attitudes. The initial analysis testing these hypotheses will be a Pearson product-moment correlation between the index of each aspect of school climate and the class mean score on the Spring test of the dependent variable. These correlations are expected to be positive and only

moderate in strength since there are many other influences on student learning of French, e.g., the language aptitude of the children, the skill of the teacher of French, and family attitudes toward French and learning generally. Furthermore, the lack of consistency among school climate variables will tend to reduce the level of association between climate aspects and the student scores. The strength of the correlations will be an indicator of the influence of the school climate on the final (for this study) level of the student acquisition of the dependent variable.

However the hypotheses demand that the climate indices be linked to changes in student skills or attitudes over the course of the school year. Learning was defined as change, in the desired direction, from pre-test to post-test on a measure indicating knowledge of the subject or attitude level. The relation between the school climate variables and learning or change will be examined by the use of partial correlations, indicating the relation between the climate indices and Spring score after the effects of Fall score have been removed. In this manner the variance in the post-test score which is due to initial student characteristics should be removed and the interaction between school climate for French and student change may be seen.

In the present study, it must be noted, there is a possibility that controlling for the pre-test measure will remove a large part of the variance due to school climate along with the Fall score (Gordon, 1967). The reasoning is that if school climate affects learning it will have affected previous learning, measured by Fall score, to the same extent

as it affects Spring score. This argument certainly bears close consideration. School achievement must be considered in the context of the students' school careers, in which knowledge and skills are built up by yearly layers, each year's work adding to the previous accretion of knowledge and skill. The process is such that those factors which affect learning during one year are likely to have influenced the learning in previous years as well. Thus, controlling for Fall score is also likely to be a control for such variables as language aptitude, general scholastic ability, family influences, and other relevant personality characteristics. It is because controlling for the pre-test score also tends to control for so many other influences which predate the school "treatment," that the pre-test/post-test design is so useful in examining the effects of school variables.

However, unless the treatment which is being examined occurs after the pre-test, it is extremely likely that the pre-test will contain, and so remove from the dependent variable, variance due to the treatment, thus reducing the treatment's apparent influence.

Certainly, it cannot be claimed that the influences that are subsumed under the rubric "school climate for French" were suddenly introduced into the schools after the giving of the French comprehension and attitude pre-tests in 1973. Attitudes in the Anglophone community toward Francophones and the French language predate Confederation, and were merely acerbated by the Federal bilingual policy and other events of the 1960s and 1970s.

It can be argued, however, that the school climate is generally less stable than many of the other variables, such as language aptitude

and family attitudes, that enter into Fall score. School climate can be changed by a change in principals, by teacher turnover, or by a child changing schools--all events which are more common over the Summer than during the school year. Furthermore, the issue of French in the schools was made salient in 1973-74 by the infusion of money for experimental French programs, by the programs themselves and by the extensive testing done by The FRENCH Project in the Fall of 1973. At this same time the immersion program entered its third year and the number of entrants increased. In Ottawa the 40-minute basic French program directly affected all teachers of grades one and two. These events might make teachers and principals more aware of the French issue and so create a stronger or different "climate" from previous years.

The extent to which controlling for Fall score will also partial out much of the influence of school climate may be examined by comparing the partial correlations, with ~~Fall score~~ controlled, with the zero-order correlations between the climate indices and Spring score. If there is little difference, it will be an indication that the school climate for French in 1973-74 had effects independent of those in previous years. The differences between the zero-order and the partial correlations will be discussed in this light.

Tables 26 to 28 and 30 to 36 show the zero-order correlations, the partial correlations, the proportion of the variance in Spring score explained by Fall score and the climate index. These latter figures were generated by a two step regression analysis in which Fall score was entered on the first step and the school climate index second. The correlations and regressions were performed separately for each

grade level, thus removing grade level effects. For grades one and two, only Carleton classes were analysed because of the large effects of the Ottawa 40-minute program on scores at these grades. Ideally, separate analyses should have been performed on the Ottawa grades one and two, but the large number of combined grade classes left samples too small to be meaningful. Note that grade one classes were not given an attitude measure in the Fall and so will not be analysed with respect to attitude change.

The relation between Integration FT (French Teacher) and the dependent variables will not be tested by product-moment correlations due to the small number of cases at each grade for which data from the French teachers were available. Because of the low response rate from teachers of French, the representativeness of these data is doubtful and any associations found must be salted even more heavily than data from more representative samples. The breakdown technique was used to examine Integration FT.

For the breakdown analysis (and for the discriminant analysis to be discussed later) classes were ranked on both pre-test and post-test measures as being high, average or low in relation to other classes of the same grade level at the same Board. Thus all Ottawa grade four/five classes were ordered on the Spring comprehension measure and the top third were coded high, the middle third average, and the bottom third low. Separate rankings were made for the Carleton grade four/five, Ottawa grade five, etc.

In the breakdown analysis the mean for Integration FT is given for the subgroups of classes created by these ranks, e.g., all classes

which are high on the measure on both Spring and Fall, or low in the Fall and high in the Spring. Table 29 shows this breakdown.

SCHOOL CLIMATE AND COMPREHENSION SKILLS

Four hypotheses were proposed pertaining to the influence of school climate for French on comprehension:

- 1) Staff opinions about French as a beneficial subject will be positively associated with student acquisition of French listening comprehension skills.
- 2) Staff attitudes related to teaching and career conditions related to French will be positively associated with student acquisition of French listening comprehension skills.
- 3) Perceived integration of French into school life will be positively associated with student acquisition of French listening comprehension skills.
- 4) A cognitive orientation on the part of the principal will be positively associated with student acquisition of French listening comprehension skills.

The results of the analyses testing these hypotheses are presented on Table 26 for the Beneficial aspect, on Table 27 for the Conditions aspect, on Tables 28 and 29 for the Integrations aspect and for cognitive orientation on Table 30. The zero-order correlations between the indices and Spring French listening comprehension scores ranged from moderate to close to zero, and were not often significant. Furthermore, the relationships were not consistently positive as predicted. However, the moderate correlations seemed to cluster at some grade levels for some variables.

The Beneficial aspect (Table 26) was moderately and negatively correlated with Spring score in grades one and two and grades five to eight, except in grade six where the correlation was moderate and

positive. The partial correlations controlling for Fall score showed that the negative relationship in the early years was not removed by Fall score, but seemed to increase. Zero-order correlations indicated no relationship with Spring score in grade three, but a significant relationship emerged when Fall score was partialled out. The regression analysis indicated that the climate aspect explains in excess of 5 per cent of the variance at these grades (although the 20 per cent of the variance in grade two is so high that it must be considered suspect). Thus, the first hypothesis has not been supported by the data. Although there may be some effects on learning in the early years, the Beneficial index influences learning in a negative direction. The generally negative influence of this aspect indicates that the more that teachers agreed with statements that learning French is a good thing, and the more French the principal said that children ought to learn, the less learning occurred. This surprising relationship will be discussed in some detail in the final chapter.

The influence of staff attitudes about teaching and working Conditions (Table 27) was moderately strong only in grades five and six, with a low correlation at grade four. These correlations were positive. Thus only in the junior grades did this aspect of school climate have any influence. When the effects measured by Fall score were removed, all effects due to the Conditions index disappeared except in grade five. Thus, the second hypothesis was not supported by the data.

Two Integration indices were constructed, one from principals' responses which measured primarily the extent to which activities planned for students and parents contained French elements, and the

TABLE 26

CORRELATIONS BETWEEN BENEFICIAL INDEX AND SPRING FRENCH
COMPREHENSION SCORE WITH AND WITHOUT FALL SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	BEN	
1	-.231	-.225	.009	.050	(26)
2	-.429 ^b	-.586 ^d	.370	.216	(20)
3	-.093	-.364 ^b	.442	.074	(33)
4	+.029	+.066	.507	.002	(36)
5	-.248	+.045	.706	.000	(30)
6	+.260 ^a	+.136	.535	.008	(42)
7	-.138	-.179	.581	.013	(62)
8	-.305 ^d	-.159	.745	.006	(71)

a. $P \leq .10$

b. $P \leq .05$

c. $P \leq .02$

d. $P \leq .01$

other from French teachers' responses measuring the extent to which school staff used French or displayed it. The principals' Integration P index (Table 28) indicated that in grades four, six, seven and eight there were consistent positive correlations which did not disappear when the influence of Fall score was controlled. The principal's Integration index accounted for from 2.5 to 3.5 per cent of the variance at these grades. However, the effects of partialling on this index were curious, since the removal of Fall score allowed a nearly significant negative influence to emerge at grade three and these negative influences of Integration P on Spring comprehension score accounted for over 2 per cent of the variance in grades two and three. Although this was the strongest support for any of the cognitive learning hypotheses, it was not very strong. However, the consistent positive effects were registered in the upper grades where assemblies might be expected to have the greatest effects. Indeed, in some schools children in grade three and below do not regularly attend assemblies. Thus, the third hypothesis may have been supported in grades six to eight by the principals' data, but it was not supported at other grades.

The breakdown for Integration FT (Table 29), presented a similarly unclear picture, due in part to the low return rates and the fact that classes which changed their ranking are a minority. Grades one and two did not support the hypothesis of positive association. At the grade three to five level, the classes low in the Fall which remained low and the classes high in the Fall which remained high rated low and high respectively on Integration FT. Grade six to eight classes which began low and became high or started high and remained

TABLE 27

CORRELATIONS BETWEEN CONDITIONS INDEX AND SPRING FRENCH COMPREHENSION SCORE
WITH AND WITHOUT FALL FRENCH SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	CON	
1	+.066	+.054	.009	.003	(26)
2	+.162	-.050	.370	.001	(20)
3	-.056	-.151	.441	.013	(32)
4	+.183	+.084	.500	.003	(35)
5	+.256	+.326 ^a	.720	.030	(31)
6	+.388 ^d	+.096	.549	.004	(45)
7	+.003	-.199	.594	.016	(59)
8	+.085	-.131	.768	.004	(66)

a. $P \leq .10$

d. $P \leq .01$

TABLE 28

CORRELATIONS BETWEEN INTEGRATION P INDEX AND SPRING FRENCH COMPREHENSION
SCORE WITH AND WITHOUT FALL FRENCH SCORE CONTROLLED
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	INT P	
1	+.037	+.007	.082	NA	(40)
2	-.191	-.204	.463	.022	(32)
3	+.013	-.264 ^a	.639	.025	(50)
4	+.384 ^d	+.274 ^b	.531	.035	(60)
5	+.054	+.043	.562	.001	(55)
6	+.389 ^d	+.212 ^b	.463	.024	(87)
7	+.220 ^b	+.261 ^c	.537	.031	(92)
8	+.188 ^a	+.257 ^c	.634	.024	(99)

a. $P \leq .10$

b. $P \leq .05$

c. $P \leq .02$

d. $P \leq .01$

high were above average, but so were classes which started high and average and became low. These data, too, did little to support the third hypothesis.

The last hypothesis pertaining to comprehension learning predicted that it could be influenced by the principals' orientation to cognitive learning. However, zero-order correlations between this index and learning indicated no reliable effects. Only in grades one and two were correlations greater than .2 and these were negative associations and not significant. Again, the hypothesis was not supported.

The correlations between the school climate indices and spring score on French listening comprehension have provided support only for the hypothesis predicting a positive influence of the Integration P aspect of school climate and learning, and this only for the upper grades. Correlations between the Beneficial aspect and Spring score tended to be negative, and moderate negative relationships in the early grades persisted, and indeed increased, when the effects of Fall score were controlled. Zero-order correlations between Conditions aspect and comprehension wobbled around zero, except in grades five and six, where they were positive. Moderate, negative and non-significant correlations were found in grades one and two between the Cognitive index and comprehension. At other grades they were close to zero. The generally low level of the correlations, together with the fact that the staff attitudes indicated by these indices were not related to French learning in a consistently positive manner, means that the cognitive learning (comprehension) hypotheses have not been supported.

TABLE 29

BREAKDOWN OF INTEGRATION FT BY RANKINGS OF SPRING AND FALL SCORES ON
FRENCH COMPREHENSION AND ATTITUDE MEASURES (BY GRADE LEVELS)
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Spr	Fall	Comprehension			Att LF		Att FC	
		Grade 1-2	Grade 3-5	Grade 6-8	Grade 6-8	Grade 6-8	Grade 6-8	Grade 6-8
High	High	9.2 (11)	11.4 (19)	11.0 (7)	8.9 (16)	8.7 (13)		
	Ave	6.0 (6)	7.3 (3)	7.0 (2)	10.5 (4)	7.7 (3)		
	Low	9.0 (2)	---	12.0 (1)	10.5 (2)	10.5 (2)		
	All	8.2 (19)	10.8 (22)	10.3 (11)	9.4 (22)	8.7 (18)		
Ave	High	12.0 (1)	6.7 (3)	9.4 (5)	10.0 (5)	9.8 (5)		
	Ave	7.9 (7)	8.0 (6)	9.6 (7)	11.2 (5)	10.2 (12)		
	Low	7.3 (7)	9.5 (2)	11.4 (5)	10.8 (6)	12.7 (3)		
	All	7.9 (15)	7.9 (11)	10.1 (17)	10.7 (16)	10.5 (20)		
Low	High	9.3 (3)	9.0 (1)	10.5 (2)	14.0 (1)	---	(0)	
	Ave	9.0 (1)	8.9 (8)	11.0 (4)	10.0 (4)	12.7 (3)		
	Low	9.1 (8)	7.9 (22)	9.1 (13)	10.2 (4)	11.2 (6)		
	All	9.2 (12)	8.2 (31)	9.7 (19)	10.5 (9)	11.7 (9)		
All		8.3 (46)	9.1 (64)	9.9 (46)	10.0 (47)	10.0 (47)		

TABLE 30

CORRELATIONS BETWEEN COGNITIVE INDEX AND SPRING FRENCH COMPREHENSION SCORE
WITH AND WITHOUT FALL FRENCH SCORE CONTROLLED
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	COG	
1	-.275	-.273	.013	.073	(26)
2	-.231	-.103	.398	.006	(21)
3	+.115	-.182	.483	.017	(33)
4	-.012	+.160	.499	.013	(39)
5	-.146	-.122	.509	.007	(43)
6	+.085	+.121	.524	.007	(75)
7	-.049	-.072	.541	.002	(84)
8	-.089	-.143	.739	.005	(93)

Three things about these results should be noted. First is the finding of clusters of association at some grade levels on each index. Significant correlations do not seem to be scattered randomly. Second, there are the negative associations found where positive ones were expected. This is especially true for the Beneficial index. Third, there is the low impact which controlling for Fall score has on the correlations. Except for the grade six and eight correlations for Beneficial index, the moderate correlations which are significant or nearly so remain moderate and significant or nearly so after partialling. For the Integration P index partialling tends to even out the effects among the affected grades. All three of these findings will be further considered after further analyses of the data are considered.

Another aspect of these data should be noted. Except in grade one and two classes, the mean fall score explains from 40 to 70 per cent of the variance in Spring score and its relationship to Spring score is always positive. The amount of residual variance to be explained is usually less than 50 per cent and is often as low as 30 per cent. It may also be noted that the Fall score seems to be less predictive in the early grades than in later grades, although this tendency is not entirely consistent. Perhaps the trend across grades might better be related to length of time in a school. In grade one all students have had only a half-day kindergarten over a year. Grade one is the first full time schooling. The variance explained increased through grade five and dips somewhat for grades six and seven, the grades when students enter intermediate school (most Carleton inter-

mediate schools begin in grade six, the rest with grade seven as Ottawa intermediate schools do). These grade level effects will be discussed in the final chapter.

SCHOOL CLIMATE AND ATTITUDES

Three hypotheses were proposed linking school climate variables to each of the two student attitude scales:

- 5). Staff opinions about French as a beneficial subject will be positively associated with the development of favourable student attitudes toward learning French.
- 6). Staff attitudes about teaching and career conditions related to French will be positively associated with the development of favourable student attitudes toward learning French.
- 7). Perceived integration of French into school life will be positively associated with the development of favourable student attitudes toward learning French.
- 8). Staff opinions about French as a beneficial subject will be positively associated with the development of favourable student attitudes toward French Canadians.
- 9). Staff attitudes about teaching and career conditions related to French will be positively associated with the development of favourable student attitudes toward French Canadians.
- 10). Perceived integration of French into school life will be positively associated with the development of favourable student attitudes toward French Canadians.

The variance in Spring attitudes explained by Fall score (Tables 31 to 36) was less than for comprehension. For Att LF it ranged between 13 and 65 per cent, and for Att FC from 3.5 to 70 per cent. Differences among grade levels were large but seemed to be due to random fluctuations since they exhibited no tendency to cluster. The response patterns to the attitudes seemed somewhat unstable over time. This lack of stability did not seem to be due to the influence

of school climate aspects. These indices were even less related to attitude change than they were to learning.

The Beneficial index was correlated with Att LF (Table 31) with some reliability only in grade seven. The Conditions index was moderately or weakly correlated with Att LF in grades four to eight, although these were significant only in grades six and seven (Table 32). Controlling for Fall score reduced these associations but they did not entirely disappear. The Integration P index was not correlated with Att LF (Table 33). Thus, there was support for only one of the Att LF hypotheses, that linking the Conditions aspect and Spring level of attitudes toward learning French.

Associations between climate and Att FC were weak to zero. Positive zero-order correlations of +.2 were found between the Beneficial index and Att FC in grades seven and eight (Table 34), but these disappeared when Fall score was controlled, indicating that they were probably not acquired only over the 1973-74 school year. Correlations between Att FC and the Conditions index were too low to be reliable (Table 35). Correlations between Att FC and Integration P, were negative and moderate or nearly so in grades one to four (Table 36). In the upper grades they hovered near zero. Again the data did not support the hypotheses predicting positive associations between Att FC change and the school climate aspect indicators.

The correlation analyses have indicated that the hypotheses predicting positive association between the indices of the school climate aspects and either comprehension or attitude change were generally not supported. Only in the upper grades and only between

TABLE 31

CORRELATIONS BETWEEN BENEFICIAL INDEX AND SPRING ATTITUDE TOWARD
LEARNING FRENCH SCORE WITH AND WITHOUT FALL ATT LF SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	BEN	
1	-.189	NA	NA	NA	(26)
2	+.100	+.243	.441	.033	(20)
3	+.171	+.142	.438	.011	(34)
4	-.017	-.032	.148	.001	(36)
5	+.075	+.047	.507	.001	(30)
6	+.144	+.113	.389	.008	(42)
7	+.317 ^d	+.240 ^a	.635	.021	(62)
8	+.101	+.004	.121	NA	(71)

a. $P \leq .10$

d. $P \leq .01$

TABLE 32
CORRELATIONS BETWEEN CONDITIONS INDEX AND SPRING ATTITUDE TOWARD
LEARNING FRENCH SCORE WITH AND WITHOUT FALL ATT LF SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	CON	
1	-.021	NA	NA	NA	(26)
2	+.015	+.128	.441	.009	(20)
3	-.151	-.137	.431	.011	(33)
4	+.141	+.101	.148	.009	(35)
5	+.219	+.177	.492	.016	(31)
6	+.314 ^b	+.260 ^a	.359	.043	(45)
7	+.349 ^c	+.169	.666	.009	(59)
8	+.223 ^a	+.139	.128	.017	(66)

a. $P \leq .10$

b. $P \leq .05$

c. $P \leq .02$

TABLE 33

CORRELATIONS BETWEEN INTEGRATION P INDEX AND SPRING ATTITUDE TOWARD
LEARNING FRENCH SCORE WITH AND WITHOUT FALL ATT LF SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	INT P	
1	+.033	NA	NA	NA	(40)
2	-.096	-.045	.364	.001	(31)
3	-.015	+.055	.411	.002	(51)
4	-.205	-.334 ^d	.264	.081	(60)
5	+.218	+.177	.478	.016	(55)
6	-.024	-.068	.459	.002	(87)
7	-.049	+.000	.559	NA	(92)
8	-.002	+.089	.233	.006	(99)

d. $P \leq .01$

TABLE 34

CORRELATIONS BETWEEN BENEFICIAL INDEX AND SPRING ATTITUDE TOWARD
FRENCH CANADIANS SCORE WITH AND WITHOUT FALL ATT FC SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	BEN	
1	-.240	NA	NA	NA	(26)
2	+.123	+.238	.230	.043	(20)
3	-.085	-.024	.709	.000	(34)
4	+.087	+.117	.265	.010	(36)
5	+.000	-.087	.035	.007	(30)
6	+.035	-.065	.391	.002	(42)
7	+.252 ^a	+.112	.348	.008	(62)
8	+.203 ^a	+.133	.082	.016	(71)

a. $P \leq .10$

b. $P \leq .05$

TABLE 35

CORRELATIONS BETWEEN CONDITIONS INDEX AND SPRING ATTITUDE TOWARD
FRENCH CANADIANS SCORE WITH AND WITHOUT FALL ATT FC SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	CON	
1	-.085	NA	NA	NA	(26)
2	-.097	+.001	.230	NA	(20)
3	-.168	-.171	.709	.008	(33)
4	+.117	+.214	.270	.033	(35)
5	+.121	+.110	.043	.011	(31)
6	+.168	+.158	.357	.016	(45)
7	+.140	+.103	.370	.007	(59)
8	-.151	-.193	.096	.033	(66)

TABLE 36

CORRELATIONS BETWEEN INTEGRATION P INDEX AND SPRING ATTITUDE TOWARD
FRENCH CANADIANS WITH AND WITHOUT FALL ATT FC SCORE CONTROLLED,
CARLETON AND OTTAWA PUBLIC SCHOOLS, 1973-74

Grade	Simple R	Partial	Proportion of Variance in Spring Score explained by		N (Classes)
			Fall	INT P	
1	-.222	NA	NA	NA	(40)
2	-.347 ^a	-.346 ^a	.202	.096	(31)
3	-.301 ^b	-.299 ^b	.628	.033	(51)
4	-.179	-.256 ^b	.280	.047	(60)
5	+.151	+.122	.141	.013	(55)
6	+.060	+.049	.413	.001	(87)
7	+.022	+.011	.326	.000	(92)
8	-.042	+.015	.138	.000	(99)

a. $P \leq .10$

b. $P \leq .05$

Integration P and Comprehension and between Conditions and Att LF were clusters of positive correlations found and the latter cluster disappeared when Fall score was partialled out. However, about one-third of the simple correlations between indices and Spring comprehension scores and between indices and Att LF were greater than .2 and about a sixth were over .3. Given the lack of consensus about French in the schools, the manner of relating school level data to classes (which may have been streamed within the school) and the fact that no curriculum or pedagogical information was included, such correlations may be considered to be moderate. For this reason it is hard to abandon the belief that school climate did influence learning without further exploration of the data. Since fairly strong opinions about French were expressed by staff, it seems reasonable that these attitudes would affect student learning in the subject. Furthermore, the negative correlations and the clustering of effects at some grade levels are unexpected results which should be explored.

FURTHER CONSIDERATIONS AND ANALYSIS

While the associations found were generally weak, the moderate ones tended to cluster at adjacent grade levels where the associations were in the same direction. For example, there were grade sequences of negative associations between Beneficial and Comprehension at grades one, two and three, and between Integration P and Att FC in grades one to four. Positive associations were found between Conditions and Comprehension in the junior grades, between Integration P and Comprehension in grades six, seven and eight (and possibly four should be included), and between Conditions and Att LF in grades five to eight. If these

moderate associations were merely chance fluctuations they would be expected to be more scattered. The clustering raises the possibility of effects that differ by grade level.

The finding of negative associations where positive ones were expected is of interest, also. It raises the question "What is really being measured by these indices?" The indices may combine variables which do not tap the expected dimensions or which do not tap the same dimension. The exploratory analysis made use of the original variables, not the aspect indices. Thus, effects of variables could be studied separately rather than in tandem with other variables.

GRADE LEVEL EFFECTS

Grade level effects were initially studied by looking at the correlations by grade between comprehension scores and five school climate variables obtained by factoring: the class teachers' Benefit Factor and Career Factor, and the three grouping criteria factors from the principals questionnaire. Five graphs show the correlation (r) for each grade between French comprehension and the mean teacher score on the Benefits Factor (Figure 5), and on the Career Factor (Figure 6), and between the principals' score on Administrative (Figure 7), Pupil (Figure 8), and Teacher (Figure 9) oriented grouping criteria. These figures indicate that the relationships between school variables and student learning are not consistent across grades. In Figure 5, for example, the correlations between the Benefits factor score and French comprehension scores change from generally negative in the early grades to generally positive in the intermediate grades. The correlations between comprehension and Career Factor (Figure 6) show no trend and this variable is probably not closely related to learning at any grade. Principals' Administrative orientation (Figure 7) seems to be related

to learning only in the middle grades. Pupil orientation (Figure 8) changes from a generally positive correlation over the elementary grade to zero or negative in the intermediate grades, while Teacher orientation is positive in the middle grades and negative in grades seven and eight (Figure 9).

Probably such changes over grade levels should be expected. Educators recognize the need for different approaches and teaching styles as students go through the grades and develop toward adulthood. Indeed, the idea of intermediate schools, present in both systems, is based on the perception of not only different needs by younger and older students, but also transitional stages. Intermediate schools provide intellectual stimulation from interaction with specialists in subject areas. Younger children, especially in grades one and two are believed to need the security and simplicity of a warmer relationship to a single teacher. (A theory that younger students need mothering rather than intellectual stimulation might be invoked to explain the negative r 's for cognitive orientation in grades one and two on Table 30.) The finding of grade level effects is an important one and will be discussed further in the final chapter.

One possible explanation for the grade level effects is that they were associated with the different tests given to three grade strata. For comprehension, OISE K was given in grades one and two, OISE 1 in grades three, four and five, and IEA II in grades six to eight. Different versions of the attitude measure was given in grades one to three, four and five, and six to eight. If clusters of association were delimited by test level it would indicate test effects, rather than grade effects.

FIGURE 5: CORRELATIONS BETWEEN CLASS TEACHER SCORES ON STATUS OF FRENCH FACTOR AND PUPILS' FRENCH COMPREHENSION SCORE BY GRADE, CARLETON PUBLIC SCHOOLS, 1973-4

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OF/DE

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FIGURE 6: CORRELATIONS BETWEEN CLASS TEACHER SCORES ON CAREER FACTOR AND PUPILS' FRENCH COMPREHENSION SCORES BY GRADE, CARLETON PUBLIC SCHOOLS, 1973-4

FIGURE 7: CORRELATIONS BETWEEN PRINCIPALS' CONCERN WITH ADMINISTRATIVE ORIENTED GROUPING
CRITERIA AND PUPILS' FRENCH COMPREHENSION BY GRADE, CARLETON PUBLIC SCHOOLS, 1973-4

FIGURE 8: CORRELATIONS BETWEEN PRINCIPALS' CONCERN WITH PUPIL ORIENTED GROUPING CRITERIA AND PUPILS' FRENCH COMPREHENSION SCORE BY GRADE, CARLETON PUBLIC SCHOOLS, 1973-4

FIGURE 9: CORRELATIONS BETWEEN PRINCIPALS' CONCERN WITH TEACHER ORIENTED GROUPING CRITERIA AND PUPILS' FRENCH COMPREHENSION SCORES BY GRADE, CARLETON PUBLIC SCHOOLS, 1973-4

However, the five graphs indicated no sharp changes by test, and the grade clusters based on simple correlations did not respect the test boundaries. Nevertheless, the test given was not independent of grade. In the data analysis to follow it will be convenient to divide the analyses by test given, using class rank in relation to other classes at the same grade and Board, as was done for the French teachers' Integration breakdown (see p.152). Doing so will increase the number of cases for each analysis, without eliminating the possibility of different effects in early, late and middle public school years.

NEGATIVE ASSOCIATIONS

The negative associations found for the indices call for examination of the effects of individual variables, separated from the indices. The associations, measured by Kendall's tau, between the rank of classes (high, average or low) for the comprehension gain score and the Spring scores on attitudes, were first examined. While associations were low, some patterns seemed to emerge.

In grades one and two (Table 37) the class teachers' score on the Benefits Factor, the principals' perceptions of Lack Time as a Disadvantage, and two measures of Integration, Hear French and Staffroom, were associated with learning at .2 or above. A third measure of Integration, Greetings, was associated at -.19. However, for each of these associations, the direction of association was problematical. If teachers in a school scored high on the Benefits Factor, that is, if they agreed with items like "French is a good intellectual discipline" or is "a needed challenge for topnotch students," the primary pupils

TABLE 37

ASSOCIATION (KENDALL'S TAU) BETWEEN SCHOOL CLIMATE VARIABLES AND
FRENCH LEARNING: OTTAWA AND CARLETON GRADES 1-2 FRENCH COMPREHENSION
AND ATTITUDES TOWARD LEARNING FRENCH AND FRENCH CANADIANS, 1973-74

VARIABLE	Gain		Spring Score		N
	Comprehension tau	N	Att LF tau	Att FC tau	
<u>A. BENEFICIAL</u>					
Benefits Factor	-.25***	(162)	+.01	+.11*	(166)
How Much French	+.01	(143)	-.08	-.05	(147)
<u>B. CONDITIONS</u>					
Career Factor	+.10*	(162)	+.02	+.04	(166)
Admin Problems	+.09	(146)	+.05	-.03	(150)
Benefits/Time	-.14**	(143)	+.10*	-.11*	(147)
Disadvantages					
Teacher Rotates	+.11*	(146)	-.03	+.05	(150)
Classes Move	+.03	(143)	-.13**	-.09	(147)
Students Seen	+.15**	(143)	-.17**	-.10*	(147)
Area Attitude	+.13*	(146)	-.02	+.02	(150)
Lack Time	+.21***	(143)	-.05	-.08	(147)
Reg Disrupts Fr	+.12*	(146)	+.07	+.07	(150)
Fr Disrupts Reg	+.11*	(146)	+.08	+.09*	(150)
Staff Hostility	+.17**	(146)	+.15**	+.14**	(150)
Short Period	+.05	(143)	-.07	-.04	(147)
Low Lose	+.11*	(143)	+.01	-.02	(147)
Principal's Time	+.04	(146)	-.18***	-.04	(150)
<u>C. INTEGRATION</u>					
Participates	+.01	(146)	-.03	-.00	(150)
Assemblies	-.12*	(142)	-.02	-.03	(146)
Parent Nights	-.07	(132)	-.24***	-.15**	(136)
Events	+.06	(137)	-.08	-.04	(141)
French Club	-.05	(142)	-.13*	-.04	(146)
Hear French	-.22***	(90)	-.12*	+.05	(93)
Greetings	-.19**	(76)	-.03	+.04	(79)
Staffroom	-.20**	(97)	-.06	+.01	(101)
<u>D. ORIENTATION</u>					
Admin Group Criteria	-.10*	(139)	+.04	-.09	(143)
Pupil Group Criteria	+.16**	(135)	-.11*	-.06	(139)
Teach Group Criteria	-.01	(137)	+.07	-.03	(141)
Parents' Desire	+.08	(138)	-.01	-.01	(141)
Program Challenge	-.07	(143)	-.16**	-.07	(147)
Would Need French	-.00	(138)	+.06	+.20***	(141)

* .5 ≥ P > .01

** .01 ≥ P > .001

*** .001 ≥ P

in the school seemed to learn less French. If the French teacher reported that students would more often hear French spoken or that she was more often greeted in French, the pupils seemed to learn less French. The expectation was for a positive association, that more learning would occur. However, this direction is consistent with earlier results.

Positive associations for the Disadvantage questions may be due to ambiguity in the question.¹ If the principal indicated that one of these items was a disadvantage, he was, in fact, indicating both that this item applied to his school and that he was concerned about its effects. Thus, the principal who responded that Lack Time was a disadvantage of the basic French program, said not only that at his school there was a lack of time to see children with difficulties, but also that he recognized the lack and was concerned about it. If the item is taken to indicate that the disadvantage occurs at those schools where the principal reported it and did not occur at schools where the principal did not report it, a negative association between the item and learning would be expected. If, however, the disadvantage occurs at all (or almost all) schools, and the response indicated that the principal was aware of and concerned about the situation as a problem for core French, then this concerned principal would be more likely to promote French learning, and a positive relation was to be expected.

1. Note that the disadvantages items as separate variables were coded with "a great disadvantage" high and a negative association was expected with learning. The coding was reversed in forming the Conditions aspect index, so that the index was expected to have a positive association with learning.

Data are available which throw some light on which of these interpretations is more likely. For most of the Disadvantages there is more or less independent evidence about whether or not the situation occurred at a school. Taking Lack Time as an example, for about half the schools the teacher of French responded² to three related questionnaire items. These data indicate that there was virtually no relation between the principal's perception of lack of remedial time as a disadvantage and whether or not remediation was available for basic French pupils, whether the teacher of French had time to help most, some or no students who need it, or the daily number of minutes the teacher of French spent in class instruction (and so was not free to help individuals). The inference may be made, therefore, that the principal's response to Lack Time was more a function of his definition of the need for such help and his concern about its lack affecting learning, than of the actual differences among schools in remedial time available.

Appendix E, Table E-7, shows these associations between Disadvantages and various in-school variables.

Similar inferences can be made about the disadvantages of Classes Move (which is not related to whether classrooms are available) and Area Attitude (unrelated to pupils' Fall attitudes). The association between Short Period and the programs offered at the school is not significant. However, the proportion of principals who believed that the short basic French period was a great disadvantage was largest among principals in

2. Because of the low response rate from teachers of French, this does not represent a random sample, but it nevertheless provides an indication of the actual situation in the school.

schools where a French immersion program was offered (35 per cent), and also larger among principals in schools with only 20-minute French periods (20 per cent) than in schools with 30- or 40-minute periods.

Significant associations indicate that the actual situation did influence responses to the remaining Disadvantages (excepting Low Lose, for which there was no related measure). These associations were so low, however, that the interpretation of these items as partly or largely measuring the principal's concern rather than actual between-school differences cannot be rejected. This interpretation is further supported by Principals Time which was more strongly associated with the more openly evaluative Benefits/Time responses, than with the more apparently factual Administrative Problems.

It may be that Hear French, Greetings, and Staffroom also represented differences in attitudes of teachers of French toward use of French by Anglophones, rather than real differences among schools in the amount of French being used, and the negative associations between these variables and learning in grades one and two represented student reactions to teacher attitudes rather than to the actual amount of French in the school. Since there are no independent measures of these variables, this possibility cannot be further explored here.

Associations between attitudes and school climate variables in grades one and two were, over-all, lower than for comprehension gain scores, and were lower for Att FC than for Att LF. The only association in excess of .2 was between Parent Nights and Att LF, -.24. This negative association (and the association of -.15 between Parent Nights and Att FC) might be explained if a preponderance of French-related parent

nights were devoted to discussions of immersion programs. An emphasis on immersion might be taken by parents or students as a disparagement of the basic French program.

In grades three to five (Table 38) the level of association between school variables and comprehension gain or attitudes is generally less than in either lower or higher grades. Only one association was greater than .2, that between Administrative Problems and Comprehension. This association of +.24 was in the expected direction, the lower level of problems the more learning. Another nine variables (out of 30) were related to learning with tau's of .10 to .16. Only three variables were related to each of the attitudes even to this extent. This low level of association with school climate variables or indices may be characteristic of students who have been together in a school for several years. However, it should be noted that controlling for Fall scores did not greatly reduce the correlations between comprehension and the aspect indices.

In grades six to eight (Table 39) two variables, both Disadvantages, were associated with learning and two with attitudes above .2. Students Seen and Area Attitudes have taus of -.24 and -.29 with Comprehension. The sign is what would be expected if these items are interpreted as reporting the actual situation in the school, rather than principal's concern. Administrative Problems and Low Lose have taus of +.27 and -.21 with Att. LF. The variables most strongly associated with learning and attitudes at these grade levels were all related to Conditions, whereas in grades one and two Integration variables were also important.

In Table 40 the associations are summarized across the grades.

TABLE 38

ASSOCIATION (KENDALL'S TAU) BETWEEN SCHOOL CLIMATE VARIABLES AND
FRENCH LEARNING: OTTAWA AND CARLETON GRADES 3-5 FRENCH COMPREHENSION
AND ATTITUDES TOWARD LEARNING FRENCH AND FRENCH CANADIANS, 1973-74

VARIABLE	Gain		Spring Score		N
	Comprehension		Att LF	Att FC	
	tau	N	tau	tau	
A. BENEFICIAL					
Benefits Factor	-.01	(247)	+.01	+.08*	(247)
How Much French	-.04	(226)	-.11**	-.00	(226)
B. CONDITIONS					
Career Factor	-.07	(247)	-.06	-.03	(247)
Admin Problems	+.24***	(238)	-.01	-.03	(238)
Benefits/Time	+.04	(230)	+.04	+.05	(230)
Disadvantages					
Teacher Rotates	-.11**	(235)	+.00	+.01	(235)
Classes Move	+.07	(234)	-.01	-.06	(234)
Students Seen	+.12**	(234)	-.09*	-.03	(234)
Area Attitude	-.04	(236)	-.03	-.05	(236)
Lack Time	+.11*	(234)	-.04	-.04	(234)
Reg Disrupts Fr	+.05	(238)	-.00	-.04	(238)
Fr Disrupts Reg	+.11**	(237)	+.05	-.01	(237)
Staff Hostility	-.04	(236)	+.03	-.09*	(236)
Short Period	+.06	(234)	-.08*	-.02	(234)
Low Lose	+.16***	(234)	+.05	+.01	(234)
Principal's Time	-.02	(238)	-.00	-.01	(238)
C. INTEGRATION					
Participates	+.15***	(236)	+.09*	+.12**	(236)
Assemblies	-.00	(217)	+.01	+.06	(217)
Parent Nights	-.01	(210)	-.16***	-.01	(210)
Events	+.06	(223)	-.11***	+.04	(223)
French Club	-.09*	(233)	+.01	+.10*	(233)
Hear French	-.06	(160)	-.02	+.03	(160)
Greetings	-.06	(139)	-.01	+.08	(139)
Staffroom	-.00	(166)	+.08	+.10*	(166)
D. ORIENTATION					
Admin Group Criteria	-.07	(228)	+.08*	+.01	(229)
Pupil Group Criteria	+.02	(223)	-.03	-.04	(224)
Teach Group Criteria	+.10*	(223)	-.08*	+.03	(224)
Parents' Desire	-.16***	(232)	-.03	+.00	(232)
Program Challenge	+.03	(226)	-.03	-.04	(226)
Wquld Need French	-.13**	(228)	-.05	-.07	(228)

* .05 ≥ P > .01

** .01 ≥ P > .001

*** .001 ≥ P

TABLE 39
ASSOCIATION (KENDALL'S TAU) BETWEEN SCHOOL CLIMATE VARIABLES AND
FRENCH LEARNING: OTTAWA AND CARLETON GRADES 6-8 FRENCH COMPREHENSION
AND ATTITUDES TOWARD LEARNING FRENCH AND FRENCH CANADIANS, 1973-74

VARIABLE	Gain		Spring Score		N
	Comprehension tau	N	Att LF tau	Att FC tau	
<u>A. BENEFICIAL</u>					
Benefits Factor	+0.07*	(280)	+0.01	+0.12**	(283)
How Much French	-0.05	(274)	+0.12***	+0.10**	(277)
<u>B. CONDITIONS</u>					
Career Factor	+0.09*	(280)	+0.00	+0.03	(283)
Admin Problems	-0.00	(273)	+0.27***	+0.07*	(276)
Benefits/Time	-0.09*	(278)	+0.07*	+0.04	(281)
Disadvantages					
Teacher Rotates	-0.14***	(272)	+0.02	-0.07*	(275)
Classes Move	-0.12**	(283)	-0.17***	-0.09*	(286)
Students Seen	-0.24***	(283)	+0.05	-0.05	(286)
Area Attitude	-0.29***	(282)	-0.11**	-0.07*	(285)
Lack Time	+0.08*	(283)	-0.13***	-0.14***	(286)
Reg Disrupts Fr	+0.06*	(283)	+0.05	-0.01	(286)
Fr Disrupts Reg	+0.14***	(282)	+0.10**	+0.02	(285)
Staff Hostility	-0.13***	(283)	-0.13***	-0.06	(286)
Short Period	-0.12**	(282)	+0.12**	-0.02	(286)
Low Lose	-0.04	(283)	-0.21***	-0.16***	(286)
Principal's Time	-0.14***	(283)	-0.11**	+0.04	(286)
<u>C. INTEGRATION</u>					
Participates	+0.02	(283)	+0.11**	+0.06*	(286)
Assemblies	+0.12**	(261)	+0.01	+0.00	(264)
Parent Nights	-0.04	(266)	-0.10**	-0.03	(269)
Events	-0.12**	(274)	-0.08*	-0.03	(277)
French Club	+0.01	(283)	-0.01	-0.06	(286)
Hear French	+0.04	(173)	+0.14**	-0.00	(177)
Greetings	+0.11*	(125)	+0.04	+0.05	(129)
Staff Room	+0.10*	(182)	+0.05	-0.01	(186)
<u>D. ORIENTATION</u>					
Admin Group Criteria	+0.04	(282)	+0.00	+0.05	(285)
Pupil Group Criteria	-0.03	(282)	+0.09*	+0.05	(285)
Teach Group Criteria	+0.03	(283)	-0.12**	-0.04	(286)
Parents' Desire	-0.10**	(283)	+0.10**	+0.11**	(286)
Program Challenge	-0.03	(278)	-0.05	+0.06	(281)
Would Need French	+0.01	(280)	-0.01	+0.02	(283)

* .05 $\geq$ P > .01
 ** .01 $\geq$ P > .001
 *** .001 $\geq$ P

TABLE 40

SIGNIFICANT ($P \leq .05$) ASSOCIATIONS BETWEEN SCHOOL CLIMATE VARIABLES
AND FRENCH LEARNING: OTTAWA AND CARLETON GRADES 1-8, 1973-74

VARIABLE	GRADES	French Comprehension			Att LF		Att FC	
		1 - 2	3 - 5	6 - 8	4 - 5	6 - 8	4 - 5	6 - 8
A. BENEFICIAL								
Benefits Factor		-.25	X	+.07	X	X ^b	+.08	+.12 ^a
How Much French		X	X	X	-.11 ^a	+.12 ^b	X	+.10 ^a
B. CONDITIONS								
Career Factor		+.10	X ^b	+.09	X	X ^b	X	X
Admin Problems		X	+.24 ^a	X	X	+.27 ^b	X	+.07
Benefits/Time		-.14 ^a	X	-.09	X	+.07	X	X
Disadvantages								
Teacher Rotates		+.11	-.11 ^a	-.14 ^b	X	X ^b	X	-.07
Classes Move		X	X	-.12 ^a	X	-.17 ^b	X	-.09
Students Seen		+.15 ^a	+.12	-.24 ^b	-.09	X	X	X
Area Attitude		+.13	X	-.29 ^b	X	-.11 ^a	X	-.07
Lack Time		+.21 ^a	+.11 ^a	+.08	X	-.13 ^b	X	-.14 ^b
Reg Disrupts Fr		+.12	X	+.06 ^b	X	X	X	X
Fr Disrupts Reg		+.11	+.11 ^a	+.14 ^b	X	+.10 ^a	X	X
Staff Hostility		+.17 ^a	X	-.13 ^b	X	-.13 ^b	-.09	X
Short Period		X	X	-.12 ^a	-.08	+.12 ^b	X	X
Low Lose		+.11	+.16 ^a	X ^b	X	-.21 ^b	X	-.16 ^b
Principal's Time		X	X	-.14 ^b	X	-.11 ^a	X	X
C. INTEGRATION								
Participates		X	+.15 ^b	X	+.09	+.11 ^a	+.12 ^a	+.06
Assemblies		-.12	X	+.12 ^a	X	X	X	X
Parent Nights		X	X	X	-.16 ^b	-.10 ^a	X	X
Events		X	X	-.12 ^a	-.11 ^b	-.08	X	X
French Club		X	-.09	X	X	X	+.10	X
Hear French		-.22 ^b	X	X	X	+.14 ^a	X	X
Greetings		-.19 ^a	X	+.11	X	X	X	X
Staff Room		-.20 ^a	X	+.10	X	X	+.10	X
D. ORIENTATION								
Admin Group Criteria		-.10	X	X	+.08	X	X	X
Pupil Group Criteria		+.16 ^a	X	X	X	+.09	X	X
Teach Group Criteria		X	+.10 ^b	X	-.08	-.12 ^a	X	X
Parents' Desire		X	-.16 ^b	-.10 ^a	X	+.10 ^a	X	+.11 ^a
Program Challenge		X	X	X	X	X	X	X
Would Need French		X	-.13 ^a	X	X	X	X	X

a. $.01 > P > .001$

b. $P \geq .001$

For all grades the associations between school climate variables and learning were much stronger than those with attitudes. Furthermore, the associations with Att LF were greater than those with Att FC, which one would expect since teaching of French is a school activity.

These data also support the impression gained earlier that school climate variables affect learning at different grade levels in different ways. In grades three to five the paucity of associations between these variables and comprehension relative to higher and lower grades is apparent. These low associations may be related to the shift in direction (from positive to negative or vice versa) which occurs from the primary to the intermediate grades. The middle years of public school seem to be a transitional period when associations are near zero. The shift in the direction of association seems to occur for Conditions and Integration variables. The nature of the shift is but dimly indicated by these data. However, it might be interpreted as a change from reacting to the emotional tone of the school (principal's concern and French teacher's attitudes have been discussed) in the early grades to responses more related to the external reality of school situations impinging on the student.

The principal's Orientation and Beneficial variables are little related to French comprehension or attitudes. Only in grades one and two does a Beneficial measure assume importance and then it is an association inverse to expectations.

SCHOOL CLIMATE VARIABLES AS DISCRIMINATORS

The low level of associations between school climate variables and either learning or attitudes raises the question of whether school climate for French as measured by these items has any substantial effects on French learning. The technique of discriminant analysis was used to provide evidence on this question. Using above average classes and below average classes as two groups, the discriminant analysis combines the information from the school climate variables into a single linear discriminant function (LDF), such that the two groups are distributed at either end of the dimension defined by the LDF (Nunnally, 1967; Tatsuoaka, 1970). The significance of the LDF will indicate whether the school climate variables can discriminate between these groups. The assumption is made that the school climate variables (or rather the school situation that they measure) pre-exist as a learning-environment for these classes. The inference is made that, if this combination of school variables discriminates between the above average and below average classes, then some sort of causal relationship exists between the school and the differences in learning which occur among classes. Furthermore, "the pattern of weights (of the standardized coefficients) indicates how much (or little) each factor contributes and in which direction," and so indicates the strength and direction of the influence of each school climate variable, "with the effects of the other variables 'partialled out'" (Tatsuoaka, 1970:3,4n).

In this analysis the classes designated high (above average) and low (below average) at each grade in each Board according to their Spring scores on the three measures, French Comprehension, Att LF and

Att FC, were used as distinct groups. Average classes were not included in the analysis.

The Fall measure of the dependent variable (comprehension or attitude) was used as a predictor (independent variable) along with the school climate variables, as a more accurate way of measuring the effect of school climate on learning than to use either Spring score alone or gain (Cronback and Furby, 1970). The correlational analysis indicated that it will not remove much of the influence of the measured school climate. The Fall score is expected to have the greatest weight on each discriminant function (that is, to be the best single predictor of the spring score), and the weight of the other variables is considered relative to its coefficient on the LDF. For this reason no discriminant analysis of the attitude measures in grades one to three was made since no Fall measure was available for grade one.

Not all school climate variables are included in the analysis. Items from the teachers of French are not included because the low response rate would cause excessive shrinkage in the sample size. In addition, no variable was included which does not have at least one significant ($P < .05$) chi-square in cross-tabulations with comprehension gain, Att LF or Att FC at one of the three grade strata. Eight variables were dropped for these reasons: Hear French, Greetings, Staffroom, Displays, French Disrupts Regular, French Club, Program Challenge, and Would Need French.

For grades three to five and six to eight analyses discriminating between high and low comprehension groups include the Fall Att LF as a possible discriminating variable.

The results of the discriminant analyses³ appear in Tables 41 to 43. For each variable in the analysis both the standardized coefficient on the LDF and a per-cent, indicating the importance of the coefficient relative to the predictive value of the Fall score, are shown. Eigen-values, canonical correlations, Wilk's lambda, and the per cent of classes correctly classified by the function are also shown.

All the LDFs for both learning and attitudes are significant beyond .000. All the LDFs with comprehension as the grouping criteria have small lambdas and enable classification of 90 per cent or more of the cases. The high/low comprehension groups account for over 70 per cent of the LDF variance for grades three to five (72 per cent) and grades six to eight (76 per cent), and 64 per cent of the variance in grades one and two.⁴ Thus, the LDFs do discriminate significantly between high and low performing groups on comprehension.

However, these statistics have not yet indicated whether this discriminating power is due to the school climate variables or whether it reflects merely the well-documented predictive power of the fall score. The relative power of each variable is indicated by its standard-

3. The discriminant analyses were performed using SPSS. A step-wise procedure, maximizing Rao's V and using default values for entry and removal, was selected. Rao's V is "a generalized distance measure. The variable selected is the one which contributes the largest increase in V when added to the previous variables" (Klecka in Nie et al., 1970:442).

4. "The canonical correlation. ...tells us how closely the functions and the 'group variable' are related, which is just another measure of the function's ability to discriminate among the groups. If we reverse the logic somewhat, we can interpret the canonical correlation squared as the proportion of variance in the discriminant function explained by the groups" (Klecka in Nie et al., Op. cit.:442).

TABLE 41
IMPORTANCE OF SCHOOL CLIMATE VARIABLES IN DISCRIMINATING
BETWEEN HIGH AND LOW GROUPS ON SPRING FRENCH SCORES,
OTTAWA AND CARLETON PUBLIC SCHOOLS, 1973-74

VARIABLE		Comprehension Grades 1-2	
		LDF*	PERCENT**
FALL SCORE		-.438	+100.
<u>A. BENEFICIAL</u>			
Benefits Factor	+	X	X
How Much French	+	-.161	+36.8
<u>B. CONDITIONS</u>			
Career Factor	-	X	X
Admin Problems	+	-.369	+84.1
Benefit/Time	+	X	X
Disadvantages			
Teacher Rotates	-	X	X
Classes Move	-	X	X
Students Seen	-	X	X
Area Attitude	-	X	X
Lack Time	-	-.385	+87.8
Fr Disrupts Reg	-	X	X
Staff Hostility	-	-.175	+39.9
Short Period	-	+.394	-89.8
Low Lose	-	X	X
Principal's Time	-	X	X
<u>C. INTEGRATION</u>			
Participates	+	+.213	-48.5
Assemblies	+	X	X
Parent Nights	+	X	X
Events	+	X	X
<u>D. ORIENTATION</u>			
Admin group criteria		-.192	+43.8
Pupil group criteria		X	X
Teach group criteria		+.202	-46.1
Parents' Desire		+.256	-58.5
Eigenvalue		1.793	
Canonical Corr		0.801	
Lambda		0.358	
Correctly Classified (%)		89.66	

- * LDF - standardized coefficient on linear discriminant function.
 ** PERCENT - each school climate coefficient as a percent of fall score
 on learning variable, giving relative importance of variable
 in discrimination of high and low Spring score groups.

TABLE 42
IMPORTANCE OF SCHOOL CLIMATE VARIABLES IN DISCRIMINATING
BETWEEN HIGH AND LOW GROUPS ON SPRING FRENCH SCORES,
OTTAWA AND CARLETON PUBLIC SCHOOLS, 1973-74

VARIABLE	Comprehension Grades 3 - 5		Att LF Grades 4 - 5		Act FC Grades 4 - 5	
	LDF*	PERCENT**	LDF*	PERCENT**	LDF*	PERCENT**
FALL SCORE	-.612	+100.	-.753	+100.	-.518	+100.
Fall Att LF +	+.130	-21.2	NA	-	NA	
<u>A. BENEFICIAL</u>						
Benefits Factor +	+.108	-17.6	X	X	-.148	+28.6
How Much French +	-.060	+9.9	+.357	-47.6	+.256	-49.4
<u>B. CONDITIONS</u>						
Career Factor -	X	X	X	X	X	X
Admin Problems +	X	X	-.413	+54.8	X	X
Benefit/Time +	X	X	X	X	X	X
<u>Disadvantages</u>						
Teacher Rotates -	X	X	-.269	+35.7	X	X
Classes Move -	X	X	X	X	X	X
Students Seen -	+.119	-19.4	X	X	+.257	-49.5
Area Attitude -	X	X	X	X	X	X
Lack Time -	X	X	X	X	X	X
Fr Disrupts Reg -	X	X	X	X	X	X
Staff Hostility -	+.141	-23.0	X	X	X	X
Short Period -	+.204	-33.3	+.261	-34.6	+.339	-65.3
Low Lose -	-.100	+16.4	X	X	X	X
Principal's Time-	X	X	X	X	X	X
<u>C. INTEGRATION</u>						
Participates +	+.068	-11.0	X	X	+.233	-44.9
Assemblies +	-.083	+13.9	X	X	-.240	+46.4
Parent Nights +	-.120	+19.6	X	X	X	X
Events +	-.108	+17.7	+.210	-27.9	+.497	-95.8
<u>D. ORIENTATION</u>						
Admin Group Criteria	X	X	-.185	+24.6	X	X
Pupil Group Criteria	X	X	X	X	X	X
Teach Group Criteria	X	X	X	X	X	X
Parents' Desire	X	X	X	X	X	X
Eigenvalue	2.590		1.166		1.090	
Canonical Corr	0.849		0.734		0.722	
Lambda	0.279		0.462		0.478	
Correctly Classified (%)	92.05		90.48		80.33	

* LDF - standardized coefficient on linear discriminant function.
 ** PERCENT - each school climate coefficient as a percent of fall score
 on learning variable, giving relative importance of variable
 in discrimination of high and low Spring score groups.

TABLE 43
IMPORTANCE OF SCHOOL CLIMATE VARIABLES IN DISCRIMINATING
BETWEEN HIGH AND LOW GROUPS ON SPRING FRENCH SCORES
OTTAWA AND CARLETON PUBLIC SCHOOLS, 1973-74

VARIABLE	Comprehension Grades 6 - 8		Att LF Grades 6 - 8		Att FC Grades 6 - 8	
	LDF*	PERCENT**	LDF*	PERCENT**	LDF*	PERCENT**
FALL SCORE	+1.003	+100.	-.904	+100.	+.968	+100.
Fall Att LF +	X	X	NA	-	NA	-
<u>A. BENEFICIAL</u>						
Benefits Factor +	-.315	-31.4	X	X	X	X
How Much French +	X	X	-.285	+31.6	X	X
<u>B. CONDITIONS</u>						
Career Factor -	X	X	-.130	+14.4	X	X
Admin Problems +	X	X	X	X	X	X
Benefit/Time +	X	X	X	X	X	X
<u>Disadvantages</u>						
Teacher Rotates -	X	X	X	X	X	X
Classes Move -	-.282	-28.1	X	X	X	X
Students Seen -	-.185	-18.5	X	X	X	X
Area Attitude -	X	X	X	X	X	X
Lack Time -	-.217	-21.6	X	X	-.290	-29.9
French Disrupts Reg- +	+.181	+18.0	X	X	X	X
Staff Hostility -	+.153	+15.3	X	X	X	X
Short Period -	X	X	X	X	X	X
Low Lose -	X	X	X	X	-.112	-11.5
Principal's Time -	X	X	+.248	-27.4	X	X
<u>C. INTEGRATION</u>						
Participates +	+.208	+20.7	X	X	X	X
Assemblies +	-.301	-30.0	X	X	X	X
Parent Nights +	+.213	+21.2	X	X	X	X
Events +	X	X	-.168	+18.6	X	X
<u>D. ORIENTATION</u>						
Admin Group Criteria	X	X	X	X	X	X
Pupil Group Criteria	+.238	+23.7	X	X	+.112	+11.5
Teach Group Criteria	X	X	X	X	X	X
Parents' Desire	X	X	X	X	X	X
Eigenvalue	3.117		1.209		1.023	
Canonical Cqrr	0.870		0.740		0.711	
Lambda	0.243		0.453		0.494	
Correctly Classified (%)	93.10		88.79		86.07	

* LDF - standardized coefficient on linear discriminant function.

** PERCENT - each school climate coefficient as a percent of Fall score on learning variable, giving relative importance of variable in discrimination of high and low Spring score groups.

ized coefficient in the LDF. On the three LDFs for comprehension, the Fall score is the largest single contributor, but in no case does it contribute more than one-third of the total coefficient weights (absolute values), and for grades one and two it contributes considerably less. Even combining the coefficients of Fall score and Att LF for the grade three to five function, the only one to which Att LF contributes, the school climate variables still contribute 60 per cent of the total coefficient weights. Caution should be taken in interpreting the larger relative importance of the school climate variables at grade one and two in any absolute sense. It probably indicates that the Fall score for these grades, which accumulates only one or two years previous learning, was less salient in forecasting differences among classes than in later grades when it incorporates more years of learning experience. This argument may be reversed, of course, to say that in later grades the Fall score assumed greater importance only because it incorporated the effects of previous exposure to school climate variables.

Thus, the school climate variables contribute significantly to the discrimination between classes scoring above or below average on French comprehension. Therefore, the inference may be made that the features of school climate measured by these variables had a substantial influence on the learning of French comprehension skills.

The case cannot be made so strongly for the LDFs relating school climate variables to attitudes, although they are not weak. The high/low attitude groups account for 50 to 55 per cent of the variance in LDFs at both junior and intermediate grade levels, and the LDFs allow correct classification of about 90 per cent of the

cases with respect to Att LF, and 80 to 86 per cent of the cases with respect to Att FC. Thus, the LDFs for attitudes do have considerable discriminating power. The extent to which the school climate variables contribute to this power varies with grade level. For grades four and five, school climate variables contribute 69 per cent of the total coefficient weights on the Att LF function and 79 per cent on the Att FC function. For grades six to eight the contribution is much less, 48 per cent on the Att LF function and about one-third on the Att FC function.

Despite their importance in discriminating between high and low classes, the relation of the school climate variables to learning and attitudes presents a very complex picture. Very different patterns were found at the three grade levels, both in terms of the variables found to discriminate and the direction of influence. Although the LDFs argue for the importance of climate in predicting learning, they do little to help clarify the nature of that influence.

Only two variables appear on all LDFs with comprehension. Staff Hostility was positively (that is, in the same direction as the Fall score) related to learning in both the early and late grades, and negatively related in grades three to five. As an indicator of the actual situation in the school a negative value would be expected, but as a measure of the principal's concern it would be expected to have a positive relationship. What actually appeared was a U-shaped relationship, which makes any explanation at this point ad hoc and unsatisfactory.

The second variable that appeared on these three LDFs is Participates, indicating the extent to which the teacher of French participates in staff meetings and decisions. This variable seemed

to exhibit a trend, with a strong negative influence in grades (one and two, fading somewhat in grades three to five, and becoming positive in grades six to eight. Participates may be a reflection of the principal's perceptions and attitudes as well as of reality. In intermediate schools students rotate to several teachers, so the position of the teacher of French is no different from other teachers. Thus, a lack of participation to the same extent as other teachers would probably be due to lack of interest on the part of the French teacher or overt hostility, both negative influences. Until grade six, however, the teacher of French is usually the only specialist on the staff (other than a librarian), the only itinerant teacher in the school, and occupies a more marginal position with respect to classes and the core curriculum. In his report on her participation, the principal of an elementary school may be indicating more about his definition of her unique role than about her actual participation. Again, this is an ad hoc explanation. However, such reasoning is not inappropriate to understanding the school structure and the difficulty of dealing adequately with school complexities.

Of all the Integration variables, only Participates contributed to discrimination in grades one and two. However, all the other indicators of school activities discriminated in grades three to five in the direction expected. In grades six to eight, Parent Nights discriminated as expected, but Assemblies appeared on the LDF in the "wrong" direction, and Events did not discriminate. A positive relationship between the Integration index and comprehension was found in the correlations for grades four and six to eight. However, the discriminating power of the variables was stronger and more consistently positive in the middle grades.

Principal's orientations contributed three discriminators to the grade one and two function. The direction for these variables had not been predicted, but the positive showing for the pupil-oriented criteria in the later grades and not in the earlier grades is not consistent with the idea that younger children are more in need of a child-centered atmosphere.

One or another of the two measures of the Beneficial aspect appears on the LDF at every grade stratum. How Much French exerts a positive influence in grades one and two and three to five, as expected, but none by grades six to eight. The Benefits Factor discriminates in grades three to five and six to eight, but its influence is negative. Indeed, whenever this factor has exerted influence, it has been negative rather than positive. This will be discussed in the next chapter.

Some conditions variables were important on every discriminating function. However, these were principals' variables; the Career Factor was never important. Administrative Problems had the expected positive influence in grades one and two. Various Disadvantages were important at different grade levels. The expectation would be that Lack Time and Short Period would have influence in the same direction, as they did in grades six to eight. In grades one and two they were both strong, but Short Period was in the expected negative direction while Lack Time was unexpectedly positive.

When the groups to be discriminated were selected on the basis of attitude scores, the discriminant functions not only account for less of the variance, but also contain fewer variables. Only for Att LF did the same variable occur on both LDFs, and in both cases, How Much

French and Events, the signs were opposite on each function (relative to the Fall scores on that function). The loadings of variables on these functions did little to shed light on their meanings.

This attempt to explicate the null findings about the hypotheses has not been very satisfying. The discriminant analyses do indicate that climate variables contribute strongly to the discrimination between high and low classes. That is, this analysis supported, in some measure, the contention that school climate for French influences French learning. However, they produced a very confused picture of what or how.

SCHOOL CLIMATE AND LEARNING: SUMMARY

Examination of the relationships between school climate and learning was carried out in two ways. The initial examination of correlations between the indices of school climate and the class mean scores on the Spring tests of the dependent variable indicated that the effects of school climate were spotty, with correlations of the expected strength appearing at only some grade sequences. At other grades learning appeared to be independent of school climate. Even these sequences, however, were not always in the positive direction expected. The Beneficial aspect, in particular, was negatively related to mean Spring scores. In general, these grade sequence effects did not disappear when Fall score was partialled out of the relationship.

The second way of testing for school climate effects was to see if climate variables discriminated between high and low scoring classes (omitting the average classes). The separate school climate variables added significantly to the discriminating power of the Fall score, but,

again, the directions of association were often problematical and varied by grade level. Scrutiny of the associations (Tau's) between these variables and learning also gave evidence of both grade level effects and the negative associations.

Three general findings seem to be that: 1) controlling for Fall score did not destroy the relationship between school climate and learning, indicating that the 1973-74 climate probably exerted independent effects from the previous accumulation; 2) some associations which logically would be expected to be positive (e.g., that between the Benefits Factor, teachers saying French is a good intellectual discipline, and cognitive learning) were, in fact, negative; and 3) climate aspects may affect learning at some grades and not others, or in different ways at some grades. These results will be considered more deeply in the next chapter.

VII. SUMMARY AND DISCUSSION

This study began with the notion that where a school curriculum includes areas which are contentious in the society at large, its effectiveness may be jeopardized by ambivalence towards it on the part of school staff. Most aspects of the school curriculum are fully supported by the society at large. It would be hard to find people who argue that reading, mathematics, language arts, music or geography should not be taught to children. The history taught in public schools tends also to be purged of controversy. Staff members may differ about pedagogy, but they can be expected to support the inclusion of all these subjects in the curriculum.

During 1973 in the Ontario part of the National Capital Region of Canada, the public school boards, with the support of the federal and provincial governments, instituted a series of new programs which focused on an issue of controversy. These programs were aimed at increasing the French language ability of all students and at making a fair number of them bilingual. Although such goals might seem innocuous in another place or time, in Canada in the 1970s they were part of a controversy about the place of the French language in the public life of the country. The right of French Canadians to use their language was enshrined in law, but in practice it had been the language of lower status. Quebec's Quiet Revolution had carried with it a new cultural awareness and a demand for functional equality of languages. In the late 1960s the federal government instituted programs to implement this equality. These programs probably had their strongest impact on public servants resident in the

Ottawa area. Suddenly, it seemed, the unilingual Anglophones were asked to learn and use French. Their Francophone colleagues (usually fluently bilingual) felt freer to use French and to expect that it would be understood. Courses were provided and a willingness to learn French was assumed to be a prerequisite for promotion and job opportunities. Many Anglophone public servants felt threatened and angry. A few were very vocal about the "unfairness." Francophones, and more than a few English, felt that it was merely the righting of long-standing wrongs.

The public schools of the Ottawa-Carleton region had had basic French programs, which provided twenty minutes per day of French to elementary students, for many years (the exact length of time depended on the jurisdiction). Three years before this study began the Ottawa Board had decided that the twenty-minute program was inadequate and had doubled the amount of time for French beginning with the cohort of students entering kindergarten in 1970. In that year also, both Ottawa and Carleton (on a smaller scale) had begun a French immersion program for students who wanted it. In 1973 about 20 per cent of Ottawa's entering cohort selected this option. The federal-provincial funding allowed these programs to be expanded and other experimental programs, immersion at the intermediate grades at both Boards and some extended French classes at Carleton, to be introduced.

Included in the funding of the experimental French programs was money to evaluate their cost and effectiveness. The FRENCH Project of the Ottawa Board of Education Research Centre began a massive project in 1973 whose main thrust was the evaluation of students in different French programs, both old and new. In 1973-74 the testing looked at

French listening comprehension skills and attitudes toward learning French and French Canadians, improvement of all three being stated aims of the programs.

Although the new programs were wanted by some parents (the immersion program had been demandé by parents), and supported by Board policy, there were other parents, some Board members, and some staff who felt that the new public school programs for French were, at best, a waste of time, and, at worst, a disruptive force in the schools and a threat to unilingual Anglophones and to the status quo. The immersion programs were particularly threatening to staff since they reduced the number of positions available for unilingual English speaking teachers. Administrators responsible for the implementation of French programs were concerned that this hostility would lessen the effectiveness of the French programs. The present study was an attempt to examine that issue.

The purpose of the study was to determine the extent to which there was a school climate hostile to the French programs and whether the climate that existed had any effect on the learning of French in the schools.

The concept of climate for French had three general dimensions to it: First, there was the extent to which school staff evaluated foreign--or in the Canadian context, second--language study as a "good thing." Did they see it as contributing to the child's educational development? Although these considerations might be important in relation to any subject taught in the school, the fact that speaking French in the Canadian context did not carry a connotation of "being cultured" as it

did, say, in Tsarist Russia, among the Boston Brahmins or in Great Britain, was expected to be important to the way teachers answered these questions. This was called the Beneficial aspect.

Second, there was the issue of the effect the emphasis on French was having on the teachers' careers and the teaching conditions in the school. This aspect covered a wide range of concerns from the French immersion programs, threatening the job security of Anglophone teachers to the loss of twenty minutes from core curriculum teaching time. If teachers and principals felt that French interfered with their normal activities, it was assumed that this would influence its reception in the school. Whether or not they believed abstractly that French study was a "good thing," they might still resent the change it might bring to their own lives. This was the Conditions aspect.

Third, there were activities which might or might not include French and their inclusion (or not) would help to indicate to the students the importance of French in the curriculum. Thus, questions were asked about assemblies, parents nights, French clubs, the speaking of French by teachers and whether the teacher of French participates in staff meetings. This was the Integration aspect. These aspects were, essentially, convenient ways of thinking about school climate.

These three sets of questions were expected to produce satisfactory measures of climate for French which could be related to student learning of French for the purposes of administrators. However, a theoretical orientation lay behind these questions. The school was seen as having two tasks in relation to students. One was that of teaching them facts and intellectual skills, the cognitive content

of education. The other was a socialization function, the teaching of social values and evaluations. In relation to French programs, the two tasks were to teach French skills (listening comprehension was the one measured here) and attitudes toward learning French and French Canadians. The curriculum guide lines indicated that both of these, skills and attitudes--favourable attitudes--were course goals.

In spite of these formal goals, there appeared to be a contradiction between the official policy and the cultural reality for a significant proportion of the school staff. Indeed, the policies of bilingualism at the federal level and of a new emphasis on French learning by the Boards were based on a belief that the cultural realities had to change. There was implicit in these policies a recognition of the old, negative, evaluation of French. Administrators responsible for French worried that the old values would be taught whatever the curriculum called for. The concept of socialization puts these worries into a sociological framework and hints at the complex and subtle nature of the process.

There was a possibility that some schools might be so strongly oriented toward cognitive learning that the French program achievement would be more or less insulated from negative social attitudes. For this reason, items expected to measure the principal's cognitive orientations were added to the questionnaires.

Three questionnaires were sent to three groups of school staff: class teachers, principals and teachers of French. The measurement of school climate for French was the raison d'etre for the class teacher's questionnaire. In the factor analysis, of the fourteen items expected

to measure attitudes to French, four loaded as expected on the Benefits Factor, five loaded as expected on the Career Factor, one item (Quebec Dialect) expected to load on the Benefits Factor actually loaded on the Career Factor, one item was eliminated because of low response rate, and the remaining three items either loaded on both factors or neither. For teachers these two dimensions seemed to exist as more than convenient ways of organizing the data and to be measured by these items. The responses to the Benefits Factor items were generally pro-French, while those to Career Factor items were generally anti-French. In the light of the copious comments provided by respondents on the returned questionnaires, these responses were interpreted to indicate a "Yes, but..." attitude on the part of the teachers. French is a good thing to learn, but not at the expense of other subjects, job security, or whatever.

Items from principals looked at all aspects of school climate. In relation to the global Beneficial aspect, they tended to support offering somewhat more French than was given at the time. Among questions pertaining to the teaching and working conditions, principals felt that there were somewhat more problems with French and these seemed to have to do with the lack of time for the teacher of French to see students both in class and to give help with difficulties. Principals, however, tended to feel that French was worth the effort.

The Integration of French into school life was to be measured by responses from both principals and teachers of French. The principals were asked whether French elements were included in assemblies, special "days," parent nights and school clubs, and whether French teachers participated to the same extent as other teachers in staff meetings.

Although some schools did not have these activities, it was usual for those that did have them to include French elements to varying extents. French teachers usually participated in staff meetings on a par with other teachers.

The low return rates from the teachers of French made their responses unreliable and any "findings" from them are at best suggestive. Only four school climate questions, all integrative aspect items, were asked of French teachers; three about French spoken around the school (few responded "frequently" and the bulk of the responses were more or less evenly divided among "sometimes," "seldom" and "never"), and one about French material on display around the school. Because of the low response rate, these items were treated separately from the integration items from principals. No firm relation to learning was found and because of the lack of reliability they will not be further discussed here.

Two questions were asked of principals which it was expected would factor into three dimensions measuring the principal's orientation to school tasks: 1) an academic or cognitive learning orientation; 2) a social (or moral) orientation; and 3) a school management orientation. Although one of the two questions (on the criteria for sorting children into classes) did produce well-defined factors, these were not the factors expected. The other question, on giving advice about special French programs, did not produce any well-defined factors and neither did a factoring of the teaching conditions question, Disadvantages of basic French. Perhaps the notion of a cognitive orientation should have been abandoned at this point. It was not, however, and an index

proportioning to measure principal's cognitive orientation was formed by adding two items, IQ Score from the grouping criteria question, and Program Challenge from the advice question. The analyses indicated that this index was neither reliably nor strongly related to learning.

Over-all, the principals indicated concern about the lack of time for French and for the teacher of French. They also indicated that French might have somewhat more problems than other areas of the curriculum, but that time spent on solving these was well spent.

Factoring of responses to the grouping question indicated an orientation to management of the personnel of the school, rather than to the content to be taught.

Indices for the Beneficial, Conditions and Integration aspects of the school climate were formed by adding item scores. The resulting indices were distributed approximately normally. Correlations with Spring scores, both zero-order and partial controlling for the effects of entry characteristics measured by Fall score, were performed between the indices and the dependent variables to test the hypotheses. A positive relationship was hypothesized between all four indices and student comprehension and between the Beneficial, Conditions, and Integrative indices and the two attitude measures. While the associations were generally quite weak, moderate positive associations were found between Integration P and Comprehension in grades six to eight, between Conditions and Att LF in grades five to eight, and between Conditions and comprehension in the junior grades. Only the first remained after the removal of Fall score influence, the second dropped, and the third disappeared. In addition to the predicted positive

correlations, there were negative associations between the Beneficial index and comprehension, and between Integration P and Att FC in the first three grades, which held up after Fall score was partialled out. Other non-zero associations between these indices and the dependent variables were either quite unreliable or were isolated at a single grade level. Small N's may be partly to blame but they are not the major reason.

CONSENSUS AND CONTINUITY

These null findings were disappointing, especially since the items measuring school climate had indicated that teachers held strong opinions about French and its implementation in the schools, and that schools varied in the extent of activities related to French. The questionnaire data seemed to indicate that there were differences among schools on these items which measured aspects which appeared to be a school climate for French. It was true that inter-relationships among items were much weaker than had been expected. This lack of correlation was interpreted in the context that the different aspects of school climate were approached in different ways on instruments from diverse staff groups. A lack of consensus about French on the aspect measured would result in an aspect score less extreme than where consensus, either for or against, existed. In the school such lack of consensus would also result in a more ambiguous climate for French, one in which different viewpoints would tend to moderate the effects of one another. These ambiguous climates would be less likely to affect learning, that is, less likely to have classes at extremes. Thus, although the lack of consensus might reduce the association between climate and learning to some extent, it was thought unlikely

that it would make it disappear, especially since such associations as were found among school climate variables were supportive of one another.

Two causes were suggested for failure of the climate items to coalesce. First, the questionnaires not only went to groups who held different positions in the school organization, but they also approached each group differently. For example, the class teachers were asked for opinions, while the principals were asked questions that were aimed more toward describing the school and its management. Thus, failure to find the expected consensus might reflect the fact that each questionnaire asked for different types of answers from its respondents.

On the other hand, the apparent lack of cohesion in the staff attitudes to French might reflect the reality of the situation, and be explained by the positions of different staff groups in relation to French both within and outside of school. The class teacher might feel that she has little stake in the success or failure of the French programs. Her role in the school would allow her considerable leeway in reacting to inconvenience, the French Teacher, and perceptions of job security, so long as these reactions were not openly disruptive. The role of the principal would demand a more professional stance since he was required to administer to both the regular and French parts of the curriculum. Although there were common issues within the school, these may not have been salient enough to require that reactions to them be based on shared value systems. Thus, staff members would respond to them on the basis of a particular point of view within the system and of attitudes brought into the school from roles in the community.

Probably, both the approaches of the measuring instruments and a real lack of consensus were responsible for the lack of inter-correlations.

Another methodological problem that might contribute to the low level of effects was related to the measurement of change. Since learning was defined as change between pre-test and post-test, it was necessary to remove the level of achievement and other entry characteristics measured by the pre-test from the post-test achievement in order to determine the influence of school climate on "learning." In the correlational analyses testing the hypotheses this was accomplished by using a partial correlation which controlled for the pre-test. It was noted that in so doing any effects of school climate contained in Fall score would also be removed. The methodological issue of removing the effects of entry characteristics was, therefore, also related to theoretical concerns about the nature of school climate. If school climate were a "treatment" limited by the school year, then its effects would not yet be present to remove with Fall score. If school climate were more or less stable over the school career of a child and its influence soaked up gradually over time, then much of its influence would be removed with Fall score.

When zero-order correlations are compared with the partials for the clusters of significant results, there is evidence for both independent effects and continuity depending on both the independent variable and the dependent variable being examined. The ten sets of correlations showed seven clusters, of which two disappeared when Fall score was partialled out (Conditions with Comprehension in the junior grades, cf. Table 27, and Beneficial with Att FC in grades seven and eight,

cf. Table 34), and one was reduced in strength (Conditions with Att LF in the upper grades, cf. Table 32). Of the four that were least affected by partialling, three were negative associations in the early years (Beneficial with Comprehension, cf. Table 26, Cognitive with Comprehension, cf. Table 30, and Integration P with Att FC, cf. Table 36).

Thus, although school climate has continuing effects which can be removed as "entry characteristics" and which served to weaken the apparent influence of school climate on learning, it also had independent effects. These are, as would be expected, strongest in children in the early years of exposure. These partials alone might indicate that school climate effects are cumulative, and partialled out in later grades. However, the zero-order correlations indicate few effects in the later grades.

As suggested earlier, the 1973-74 school year was one in which French became salient because of the experimental programs, research, and expansion of French immersion. School climate is composed of the reactions of staff to the circumstances of their position and these are subject to change over time.

GRADE LEVEL EFFECTS

School climate variables apparently have different effects depending on grade. The clustering of moderate correlations in grade sequences indicates grade level interaction effects. So, too, does the increase over the early grades of school in the amount of variance in Spring score explained by Fall score. The impression that grade level effects are important is supported by the changes in the correlations by grade for the five factors (two from teacher questionnaires

and the three grouping criteria from the principals) shown on Figures 5 to 9, and by the associations between the other variables and comprehension gain (cf. Tables 37-40). Insofar as different school climate variables affect different grade levels or have different effects at different grade levels, it would tend to decrease the number of significant correlations and might even lead to isolated effects like the positive association between Beneficial and Comprehension at grade six (cf. Table 26) or the shift between grade three and grade four from negative to positive r 's in the correlations between Integration, P and Comprehension (cf. Table 28). Such differences in association level or direction are more likely due to developmental processes of children than strictly grade level (although this proposition cannot be tested with these data). If so, differences in developmental phase among children at a grade level would dilute the measurable impact of the variable.

Children from age six to fourteen are maturing rapidly. Developmental changes during these years are important in many psychological theories. For example, the theories associated with Piaget indicate that children normally pass through two cognitive changes during these years, from pre-operational into concrete operational, and out of concrete operational into formal operations (see Baldwin, 1968:191-193 for a summary with ages). Kohlberg's data show children in the United States moving from predominantly stage one, pre-conventional moral development to predominantly conventional; stage three and four moral development during these years (Kohlberg, 1968). Such cognitive and moral changes would strongly influence children's perception, definitions and understanding of the school situation.

At the time he enters school, the child depends on others for his definitions of himself as "good" or "bad." Such dependency might be expected to make the child more sensitive to the subtle communication, tone of voice and body language, perhaps even more than words, of these evaluations by teachers. In the later years, the conventional moral authority tends to be separated from the authority figure and to reside more in society in general. Thus, in the early grades the child would be responding more to the definitions of the teacher, but by the intermediate grades the child would be responding to more inclusive definitions in which views of home and school authority figures have merged into a social definition more independent of interaction with the immediate authority figure of the teacher.

Erikson, from a Freudian tradition, posits movement out of a locomotor-genital stage into latency at the beginning of the schooling period, and from latency into adolescence at the age of intermediate grades (Erikson, 1963: especially pages 258-274). Erikson argues that ideally, as the child moves through these three phases he should acquire, in the first, a sense of initiative or sense of agency, in the second, a feeling of the value of his own work, and in the third, a self-identity more independent of the role he is playing at the moment. The idea of identity would seem to be supportive of an independence from the immediate definitions of the teacher similar to that mentioned above. Thus, it might be expected that the child in the intermediate years would be more responsive to those aspects of school climate for French that provide experience of French than to the attitudes of teachers.

To some extent these tendencies were supported by the data. The only positive associations found in the correlation analyses were

those with Integration P, that is, activities present in the school, in grades six, seven and eight. However, only one of these, Parent Nights, was positive in discriminating the high classes in these grades and Assemblies was negative. All the principals' Integration variables discriminated positively in grades three to five.

Changes in response by grade levels (or by ages associated with grades) seem to be little considered in research. Most studies take only one or two grades at a time and so do not systematically consider changes in effects by grade. A notable exception was Rosenthal and Jacobson (1968) who found that teacher expectancy affected only grades one and two students significantly (and grade one more than grade two), and it was largely these differences which made the over-all school differences significant. In a review of literature, Rosenshine (1970) reported on a study by Harris et al. which indicated that teacher effects on class reading scores were significant in grade one but not in grade two. Rosenshine also reported that both the Harris studies and one by Soar showed test-retest (pre-test and post-test) correlations which increased with grade level. However, these grade level effects were not discussed as such. Boocock's (1972) foundation work in the sociology of learning does not even refer to grade or age effects in the index.

In the data presented in this study, there was a grade effect shown in the stability of comprehension scores over time. In grade one Fall scores were not reliably predictive and they were less predictive in grade two than in following years. There was a drop again in grades six and seven, each being grades when a large proportion of the sample

were in their first year of an intermediate school (cf. Tables 26 to 28, 30). It should be noted that this effect was less pronounced for the individual scores (cf. Table 3). For the subsample of students, the Fall-Spring correlations were high in grade two.

These grade level effects might be due to a firming up of school definitions of class ability levels as well as to maturational changes in the students. In grade one most classes are newly formed. The academic reports that students bring from kindergarten are inchoate and the grade one teacher has few guides to use in defining the class. The grade two teacher has the opinion of only the grade one teacher on which to base her definition of the class (assuming classes remain more or less intact through the grades, as is generally the case at these Boards). It would be easier for her to take a wait-and-see attitude or to discount the earlier evaluation than it would be for a subsequent teacher in the upper grades of a school who would have to doubt the valuations of more colleagues. If, as Berger (1963) says, the same child believes what it says in the school records, the entering grade one child does not have as much to believe as older children. Perhaps also, younger children may be allowed the luxury of forgetting more over the summer. (See p. 81 above.)

These arguments apply, of course, to general scholastic achievement rather than French. The same French teacher will be likely to teach the class for two or three years (or even through all the grades in a school), and it will be her own perceptions of class ability and behaviour that influence her subsequent teaching, and student perceptions of her than influence their subsequent learning. In this situation the

defining of expected class achievement should be especially strong.

It should also be noted that in this study the effects of all school climate indices were greater in the early years. This may simply be due to statistical artifacts in that there was no strong Fall score to remove variability. However, such a finding may also be related to the defining nature of the school. If the capabilities of the child are not so clearly defined, he has more room to move in response to the definitions of the subject that are presented to him. Once he knows how much he is expected to learn, the evaluation of the subject may be less important.

It should be noted that the data available here were longitudinal only over the one year. Grade level effects, either for achievement or response to climate, should be tested with cohorts moving through the grades. If the finding of grade-related differences is replicated and found to be reliable, it will be of importance to further research on the effects of school climate, teacher behaviour, and the like, since the grade level and school variable interaction will assume greater salience than it has generally been given.

SUBTLETY AND COMPLEXITY

The negative associations which were found where positive ones were expected are enigmas. However, the attempt to probe the mystery may add to the understanding of school climate as a socializing agent. One such set of negative relationships were the correlations between the Beneficial index and Comprehension in the primary grades (cf. Table 26). This negative r can only be understood as a clue to the subtle forces operating in the socialization process of the school. Another unexpectedly

negative finding--that more student learning occurs in the basic French program when the principal calls some facet of the program "a great disadvantage" rather than "not a disadvantage"--will also be discussed to illustrate the convoluted patterns in school socialization.

Two variables contributed to the Beneficial index, the Benefits Factor and How Much French. The tau between Benefits Factor and gain was significant in grades one and two and neither variable showed any other tau greater than .1. In discriminating between high and low groups, How Much French was a positive discriminator in grades one and two (Table 41) and to a lesser extent in grades three to five (Table 42). Benefits factor discriminated negatively in grades above three (Tables 42 and 43). Thus, the two variables composing the Beneficial index seemed to affect learning in opposite ways, with the Benefits Factor consistently negative. Although grade level effects vary depending on the method used to relate the variable to learning, the consistency of the minus sign and the moderate strength of the several associations indicate that where teachers indicated stronger pro-French attitudes, learning was less. Why?

Anglophone teachers in the Ontario public schools of the National Capital region in 1973-74 were caught in a dilemma. One horn of the dilemma was that as instruments of socialization, teachers are instruments of the status quo, and, as Jenks (1972) pointed out in relation to social class, the schools are fairly efficient supporters of the existing social order. In Canada, this existing order gave English de facto rights as the language of the dominant majority. The other horn of the dilemma was the set of values favouring French in the schools. These were such patriotic values as national unity,

social good such as human rights, and the traditional values placed on obedience to authority, to law and to school board policy. Yet policies for increased French learning inescapably also called for the schools to initiate change by producing from the present generation of students a wave of bilingual adults, ready, able and willing to grant functional equality to French and French Canadians. That the policies called (or appeared to call) for changes in the social order and in the symbols of that order (O Canada instead of God Save the Queen) was difficult enough. In addition, these changes would make the largely unilingual English school staff obsolescent in twelve years or so. Some teachers verbalized this problem: as one teacher said in her comments on the questionnaire, "Creating a lot of bilingual people only serves to further isolate the unilingual person." Even within the schools, as French "engulfed the building in its grasp," the change was affecting the teachers' life style.

Two other features of the context of the times should be noted. First, the Quiet Revolution in Quebec and the call for Francophone rights followed and overlapped the civil rights movement in the United States. English Canadians had had an opportunity to view in another context civil rights marchers sprayed by fire hoses and racially-inspired assassinations. They were exposed to the pejorative connotation of words like redneck and bigot.

The second factor in the temporal context was the push for upgrading teachers' educational qualifications that had begun in Ontario in the 60's. Almost 85 per cent of the teacher respondents had had at least one year of university education, usually in Arts (only five per

cent of teachers with Bachelor degrees had Science degrees). It is reasonable to believe that many of these teachers had been exposed to F-scale type personality measurements in social psychology courses, and to the negative connotation surrounding concepts like authoritarianism and ethnocentrism. The teachers tended to respond positively to the pro-French items forming the Benefits Factor, and positively as well to the anti-French Career Factor items. It was suggested that this pattern represented a "French is a good thing, but..." response. This explication may be carried further in the light of the negative associations between the Benefits Factor scores and learning. This factor should be interpreted in the context of the values dilemma which a teacher would face if she opposed the French programs (thereby opposing Board policy and national unity) and ran the risk of being labeled a bigot. It may be that these F-scale type items have brought forth stereotypical responses from those respondents who are least open in dealing with the cultural dilemma facing them. While such an explanation may seem somewhat tortuous, other explanations are hard to come by. The social scientist should, in any case, remain open to the reflexive nature of his craft, especially when the respondents have received training in the use of manipulative skills.

To a certain extent the explication of the positive associations between items which are more of a disadvantage and learning also depends on the mediating personality variable of openness. As noted earlier, when a principal reports that a feature is a disadvantage of the French program, he indicates both that it is a feature which exists at his school and that he is concerned about it. He must be open to the

existence of the problem (e.g., that only one principal indicated that staff hostility was a great disadvantage seems, in the light of questionnaire returns for teachers, to be somewhat low), and he must feel that it has adverse effects. When the responses to these Disadvantages items were related to the situation at the school (e.g., whether Short Period was related to the length of basic French period) relationships were low (cf. pp.182-183). Therefore, the inference was made that often the "great disadvantage" responses indicated concern about French on the part of the principals over a situation which was widespread. This concern is generally an asset to the French programs.

It must be noted, however, that responses to these items are sometimes linked to learning in the expected direction and the relationships do not seem to be simple ones. There is, apparently, interaction between the actual presence of the feature, the principal's awareness of that presence, his evaluation of the importance of such a feature to French learning, and the level of his concern about the implementation of the French program. He may also be concerned about the feature's effect on the management of the school and teacher (either French or class) morale. Whether he feels a positive response will put him in a good light or not may also affect his response. In addition, the feature, the actual situation, may directly affect students and their learning.

The school is a complex social system. When asking if some parameter of schooling is effective in achieving a learning goal, the researcher tends to think of the school as a rational or goal-oriented system. It may be. At the same time, however, it is also a socializing agent which may be quite effective in spite of (or because of) the fact

that its goals are latent and its means unconsciously taken. In addition, the adults of the school, those who are staff and employees, have an interest in the system as a work organization. Some of their goals (both latent and manifest) are not changes in the children, but the things that make the school a pleasant place to work. Whether these organizational goals are consistent with educational goals is an empirical question.

School climate encompasses all these levels. Any school climate variable may have direct effects on cognitive learning and it will likely have indirect effects through layers of the system. There is no reason to expect that direct and indirect effects will be in the same direction or that direct effects will be stronger than indirect ones. These are empirical questions. It should be noted, however, that the idea of indirect effects used here is not a statistical concept. Unless the researcher includes the intervening variables in his equation, indirect effects are likely to turn up as direct ones.

SCHOOL CLIMATE EFFECTS AND SOCIALIZATION

The last puzzle to be discussed is the contradiction between the low level of effects in the correlation of the indices with the dependent variables and the significant contribution of the separate school climate variables on the discriminant analyses. These analyses, particularly those with comprehension as the dependent variable, indicate that the school climate variables may be used as parameters in distinguishing between low-achieving and high-achieving classes.

Some reasons for the success of the discriminant analyses have been hinted at in the previous discussion. First of all, the discriminant

analyses, by combining several grade levels and including combined grade classes, could operate on a much larger sample than the grade by grade regressions. Smaller effects were more likely to reach significance.

Second, because the separate variables did not operate in a simple way to affect learning, the adding together of variables to produce indices appears to have been extremely naive. The Beneficial index, for instance, combined How Much French, which appears to have had the expected positive effects, with Benefits Factor, which has fairly consistently negative effects. There is small wonder, then, that the resulting index did not show strong correlations with learning. The Conditions index combined a larger group of items, but these, too, were mixed in their effects. Some operated across grades in ways contrary to expectations, others had different effects at different grade levels. Addition into a single index was scarcely appropriate.

Indeed, discriminant analysis is probably the technique that is most useful in combining the climate variables into a predictive indicator of school climate for French. As such, however, it has two failings, one inherent and the other perhaps more related to the operational definitions or measurement of the variables used in this analysis.

The inherent failing, for this study, is that the discriminant analysis combines the variables a posteriori. The statistical technique takes the given variables and sees how well they can be organized into a function which discriminates between high and low classes. The resultant function, as Tatsuoka (1970) has noted, is difficult to interpret. If the alignment of the discriminating variables on the LDF had agreed

with some expected pattern, the problem would not exist. As it stands, however, it is rather a case of "by their fruits ye shall know them." Ideally, the LDF should describe some theoretically defensible combination of variables and its predictive power should be tested on a second sample of cases. This latter test was not possible in the second year of the French project for a number of reasons.

The functions which emerged from the discriminant analysis did not fit some expected theoretical pattern. Indeed, they included variables with signs opposite to prediction, variables which appeared at some grade levels and not at others, and variables which changed signs across grade levels. This confused picture was not expected. Some of the differences can be explained. The negative effects of the Benefits Factor and the positive effect of principal's concern about some disadvantages have been discussed. The change in the sign of Participates from negative--the less the French teacher is seen to participate in staff meetings the more learning--in elementary grades (cf. Tables 41, 42) to positive in intermediate grades (cf. Table 43) has been linked to differences in the French teacher's role. In elementary schools she is not a teacher like the others but moves from class to class. If the principal believes she participates "less" this may indicate that he expects her to be a full member of the team, an attitude favourable to French. At intermediate grades, where classes are on rotary for all teachers, the French teacher's role is similar to that of all teachers at this level.

However, while it is possible to explain many of the item relationships across grade level LDF's in this manner, it is more

difficult to define the theory underlying the combination of variables on the LDF.

Indeed, since the analytical process partials out interaction effects among variables, it may be too much to expect the function to present dimensionality (as a factor does). The LDF combines effects to indicate the most discriminating variables. In this way it accomplishes data reduction. However, school climate variables are apparently not strongly inter-related. The LDF, then, indicates which of these independent facets of the school contribute to discrimination.

Because of the lack of coherence among staff, the changing reactions of maturing children, the intricacy of the relation of staff attitudes and behaviour to student learning, and the complexity of the school as a many-layered, many-faceted system, it is entirely possible that there are no ultimate functions. There are many variables to school climate at various organizational and psychological levels of the system, of which the more important may each account for only one or two per cent of the variance. The climate for French variables used here are only a few of the things in the system impinging on French learning (curriculum and pedagogical variables are entirely missing for example). It is likely that for each grade level, differences in the personalities of staff and in social and intellectual characteristics of students will result in differences in the school climate variables which are salient and the direction of their influence. Thus, each replication would result in a different LDF. Probably over many replications some variables would appear on most LDFs for a grade level and others would be more idiosyncratic to particular schools, but some pattern would emerge.

THE NATURE OF SCHOOL CLIMATE

This particular study was based on the theory that socialization of negative cultural evaluations of French would result in less learning. While the LDFs indicate that climate affects learning, the devious nature of that relationship does not support the hypothesis in an unequivocal way. Perhaps the reason for this lies in the nature of school climate itself.

The setting for this study was a community in which some groups wanted more French and others felt that French was "being shoved down our throats." This ambivalent ambiance in the community provided alternate sets of values and beliefs, all of which were part of the culture.

The school staffs, whose responses to questionnaire items measured school climate, occupied different positions within the school and within the community. Because of this, each would be affected differently by the implementation of bilingual programs and the role of each would require or allow different stances in relation to the particular circumstances faced, whether these were teaching French in a classroom where one could not use the blackboard, teaching the remaining English grade two/three students in a school where 60 per cent of the enrolment were taking a French immersion program, or mediating between French and English teachers.

In defining the role of French in the school curriculum and organization, each teacher and principal had available the alternative value sets present in the community. Which ones would be chosen would depend not only on the community values and the circumstances of his position in the school and the community, but also on general personality traits like optimism and pessimism.

For instance, assume that it is true that an item measuring the principal's awareness of Staff Hostility and his concern about its effects is correlated with student learning of French. Do unawareness and unconcern represent cultural attitudes? Or are these psychological traits? Teacher openness was introduced as a concept to explain a negative correlation between saying "French is a good thing" and student learning. Openness is negatively related to ethnocentrism and Anglophone ethnocentrists would likely devalue French. However, this explanation depends on personality factors interacting with role definitions and with sets of alternatives for behaviour and evaluation of French available in the culture. Thus, school climate is a complex mixture of cultural choices, personal preferences and role-playing by the many participants. The school provides the setting.

The discriminant functions may describe a relationship between school climate variables and learning, but that relationship will contain all the elements of this complex mixture. The items measuring climate were unable to capture this subtlety. It may also be that the cultural dilemma and the role of the school as socializing agent are merely elements in a social situation, whose outcome is finally determined by the personalities of the participants.

The positive relationships hypothesized to exist were not found. Socialization is an intricate and subtle process and cognitive learning processes are also far from simple. The culture of a school, which is what is meant by school climate, is also hard to define and perhaps this research used inappropriate or naive items to measure it.

Despite this, some important findings emerge: 1) There is strong evidence for grade level effects in respect to both the strength and direction of interaction between school climate variables and learning. 2) The significance of the discriminant functions indicates that school climate for French did affect French learning. 3) The relationship between school climate responses and their effects on learning are subtle and the relationship is complicated by the organization of the system through which the effects must filter.

These findings are not insignificant. Grade level effects have not usually been considered in educational research, and yet they may have important implications for both research methodology and school policy. The subtlety of the socialization process is well-known. Nevertheless, reiteration of the complexity may be useful. Possibilities that research, and education itself, may introduce reflexive complications and that meaning is an important part of social variables are parts of that complexity.

IMPLICATIONS

This study has evaluated the achievement of certain stated goals of Ottawa and Carleton schools. These goals were the learning by students in grades one to eight of French listening comprehension skills and of positive attitudes toward learning French and French-speaking Canadians. The hypothesis was that when school staff did not support these goals, achievement would be less. To investigate this issue, data were gathered from four groups of people in the schools, students, class teachers, teachers of French (in so far as the response rate would allow), and principals. The results did indicate that where

schools presented more French activities to students in intermediate grades, these students did learn more French (although ~~not~~ better attitudes), but in general the data failed to support the hypothesis. The measures of staff attitudes were found either not related to French learning or negatively related. To understand the sociological implications of these findings, the relations of the four groups to each other and to goals will first be examined and then the relationships among the groups relative to the goals will be discussed.

Various sociologists have indicated that the schools are goal-oriented (for example, Parsons, 1960; Caplow, 1964; Etzioni, 1961). Parsons (1960) notes that the goals or output of an organization are input to some other subsystem of the society. There must be a set of consequences which flow from the operation of the organization and which make a difference to the functioning of some other subsystem. The subsystem (or its members) may be considered to be the client(s) of the organization. Parsons seems, therefore, to see goal achievement as a function of the organization. Goals, according to Etzioni (1964:7) "are always intended," although there may be differences "between" stated intentions and real ones." This study has looked at a case where there were stated goals which, although not "unreal," were incompatible with the implications of another function of the schools, the socialization of children to the values and definitions of the larger society. This function is not latent; the schools call it moral education or citizenship training and educators often speak as if it were as important a goal as cognitive learning. There are, however, latent implications of this cultural education, because the values of the dominant English culture in Canada have placed no virtue in the

learning of French. The federal emphasis on the equality of the two languages and the support for such equality by some Anglophones represents a change occurring within the dominant culture. This change began from an awareness that the more abstract values of the culture, for equality of opportunity had not been achieved for French Canadians. What was being asked of the English culture was that it recognize the hiatus between equality values and its attitudes to French and French-Canadians, and that it take affirmative action in favour of the equality values. The call was for more consistency among elements of the dominant culture.

Etzioni (1961), in discussing complex organizations (one example of which is the school), indicates that if the organization is to be stable there must be compatibility between the means of power exercised by elites, the form of involvement (compliance) of lower participants, and the nature of its goals. He finds three of each: power can be coercive, remunerative, or normative; compliance can be alienative, calculative, or moral; and goals may be described as related to order, economics, or culture. Etzioni also argues that where there are dual goals or dual power/compliance relations, the conflicting modes will tend to be separated and isolated from one another.

The schools, as relatively stable organizations, tend to exercise normative power, with the lower participants (students) involved morally (although Etzioni does note that coercive compliance is a secondary pattern less prevalent in modern schools than hithertofore-- however, see Herndon, 1971, especially pp. 86-88). In this study, both the goals under consideration were clearly cultural, being

related to the transmission of culture. The inconsistency is not, therefore, between the nature of the goals, but lies within the cultural value system and is being made manifest by social change. However, the school has behaved as if the conflict were of the type Etzioni mentions, and has isolated the teaching of French. The teaching of both the language skills and of attitudes favourable to the language and the people who speak it are the responsibility of the specialist French teacher. This assignment may be a recognition that the regular class teacher cannot or should not be asked to accomplish this pro-French task and also be expected to accomplish the socialization necessary for pattern maintenance. Burstall (1974) indicates that class teachers, in another social milieu, can be expected to teach French after being given special instruction in the language. However, in three and a half years of working on The FRENCH Project, the author of this thesis has never heard that method suggested for Ontario schools, despite the fact that Burstall's work is much admired by Ontario Ministry officials. In Great Britain the existing social hierarchy is not threatened by French and so its French teaching does not face the negative evaluation present in Canadian cultural milieu. One may suspect, therefore, that differences in cultural patterns require that the promulgation of pro-French attitudes be assigned to a specialist in Canada.

However, despite the negative evaluation present in the dominant culture, it cannot be said that the promulgation of anti-French attitudes was a manifest part of the class teacher's role. In looking at her role, Gouldner's (1957) concept of latent roles is useful to consider.

Gouldner argues that people bring into a group or organization identities relevant to their roles outside the organization. These latent identities should be irrelevant to the person in the performance of the role in this organization, but in fact they do make a difference (cf. Zetterberg, 1968). Although the manifest role of the class teacher in the schools is to teach values, these have never been well defined. Certainly, no formal specifications ever indicated that anti-French attitudes were a part of the curriculum, although some such material did "slip" into texts. This curriculum was inherently hidden and "unintended." It was left to the discretion of teachers and they probably taught whatever values were indicated by their latent roles. Before French became an issue, it is unlikely that such values entered into the recruitment process (see Becker and Geer, 1971:57), and their attitudes probably represented most of the range present in the culture.

With the coming of French as an issue, in the schools and in the culture, there emerged strictures against negative-to-French values being taught, whereas before the issue was left to "latent roles" or "latent identities." The present emphasis on French adds these strictures as a new element to the teacher's manifest role in favour of the French program goals. The latent roles have not been invalidated, but this aspect of them has been declared illegitimate rather than merely irrelevant. The position of the teacher may be compared to that of the older scientist faced with a new paradigm that is gaining acceptance (Kuhn, 1962). It is unlikely that the latent roles, especially for teachers who have been in the system for some time, will change because of the change in manifest role. However, the teachers might be persuaded not to express sentiments negative toward French.

This point brings to the fore the problem of making teachers comply with the revised manifest role. Etzioni (1961) tends to include teachers as the "elite" and to consider students as lower participants. However, a case can be made that students are either clients who receive the output (learning) of the school (Parsons, 1960), or "throughput" who are imported into the system, acted upon, and then turned out as "products" of the system (Herriott and Hodgkins, 1973). In either case, children are only temporary members of the system. Teachers are the lowest permanent members and it is their compliance to the school strictures and formal roles that concerns us. Students are important because it is in their heads that the product of the school is, in some mysterious way, created. It is the teacher who is on the production line working these miracles. In so far as concerns us here, it is the teacher's compliance that is demanded.

Although students' involvement is probably, as Etzioni (1961) indicated, moral, teachers' involvement is equally or predominantly calculative. There is no doubt that teachers are concerned about students, and there is evidence that their values are oriented toward people (Rosenberg, 1957). Nevertheless, salaries are important to them. Indeed, economic measures have pushed teachers to take courses toward a university degree, and as has been noted, this exposure may have made teachers more sensitive to the connotations of being "authoritarian" or bigoted as reflected in answers to the Benefits Factor questions. In this case calculative involvement was used, at least indirectly, to obtain support for cultural goals.

However, Etzioni indicates that calculative involvement generally may not be adequate to achieve culture goals. Such an inter-

pretation may explain why the Conditions aspect failed to be related to learning. Since it was mostly concerned with the calculative rewards of the role of teacher, the attitudes surrounding it may not have had enough force to affect student learning.

In this setting, too, the moral involvement of the teacher may be activated more by personal interactions among staff and with the parents as clients than by abstract values. Her support of new elements of the manifest role may depend on the congruence between these and her latent roles, on the strength of the latent roles, on the support for French by those parents whom she sees, on the personality of and interaction with the French teacher, and finally, on the strength of the principal as a leader and on his commitment to the change. With so many major vectors pulling for the teacher's commitment, the outcome may be indeterminant, since in most cases they will not all pull the same way. The very complexity of the social setting creates this indeterminacy by offering a variety of socially acceptable choices (that is, acceptable to some part of the social situation). The changing demands on the teacher in relation to French may mean, therefore, that she is "free" of social constraints simply because these constraints tend to cancel out one another. It is important to recognize, also that the student is directly affected by at least some of the countervailing forces and that this may mean that he or she, too, may be more free of the influence of the school climate for French that has been measured here.

This study has attempted to measure a number of variables about the attitudes of people working in a complex organizational environment and their effect on the goal achievement of the organization. School

staffs were asked to implement a program for teaching French in a community setting where views on its value were divided. The complexity of the organization and the inconsistency of goals provided the "elbow room" within which staff could maintain diverse opinions and different types of commitment for one or the other side of the issue. It may well be that differences among staff are without measureable effects on ultimate goals, when the organization is so complex and the overall climate is ambivalent.

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APPENDIX A: OPINION QUESTIONNAIRE
FOR STUDENTS

OPINION QUESTIONNAIRES FOR STUDENTS

There are three forms of the opinion questionnaire for students given. Form A was given to grades one through three, Form B was given to grades four and five, and Form C was given to grades six through eight. Forms were progressively more complex in response format, syntax and conceptual sophistication. In the administration of Forms A and B, the questions were read to the class of students by the testor from the Research Centre. Students recorded their answers on a specially designed answer sheet. For grades one to three the response format was a simple yes or no. The responses were made on a five point agree/disagree format in grade four and five, and a seven point agree/disagree format in the later grades.

All forms of the opinion questionnaires were expected to yield scores on four factors: attitudes toward French Canadians, attitudes toward learning French, instrumental motivation for learning French and integrative motivation for learning French. Forms A and B had items about English Canadians which were parallel to those for French Canadians and provide some indication of the relative validity of this type of test for these grades.

The items from each form are presented here in the order in which they appeared on the students questionnaire. The scale which each item was expected to measure is indicated by a code in parentheses following the item.

- EC - attitudes toward English Canadians
- FC - attitudes toward French Canadians
- LF - attitudes toward learning French
- INTEG - integrative motivation for learning French
- INSTR - instrumental motivation for learning French

OPINION QUESTIONNAIRE A (GRADES ONE TO THREE)

1. I am learning the French language because I will need to speak French some day. (INSTR)
2. People who speak French are very kind. (FC)
3. People who speak French are very smart. (FC)
4. I am learning to speak French so that I may make friends with people who speak French. (INTEG)
5. People who speak French are very friendly. (FC)
6. People who speak English are very nice. (EC)
7. I love learning French. (LF)
8. I really enjoy learning French. (LF)
9. I am learning to speak French because it will help me to get a good job. (INSTR)
10. People who speak French are very important. (FC)
11. People who speak English are very friendly. (EC)
12. People who speak English are very important. (EC)
13. People who speak French are very nice. (FC)
14. French is an important part of school. (LF)
15. People who speak English are very kind. (EC)
16. I am learning to speak French because it will help me to know more about people who speak French. (INTEG)
17. People who speak English are very smart. (EC)
18. I want to learn as much French as possible. (LF)
19. Learning French is really great. (LF)

OPINION QUESTIONNAIRE B (GRADES FOUR AND FIVE)

1. I am learning the French language because I will need to speak French some day. (INSTR)
2. French Canadians are very kind. (FC)
3. French Canadians are very smart. (FC)
4. I am learning to speak French so that I may have French Canadian friends. (INTEG)
5. French Canadians are very friendly. (FC)
6. English Canadians are very nice. (EC)
7. I love learning French. (LF)
8. I really enjoy learning French. (LF)
9. I am learning to speak French because it will help me to get a good job. (INSTR)
10. French Canadians are very important. (FC)
11. English Canadians are very friendly. (EC)
12. English Canadians are very important. (EC)
13. French Canadians are very nice. (FC)
14. French is an important part of school. (LF)
15. English Canadians are very kind. (EC)
16. I am learning to speak French because it will help me to know more about French Canadians. (INTEG)
17. English Canadians are very smart. (EC)
18. I want to learn as much French as possible. (LF)
19. Learning French is really great. (LF)

OPINION QUESTIONNAIRE C (GRADES SIX TO EIGHT)

1. French Canadians are a very warm-hearted and creative people. (FC)
2. If Canada should lose the French culture of Quebec, it would be a great loss. (FC)
3. I hate French. (LF)
4. The more I get to know French Canadians, the more I want to be fluent in their language. (FC)
5. Studying French can be important for me because it will allow me to be more at ease with fellow Canadians who speak French. (INTEG)
6. The French Canadian heritage is an important part of our Canadian identity. (FC)
7. I plan to learn as much French as possible. (LF)
8. Studying French can be important for me only because I'll need it for my future career. (INSTR)
9. French is an important part of the school program. (LF)
10. I love learning French. (LF)
11. French Canadians add an important element to the Canadian culture. (FC)
12. English Canadians should make a greater effort to learn the French language. (FC)
13. Studying French can be important for me because I will be able to participate more freely in the activities of other cultural groups. (INTEG)
14. Most French Canadians are so friendly and easy to get along with that Canada is fortunate to have them. (FC)
15. Some of our best citizens are of French Canadian origin. (FC)
16. I would like to know more French Canadians. (FC)
17. Studying French can be important for me because I think it will some day be useful in getting a good job. (INSTR)
18. I think that learning French is dull. (LF)
19. I would rather spend my time on subjects other than French. (LF)

20. Studying French can be important for me because other people will respect me more if I have a knowledge of a foreign language. (INSTR)
21. Learning French is really great. (LF)
22. When I leave school I shall give up the study of French entirely because I am not interested in it. (LF)
23. I really enjoy learning French. (LF)
24. Studying French can be important for me because it will make me a more knowledgeable person. (INSTR)
25. Learning French is a waste of time. (LF)
26. Studying French can be important for me because it will enable me to better understand and appreciate French Canadian art and literature. (INTEG)
27. French Canadians have preserved much of the beauty of the old Canadian folkways. (FC)
28. Studying French can be important for me because it will allow me to meet and converse with more and varied people. (INTEG)

APPENDIX B: QUESTIONNAIRE TO CLASS TEACHERS

1. How important do you think it is to teach French in our elementary schools?

(CIRCLE THE LETTER OF THE BEST ANSWER).

- a) I feel strongly that it is not necessary.
- b) I feel that, if it is to be taught, it ought to be optional for certain students.
- c) I feel that most students should have some understanding of French (about 20 minutes a day now given in the core French programme).
- d) I feel that most students ought to study more French than is now offered by the core programme.
- e) I feel that it is important for most students to become bilingual.

THE FOLLOWING STATEMENTS HAVE BEEN VOICED BY TEACHERS AND OTHERS ABOUT THE FRENCH PROGRAMMES. FOR EACH OF THE ITEMS ON THIS PAGE, PLACE AN X ON THE LINE IN THE COLUMN THAT MOST NEARLY EXPRESSES YOUR OPINION.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
2. Learning French is a good intellectual discipline and a student can gain a lot from it						
3. The extension of the French core programme from 20 minutes to 40 minutes a day is detrimental to the regular classroom program						
4. The ability to speak French has become more important in our school system than the ability to teach						
5. One needs a good knowledge of at least one foreign language to be a cultured person						
6. Teachers of French immersion are not as demanding academically of their students as regular classroom teachers						
7. Taking academic subjects in the French language presents a needed challenge for top-notch students						
8. There would be more criticism of the French-for-a-second-language programmes if people were not afraid this would be considered "anti-French".						
9. The current emphasis on French is hard on low ability students who need the time to learn basic English skills						
10. The French spoken in Quebec is a dialect and therefore of little use to a student learning French						
11. The current emphasis on French language teaching poses a threat to the jobs of English-speaking teachers						
12. The financing of the French programmes is using money that is more needed in other areas of the school curriculum						

13. The core French programme is useless because students do not have enough time to really learn French
14. Learning a language like French helps students to understand their own language better
15. One of the greatest advantages of the core French programme is that it gives the classroom teacher a needed break
16. In your opinion, which one of the following is the most important reason for learning French? (CIRCLE THE LETTER OF THE BEST ANSWER)
- a) It is not important to learn French
- French is important because . . .
- b) Of its cultural advantages
- c) Of its job advantages
- d) Of political necessity
17. How well would you say that you speak French?
- a) I speak French better than I speak English
- b) I speak French just as well as I speak English
- c) I can speak French easily
- d) I can usually make myself understood in French, but it is difficult for me.
- e) I can say a few things in French
- f) I cannot speak French
18. How well would you say you understand French?
- a) I understand French better than I do English.
- b) I understand French just as well as I do English
- c) I can follow a conversation in French easily
- d) I can follow a conversation in French, but it is difficult for me.
- e) I can understand only a small part of what is said when people speak French.
- f) I do not understand when they speak French.
19. At what school do you teach?

Ottawa Board of Education _____ or Carleton Board of Education _____

20. How many years, including the current year, have you taught school?

- a) one
- b) 2 - 4
- c) 5 - 9
- d) 10 - 14
- e) 15 or more.

21. What is your education other than teacher training?

- a) Grade 11
- b) Grade 12
- c) Grade 13
- d) 1 or 2 years university
- e) Pass BA
- f) Pass BS
- g) Honours BA
- h) Honours BS
- i) Some post graduate work
- j) Master's degree
- k) Work towards doctorate
- l) Ph.D.

22. What teacher training have you had? _____

THANK YOU VERY MUCH FOR YOUR COOPEATION. If you have any comments on the French programmes, or on this questionnaire, which would aid in our evaluation we would appreciate your writing them below. (Add extra pages if necessary).

APPENDIX C: QUESTIONNAIRE TO PRINCIPALS

PART A: To Be Answered At All Schools

CORE FRENCH

Core French is the label used for the traditional French program in which French instruction is given daily for about 20 minutes at a time. (The actual time allotted may be anywhere from about 10 to 50 minutes.)

Most of the questions in Part A ask you to circle the letter for the answer which seem to you to best describe the situation in your school. In a few of the questions you are asked to write in your answer and lines are provided to indicate this.

A1 How important do you think it is for children to learn French in our schools?

- a) I feel strongly that it is not necessary.
- b) I feel that, if it is to be taught, it should be optional for certain students.
- c) I feel that most students ought to have some understanding of French (about the amount that is now given by the Core French program)
- d) I feel that most students ought to study more French than is now given by the Core program.
- e) I feel that most students ought to become bilingual.

A2 In your opinion, the Core French program should use (on a daily basis)

- a) 10 to 20 minutes
- b) 30 to 40 minutes
- c) 50 to 60 minutes
- d) There should not be a core French program.

A3 In your opinion, which one of the following is the most important reason for learning French?

a) It is not important to learn French.

French is important because . . .

b) of its cultural advantages.

b) of its job advantages.

d) of political necessity.

A4 How important do you consider each of the following criteria to be when grouping children for instructional purposes? (MAKE A CHECK UNDER THE APPROPRIATE COLUMN FOR EACH ITEM).

	<u>Very</u> <u>Important</u>	<u>Important</u>	<u>Somewhat</u> <u>Important</u>	<u>Little</u> <u>Import</u>
a) Years of schooling	—	—	—	—
b) Modules of work completed . . .	—	—	—	—
c) Score on intelligence tests . . .	—	—	—	—
d) Score on achievement tests . . .	—	—	—	—
e) Teacher rating of ability . . .	—	—	—	—
f) Social maturity of child . . .	—	—	—	—
g) Keeping a child in a class with his friends	—	—	—	—
h) Keeping class size fairly even . .	—	—	—	—
i) A teacher's ability with certain types of children . . .	—	—	—	—
j) A teacher's capacity to handle larger or smaller groups . . .	—	—	—	—
k) Special needs of some groups of students.	—	—	—	—
l) Idiosyncratic needs of child . . .	—	—	—	—
m) Maintaining pupil-teacher ratio.	—	—	—	—
n) Other: Please specify	—	—	—	—
	—	—	—	—
	—	—	—	—

A5 Are students grouped differently for Core French periods than for their home room groupings?

a) Yes

b) No

If Yes, on what basis is the regrouping done?

A6 Are students grouped differently for French-for-a-single-subject than for other classes?

a) We have no French-for-single-subject here.

b) Yes

c) No

If Yes, on what basis is the regrouping done?

A7 How often do the students (exclude immersion students if any), in your class hear teachers talking to one another in French?

a) Frequently

b) Sometimes

c) Rarely

d) Never

A8 On this page are listed 9 phrases which may be used as criteria when deciding whether a particular child should be encouraged to take a special program (e.g. immersion, partial immersion, French-for-a-single-subject) in French. There are 9 empty boxes at the bottom of this page. Place the letter for each phrase in the box that best describes how important you think it is as a factor in deciding whether a particular child should enter a special French program. Put only one letter in each box.

- a) The French ability of the child
- b) The general scholastic ability of the child
- c) The child's desire to take the French program
- d) The parents' desire to have the child take the French program
- e) Whether the child's friends were taking the French program
- f) The challenge of the special French program
- g) Whether he would need French in the future
- h) The number of students who could be accommodated in the French program
- i) The number of students who would be left in the English program

<u>Most Important</u>	<u>Next Most Important</u>	<u>Middle Importance</u>	<u>Next Least Important</u>	<u>Least Important</u>
		☐		
☐	☐	☐	☐	☐
	☐	☐	☐	
		☐		

A9 Knowing that there can be problems associated with any school subject, do you find those associated with Core French to be . . .

- a) greater than for other subjects
- b) about the same as for other subjects
- c) lower than for other subjects

A10 About what proportion of your time is taken by the Core French?

A11 About what proportion of your time do you think should be devoted to Core French?

A12 Considering the time that you do spend on Core French, do you feel that its benefits are proportionate to the time spent?

- a) No, there are very few benefits
- b) Yes
- c) Yes, but the time could more beneficially be used in other ways.

The next two questions ask whether French teachers participate in staff meetings.

A13 To what extent do Core French teachers participate in discussion and decisions at staff meetings in your school?

- a) more than other teachers
- b) about the same as other teachers
- c) less than other teachers
- d) generally do not attend staff meetings

A14 To what extent has the introduction of French-for-a-single-subject increased or decreased the participation of French teachers in discussion and decision-making at staff meetings?

- a) We do not have FSS teacher in this school.
- b) It has increased greatly
- c) It has increased somewhat
- d) It has not changed
- e) It has decreased somewhat
- f) It has decreased greatly

The next six questions seek information about student presentation.

A15 What are your feelings regarding the place of student presentations, in French, at school assemblies or parents' nights?

A16 How many school assemblies have you had this year (approximately)?

_____ (write in number of them).

A17 During this school year how frequently have there been presentations by French-for-a-single-subject students at school assemblies?

a) not applicable.

b) _____ (write in number of them).

A18 During this school year how frequently have there been presentations by Core French students at school assemblies?

_____ (write in number of them)

A19 How many parents' nights have you had this year, (approximately)?

_____ (write in number of them).

A20 During this school year how frequently have there been presentations by French students or about the French programs at parents' nights?

_____ (write in number of them)

A21 Over the year have there been any special "events" or "days" devoted to a school subject?

No

Mathematics	_____
Science	_____
French	_____
Art	_____
Music	_____
Others (please specify) _____	_____

A22 Is there a French club or other extra-curricular group at your school?

- a) We do not have clubs or extra-curricular activities here.
- b) Yes
- c) No

A23 In general what do the regular classroom teachers do while the class is taking Core French? (PLEASE MAKE A CHECK UNDER THE APPROPRIATE COLUMN FOR EACH ITEM).

	Most teachers	Some teachers	No teachers
a) Do work associated with own class such as grading or record keeping . . .	—	—	—
b) Provide help for child(ren) in own class with problems	—	—	—
c) Provide help for children in other classes with problems	—	—	—
d) Provide instruction for another class .	—	—	—
e) Take a break	—	—	—
f) Be on call as a substitute teacher . .	—	—	—
g) Teach classes assigned in school rotary system	—	—	—
h) Other: Please specify _____	—	—	—

Comments: (Special Cases etc.)

A24 Is there anything you would like to see done at the regular teacher's time while her class is receiving Core French?

A25 If the time for Core French were increased to an hour a day how could the regular teacher's time best be used?

A26 A number of disadvantages have been suggested with respect to the Core French program. For each item on the list, indicate the extent to which you see it as a disadvantage. (CHECK UNDER THE APPROPRIATE COLUMN FOR EACH ITEM).

	not a disadvantage	somewhat of a disadvantage	a gre disadvan
a) Teacher rotates among many classrooms	—	—	—
b) Having classes of students come and go	—	—	—
c) Sheer number of students seen by French teacher each day	—	—	—
d) Negative attitude towards French in our area	—	—	—
e) Lack of time for French teacher to see children with difficulties	—	—	—
f) Disruption of French program by regular program activities	—	—	—
g) Disruption to regular program by French periods	—	—	—
h) Hostility of some staff towards French program	—	—	—
i) Shortness of time provided for each French period	—	—	—
j) Low ability students lose time needed for other subjects	—	—	—
k) Amount of administrative time required	—	—	—
Others: Please specify:			
l) _____	—	—	—
m) _____	—	—	—

A27 How well would you say that you speak French?

- a) I speak French better than I speak English.
- b) I speak French just as well as I speak English.
- c) I speak French easily.
- d) I can usually make myself understood in French, but it is a bit difficult for me.
- e) I can say a few things in French.
- f) I cannot speak French.

The last few questions in Part A inquire about facilities and materials available for French teaching.

A28 Some schools are able to provide a classroom for the teaching of French, in others the French is taught in the student's regular classroom. Other schools have still other arrangements. Please indicate below whether your school has classrooms assigned to French teaching and how these are allotted among the French teaching staff.

How many rooms are assigned to French teaching in your school? _____

Does every French teacher in your school have his/her own classroom?

- a) Yes
- b) No

If your school has fewer French rooms than French teachers, please indicate how classrooms are assigned to French teaching.

A29 What office or storage space is provided for French teachers who do not have a classroom of their own?

- a) Each French teacher in this school has his/her own classroom.
- b) An office for his/her own use.
- c) An office shared by all French teachers.
- d) An office which he/she can use at certain times.
- e) A desk of his/her own in a larger office.
- f) A desk which he/she can use at certain times.
- g) Storage space for books and supplies.
- h) No specific space is allocated to the French teachers.
- i) Other. Please specify _____

A30 Does your school library have any French language books or magazines?

- a) Yes
- b) No (If No, skip to Part B)

A31 The French language books in the school library collection are kept . . .

- a) In a special section of the library.
- b) Mingled with the regular books.
- c) Not in the library but wherever French teachers put them.

A32 The school library subscribes to how many French language magazines?

- a) Five or more.
- b) Three or four.
- c) One or two.
- d) None.

A33 Not counting funds for experimental French programs, what percentage of your 1973 library budget was used to buy French books or magazines?

- a) Less than 5%
- b) Between 5% and 15%.
- c) Between 16% and 30%.
- d) Over 30%.

PART B: To Be Answered Only By Those Principals Who Have
A French-For-A-Single-Subject Programme In Their Schools.

(In this part of the Questionnaire FSS stands for French-For-A-Single-Subject).

- B1 Last spring, to what degree did you want the FSS programme in your school?
- a) Very much
 - b) Somewhat
 - c) Not very much
 - d) Not at all.
- B2 Thinking ahead to next year, will you want the FSS programmes in your school?
- a) Very much
 - b) Somewhat
 - c) Not very much
 - d) Not at all
- B3 Which of the following did you consider as the one most important reason for selecting the subjects taught in your school?
- a) The skills of the French teachers.
 - b) The usefulness of the subject as a means of teaching French.
 - c) A willingness to risk minimal learning in that subject for this year.
- B4 What was the initial reaction of the regular classroom teachers to the FSS programme?
- a) They were enthusiastic.
 - b) Most thought it to be a good idea.
 - c) They tended to be neutral.
 - d) On the whole they were opposed to it.

B5 In comparison with children taking the same subject in English, do regular classroom teachers feel that the children in the French-for-a-single-subject learn _____ about the subject?

- a) A great deal less.
- b) A little less.
- c) About the same.
- d) A little more
- e) A great deal more.

B6 Do you think that the teachers teaching the same subjects in English as are given in the FSS programme, work extra hard because they know their classes will be compared?

- a) Yes
- b) No

B7 What would you like to see happen to the FSS programme in terms of number of students taking part?

- a) Expand (more students).
- b) Remain about the same.
- c) Have fewer students.
- d) Withdrawn.

B8 What would you like to see happen to the FSS programme in terms of the subjects offered?

- a) Expanded, so students would have a choice of subjects.
- b) Expanded so students could take more than one subject in F.S.S.
- c) The subjects offered now are about right.
- d) There are too many subjects offered.

B9 Has the FSS programme created a greater demand for . . .
(PLEASE CHECK EACH ITEM UNDER THE APPROPRIATE COLUMN).

	<u>A great deal</u>	<u>Somewhat</u>	<u>Not at all</u>
a) French books in classrooms . . .	☒	☐	☐
b) French books in the library . . .	☒	☐	☐
c) French film strips	☒	☐	☐
d) French records and tapes	☐	☐	☐
e) Material about French-Canada . .	☐	☐	☐
f) Material about France	☐	☐	☐
g) Other: Please specify	☐	☐	☐
h) _____	☐	☐	☐
i) _____	☐	☐	☐

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OF/DE

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

PART C: To Be Answered Only By Those Principals Who Have
An Immersion Or A Partial Immersion Program In Their Schools.

C1 If the choice were entirely up to you, would you have a French immersion programme at your school or not?

- a) Definitely yes.
- b) Probably yes.
- c) Probably no.
- d) Definitely no.

Why do you feel this way?

C2 What would you like to see happen to the French immersion program in the future in terms of proportion of students entering the program?

- a) Would like to see it expanded.
- b) Would like to see it remain about the same.
- c) Would like to see it include fewer children.
- d) Would like to see it phased out altogether.

Why?

C3 To what extent do you feel Immersion provides a basic education?

- a) Better than English.
- b) As well as English.
- c) Adequate but not as good as English.
- d) Inadequate.

C4 To what extent are you able to give guidance and supervision to French Immersion teachers?

- a) More than to English.
- b) About the same as to English.
- c) Less than to English.

C5 Do you visit the immersion classrooms as often as you do other classrooms?

- a) Yes
- b) No
- c) I do not visit classrooms.

C6 To what extent do French immersion teachers participate in discussions and decisions at staff meetings in this school?

- a) More than most other teachers.
- b) About the same as most other teachers.
- c) Less than most other teachers
- d) Generally do not attend staff meetings.

C7 Do French immersion teachers meet regularly as a group to discuss problems of the Immersion Programme?

- a) Yes
- b) No
- c) There is only one French Immersion teacher.

C8 During this school year how frequently have there been presentations by Immersion French students at school assemblies?

- a) Usually.
- b) At most of them.
- c) At some of them.
- d) At none of them.
- e) Have had no school assemblies.

C9 During this school year how frequently have immersion French children made presentations at all school Parents' nights?

- a) Usually
- b) At most of them
- c) At some of them
- d) At none of them
- e) Have had no Parents' nights

C10 During this school year have there been Parents' nights for immersion parents only?

- a) Yes
- b) No

C11 Is there an English teacher who visits the immersion French classes to provide English language teaching?

- a) Yes
- b) No

C12 If yes, what does the French immersion teacher generally do during this time?

	<u>usually</u>	<u>sometimes</u>	<u>never</u>
a) Does work associated with own class such as grading or record keeping	___	___	___
b) Provide help for child(ren) in own class with problems	___	___	___
c) Provide help for child(ren) in other classes with problems	___	___	___
d) Teach French to English classes	___	___	___
e) Teach another class a subject other than French.	___	___	___
f) Have a spare	___	___	___
g) Other: Please specify	___	___	___

C13 How much English language study do you believe is necessary for immersion French children?

	<u>Amount</u>	<u>Time</u>
For students beginning immersion in primary grades	Kindergarten	___
	Grade One	___
	Grade Two	___
	Grade Three	___
	Grade Four	___
For students beginning in middle or intermediate grades	Grade Six	___
	Grade Seven	___
	Grade Eight	___

C14 In comparison with children in the regular program how much do you feel that children in the French immersion program learn in the traditional academic subjects?

- a) A great deal less
- b) A little less
- c) About the same
- d) A little more
- e) A great deal more

C15 Has the presence of the French immersion classes increased the use of French by children in the regular classes?

- a) Yes
- b) No

C16 At recess do the immersion children play together as a separate group or do they mingle with the other children in the school?

<u>Grade</u>	<u>Separate Group</u>	<u>Mingle</u>
Kindergarten	—	—
Grade One	—	—
Grade Two	—	—
Grade Three	—	—
Grade Four	—	—
Grade Six	—	—
Grade Seven	—	—
Grade Eight	—	—

C17 Do children from French immersion classes have proportionately more or fewer discipline problems than other children at the same grade level?

- a) Many more problems
- b) Slightly more problems
- c) About the same
- d) Slightly fewer problems
- e) Many fewer problems

C18 Do you think that the teachers in the English comparison classes work extra hard because they know classes will be compared?

- a) Yes
- b) No

C19 In general, how do the non-French teachers in your school react to the immersion programme?

- a) They think it should be expanded to include a higher proportion of children
- b) They think that it should remain about the same
- c) They think that it should be deemphasized
- d) They think that it should be ended

C20 What is their most serious concern about the immersion programme?

C21 What is your most serious concern about the immersion programme?

C22 Has the French immersion program created a greater demand for . . .

	<u>A great deal</u>	<u>Somewhat</u>	<u>Not at</u>
a) French books in classrooms . . .	—	—	—
b) French books in the library . .	—	—	—
c) French film strips	—	—	—
d) French records and tapes	—	—	—
e) Material about French Canada . .	—	—	—
f) Material about France	—	—	—
g) Other: Please specify	—	—	—

APPENDIX D: QUESTIONNAIRE TO FRENCH TEACHERS

QUESTIONNAIRE FOR FRENCH TEACHERS OF CORE AND FRENCH FOR SINGLE SUBJECT

I

NAME _____

SCHOOL _____

Si votre connaissance de l'anglais ne vous permet pas de répondre à ce questionnaire de façon adéquate, veuillez nous téléphoner à 563-2408. Nous pourrions le traduire pour vous.

PART A

1. In order to have as accurate a picture as possible of the way your time is used, we ask that you provide us with a detailed schedule of a working day. On the following page, please list for Tuesday, or, if your school is on a cycle, Day Two of the cycle all of your activities which are regularly scheduled or usually performed on that day. These will include, in addition to classes, such things as breaks, seeing students after school, supervisory duties, remedial groups, and teaching other than French. Begin with the first thing you do at school, which may occur even before school starts (for example, yard duty).

Time - list the scheduled starting and ending times of each activity. Whenever some minutes are scheduled between activities (for example, to get from one to another) indicate this by leaving gaps between the ending time for one activity and the starting time for the next.

Type of class or activity - As concisely as possible tell us what you do. Examples might be "teach oral French"; "help students who have problems", or "coffebreak". If you have a spare period during which you normally do some school related task please indicate what it is that you do.

Grade level(s) - if the activity involves teaching, state at what grade level or levels you teach these children. If the activity is not teaching leave this column blank.

Number of students - State how many students are in the class or are normally seen during this period.

Room number - we want to determine to what extent French teachers rotate among different classrooms..

Students' Homeroom Teacher - We need this information to relate your French classes to the homeroom classes where the student testing was done. If students come from two or three different homerooms, please give all these homeroom teachers' names. If from more than three, just indicate the number of homerooms and their grades.

[illegible]

2. What differences are there between the schedule you have given us (for a Tuesday or a Day Two) and what would you consider your typical day at school? That is, what classes or activities would occur on the typical day that are not listed on this schedule, or that are listed but happen only once a week or per cycle?

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The paper appears slightly aged or used, as there are several small, dark, irregular spots or stains scattered across its surface. A prominent vertical crease or fold is visible on the right side of the page. The overall appearance is that of a clean but slightly worn piece of stationery.

3. If any of your regularly scheduled French classes have been omitted from your schedule, as outlined in Questions 1 and 2, please list them below:

[illegible]

4. How long is the cycle at your school?

- a) weekly (or one day cycle)
- b) _____ day cycle

5. Of the classes you have listed on your schedule are there any which miss more time than others?

- a) yes
- b) no

If so, please put an asterisk (*) beside the class activity on your schedule to indicate which one(s).

6. Is there time scheduled between classes for you to get from one to another (or for one class to get out of your room and the next to come in) or is this time taken from the allotted class time?

- a) Time for changing classes is allowed in the schedule.
- b) Time for changing classes comes from the French instruction time

PART B

MOST OF THESE QUESTIONS ASK YOU TO CIRCLE THE LETTER FOR THE ANSWER WHICH SEEMS TO YOU TO BEST DESCRIBE YOUR SITUATION. IN SOME OF THE QUESTIONS YOU ARE ASKED TO WRITE IN YOUR ANSWER AND LINES ARE PROVIDED TO INDICATE THIS.

1. At your school is remedial help in French scheduled for those who require it?
- a) yes
 - b) no

IF NO, SKIP TO QUESTION 3.

2. At what times during the school year is this remedial help given?
- a) it is scheduled throughout the year and students are sent into it as needed.
 - b) it is available to students who need it from the beginning of the year.
 - c) the remedial programme starts after the Christmas break.
 - d) the remedial programme starts after the winter break.
 - e) Other arrangements: Please specify _____

3. Was such formal remedial help available in your school last year?

- a) yes
- b) no

4. To what extent are you able to find time to help individual students who have difficulty with French, even though this may not be scheduled?

- a) I find time to help most students who need it.
- b) There is time to help only some students who need it.
- c) There is little or no time to help students who need it.

5. How often do you give homework assignments? (CHECK AS MANY AS APPLY).

	GRADES 1-3	GRADES 4-6	GRADES 7-8
every day	_____	_____	_____
2 to 4 times a week	_____	_____	_____
once a week	_____	_____	_____
infrequently or not at all	_____	_____	_____
projects on a regular basis	_____	_____	_____
I do not teach these grades.	_____	_____	_____

6. Have you been absent from your classes this year for any reason (for example illness, death in family, etc)?

a) yes

b) no

IF NO SKIP TO QUESTION 12.

7. How many days have you missed this year? _____

8. How often did a supply teacher take your place when you were away?

a) every time

b) usually

c) sometimes

d) never

9. Whenever a supply teacher took your place, did (s)he teach in French?

a) yes

b) no

c) sometimes

d) there was no supply teacher

10. Have you been away from classes for two or more consecutive teaching weeks during this school year?

- a) yes
- b) no

IF NO SKIP TO QUESTION 12.

11. If yes, did the supply teacher who replaced you carry on the teaching of the French programme?

- a) yes
- b) no
- c) no supply teacher replaced me

12. Except for such absences, have you taught the classes listed on your schedule since the beginning of the year?

- a) yes
- b) no

If no, what date did you begin to teach them?

13. How many workshops or development programmes on French language teaching have you attended this year?

14. How helpful have these been with respect to the particular problems you face in your teaching?

- a) very helpful
- b) somewhat helpful
- c) of little help
- d) not helpful

15. What sort of professional help or guidance is most needed by teachers of French-as-a-second-language and do you feel these needs are being met?

16. In your school during the past week were any of the following displayed around the school (excluding classrooms used exclusively or mostly for French)?

	No	Yes
Posters or similar display material about France	---	---
Posters or similar display material about Quebec	---	---
Posters or similar material in French	---	---
Student work in French	---	---
French books for leisure reading	---	---
Books or magazines about Quebec or French Canadian culture	---	---
Books or magazines about France or French culture	---	---

17. Outside of French class, how often do students hear French spoken by teachers in your school?

- a) frequently
- b) sometimes
- c) seldom
- d) never

18. How often do staff members (other than teachers of French) greet you in French?

- a) frequently
- b) sometimes
- c) seldom
- d) never

19. How often is French spoken in the staff room at your school?

- a) frequently
- b) sometimes
- c) seldom
- d) never

20. What was the first language that you spoke as a child, and which you still speak?

If French, where was it learned?

- a) Quebec
- b) Canada outside Quebec
- c) Europe
- d) Other, please specify _____

21. How well would you say you speak French?

- a) I speak French as my native tongue
- b) I speak French fluently in conversation with Francophones
- c) I speak French fairly well
- d) I can usually make myself understood in French, but it is difficult for me
- e) I can say a few things in French

22. How well would you say you speak English?

- a) I speak English as my native tongue
- b) I speak English fluently in conversation with Anglophones
- c) I speak English fairly well
- d) I can usually make myself understood in English, but it is difficult for me
- e) I can say a few things in English

23. How often do you read French books, magazines or newspapers?

- a) daily
- b) weekly
- c) monthly
- d) several times a year
- e) no more than once a year

24. Are you male or female?

- a) male
- b) female

25. What is your education other than teacher training?

- a) Grade 11
- b) Grade 12
- c) Grade 13
- d) 1 or two years university
- e) Pass Bachelors Degree
- f) Honours Bachelors Degree
- g) Some post graduate work
- h) Master's Degree
- i) Work towards doctorate
- j) Ph.D.

26. What teacher training have you had?

27. Including the current year, how many years have you taught school? _____

Of these, how many years have you spent teaching French? _____

Of the years teaching French how many have you taught the following programmes:

- a) Core (one period per day) _____ At what grade level(s)? _____
- b) Immersion _____ At what grade level(s)? _____
- c) One or more academic subjects in French? _____

28. Have you ever taught Francophones? a) yes b) no

If yes, how many years _____ At what grade levels? _____

PART C

QUESTIONS 29 TO 33 ARE TO BE ANSWERED ONLY BY TEACHERS OF FRENCH FOR A SINGLE SUBJECT. IF YOU DO NOT TEACH SINGLE SUBJECT IN FRENCH UNDER THIS PROGRAM CHECK HERE _____ AND PROCEED TO PART D.

29. What subject(s) are you teaching in French?

30. Have you ever taught this subject before?

- a) yes
- b) no

31. If yes, did you teach it in French or English?

- a) French
- b) English
- c) both
- d) other language: please specify what other language _____

32. Has French for a single subject increased your use of the following? (CIRCLE AS MANY AS APPLY).

- a) audio-visual equipment
- b) ditto or mimeographed material for students
- c) library facilities for students
- d) library facilities for self

33. Are the library facilities in your school adequate for the programme and subject you are teaching?

- a) yes
- b) no

PART D

QUESTIONS 34 AND 35 ARE TO BE ANSWERED ONLY BY TEACHERS OF ENRICHED CORE CLASSES. THAT IS CLASSES SCHEDULED FOR 30 MINUTES A DAY OR MORE. IF YOU DO NOT TEACH ENRICHED CORE, CHECK HERE _____ AND PROCEED TO THE NEXT PAGE.

34. Would you say that the longer time period has enabled you to: (CIRCLE ALL THAT APPLY).

- a) cover more material (extent)
 - b) enrich the same material (depth)
 - c) emphasize culture and attitudes more
 - d) emphasize skill at the individual level more (that is, give the child more time to speak)
 - e) other, specify please
- _____
- _____

35. Has the longer time period increased your use of:
(CIRCLE ALL THAT APPLY).

- a) audio-visual aids
- b) handouts to children
- c) drill
- d) conversation

FOR ALL TEACHERS

THANK YOU VERY MUCH FOR YOUR COOPERATION. If you have any comments on the French programmes or on this questionnaire, which would aid in our evaluation we would appreciate your writing them below. (Add extra pages if necessary).

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has some minor blemishes and dust specks, particularly near the top edge. The overall appearance is that of a clean, unused piece of stationery or notebook paper.

TABLE E-1
FACTOR SOLUTIONS FOR TEACHER ATTITUDE QUESTIONS (OBLIQUE),
OTTAWA-CARLETON PUBLIC SCHOOL CLASS TEACHERS, 1974

	Unspecified				3 factor			2 factor	
	I	II	III	IV	I	II	III	I	II
Good Discipline +	+ .09	-.45	-.06	-.18	+ .08	-.48	-.18	+ .13	-.54
Cultured Person +	-.13	-.56	-.07	+ .02	-.11	-.58	+ .00	-.18	-.60
Needed Challenge +	+ .06	-.69	+ .13	+ .12	+ .02	-.66	+ .12	-.10	-.59
Understand Own +	+ .10	-.40	-.05	-.18	+ .11	-.44	-.14	+ .13	-.49
Quebec Dialect, -	-.12	-.02	+ .22	+ .37	-.35	+ .04	+ .20	-.45	+ .08
Extension Harms -	+ .08	+ .15	+ .01	+ .66	+ .03	+ .15	+ .74	-.34	+ .32
Ability to Speak -	-.49	+ .00	-.13	+ .19	-.58	-.04	+ .06	-.60	-.06
Job Threat -	-.67	-.01	-.20	+ .03	-.61	-.04	+ .02	-.60	-.07
Financing -	-.63	.22	+ .05	+ .04	-.64	+ .18	+ .03	-.62	+ .15
Core Useless -	-.32	-.01	+ .13	-.07	-.36	+ .02	-.12	-.28	-.03
More Criticism -	-.38	-.06	+ .09	+ .24	-.45	-.06	+ .12	-.52	-.05
Low Ability -	-.08	-.06	-.08	+ .64	-.28	-.03	+ .39	-.49	+ .07
Gives Break ?	+ .05	+ .00	+ .44	-.05				-.02	+ .04
Demanding -	-.22	+ .05	+ .46	+ .22					
Eigenvalues	2.93	1.08	0.55	0.45	2.55	1.10	0.45	2.48	1.08

TABLE E-2

FACTOR COEFFICIENTS OF TEACHER ATTITUDE QUESTIONS,
OTTAWA-CARLETON PUBLIC SCHOOL CLASS TEACHERS, 1974

	I	II
Good Discipline	+0.059	-.268
Cultured Person	-.057	-.284
Needed Challenge	-.042	-.271
Understand Own	+0.052	-.223
Quebec Dialect	-.136	+0.037
Extension Harms	-.114	+0.144
Ability to Speak	-.221	-.022
Job Threat	-.205	-.031
Financing	-.279	+0.102
Core Useless	-.068	-.009
More Criticism	-.169	-.020
Low Ability	-.162	+0.039
Gives Break	-.002	+0.011

TABLE E-3
PRINCIPALS' GROUPING CRITERIA FACTORS (VARIMAX),
OTTAWA-CARLETON PUBLIC SCHOOLS, 1974

	Unspecified solution					3-Factor solution		
	I	II	III	IV	V	I	II	III
Years of school	+.23	+.39	-.04	-.19	+.31	+.51	+.28	-.04
Modules of work	+.55	+.14	-.02	-.16	-.04	+.15	+.57	-.02
I.Q. Score	-.11	-.09	-.03	+.75	-.03	-.23	-.16	-.07
Achievement	+.12	-.28	+.04	+.24	-.09	-.35	+.10	+.01
Teacher rating	+.27	-.11	+.06	+.02	+.06	-.10	+.29	+.04
Social maturity	+.43	-.03	+.30	-.17	+.42	+.11	+.49	+.26
With Friends	-.05	+.24	-.11	-.03	+.55	+.35	-.00	-.10
Class Size	-.10	+.75	+.02	-.10	+.12	+.79	-.12	+.05
Ability/Types	+.09	-.06	+.92	-.16	+.00	-.04	+.14	+.95
Handle Sizes	+.16	+.05	+.69	+.13	-.06	-.03	+.16	+.64
Needs of Groups	+.92	+.04	+.19	-.02	-.18	-.02	+.80	+.18
Idiosyncratic	+.43	-.08	+.08	+.13	+.27	-.04	+.44	+.05
Maintain PTR	+.04	+.81	+.02	+.03	+.02	+.66	+.01	+.03
Eigenvalues	2.23	1.76	1.04	0.69	0.57	2.11	1.68	0.99

TABLE E-4

PRINCIPALS' CRITERIA FOR GIVING ADVICE ABOUT FRENCH PROGRAMS
FACTORS (VARIMAX), OTTAWA-CARLETON PUBLIC SCHOOLS, 1974

	I	II	III
French Ability	+ .14	-.54	+.75
General Ability	+ .13	-.32	+.03
Child's Desire	-.07	+.11	-.03
Parents' Desire	-.35	+.14	-.05
Child's Friends	-.67	+.09	+.02
Program Challenge	+ .00	-.00	-.13
Would Need	+ .47	+.81	+.34
Space in French	+ .15	-.15	-.23
Students Left	+ .57	+.01	-.34
Eigenvalues	1.29	1.08	0.81

TABLE E-5

DISADVANTAGES OF BASIC FRENCH AS PERCEIVED BY PRINCIPALS:
FACTORS (VARIMAX), OTTAWA-CARLETON PUBLIC SCHOOLS, 1974

	I	II	III
Students Seen	+ .09	+.26	+.37
Area Attitude	+ .40	-.12	+.10
Lack of Time	-.36	+.43	+.03
Reg Disrupts Fr	+ .61	+.02	+.07
Fr Disrupts Reg	+ .02	-.15	+.72
Staff Hostility	+ .50	-.19	+.28
Short Period	-.03	+.74	-.08
Low Lose	+ .32	-.04	+.22
Principal's Time	+ .72	+.01	-.15
Eigenvalues	1.73	0.80	0.71

TABLE E-6
ASSOCIATIONS BETWEEN PRINCIPAL'S PERCEPTION OF DISADVANTAGES
WITH RESPECT TO CORE FRENCH AND RELATED SCHOOL VARIABLES,
OTTAWA-CARLETON PUBLIC SCHOOLS, 1974

DISADVANTAGE	RELATED SCHOOL VARIABLE	TAU	P	N
Teacher Rotates	Classroom for French (Principal)	+.22	.001	(90)
Classes Move	Classroom for French (Principal)	+.10	N.S.	(90)
Students Seen	French teacher's report of pupils seen daily	+.25	.03	(40)
Area Attitude	Pupils' fall attitude to French Canadians	-.05	N.S.	(70)
	Learn French	+.10	N.S.	(70)
Lack Time	French teacher's report of Remediation available	+.08	N.S.	(59)
	Her time to help pupils	+.02	N.S.	(39)
	Her daily instruction time	-.01	N.S.	(43)
Reg Disrupts Fr	French teacher's report of Actual - intended time	+.03	N.S.	(263) ^a
	Whether class misses periods	+.14	.01	(276) ^a
Fr Disrupts Reg	Admin problems (Principal)	-.06	N.S.	(91)
Staff Hostility	Class teachers: Benefits factor	-.05	N.S.	(57)
	Career factor	-.11	.05	(57)
Short Period	Program at school	b	-	(72)
Low Lose	(No related variables measured)	-	-	-
Principal's Time	Admin problems (Principal)	-.18	.007	(92)
	Benefits/time (Principal)	-.25	.001	(90)

N = schools except as noted

a. N = classes, since the French teacher reported this for each class she taught.

b. See text.

END

07 11 2

FIN