The effects of second-language learning on self-esteem and attitudes towards bilingualism.

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LA THÈSE A ÉTÉ MICROFILMÉE TELLE QUE NOUS L'AVONS RÉCU
THE EFFECTS OF SECOND-LANGUAGE LEARNING
ON SELF-ESTEEM AND ATTITUDES
- TOWARDS BILINGUALISM

by

Mary Anne Johnston
B.A. (Hon.), University of Windsor, 1978

A Thesis
Submitted to the Faculty of Graduate Studies
Through the Department of Psychology
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of Master of Arts at the
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ABSTRACT.

The purpose of the present research was to investigate a few of the correlates of bilingual proficiency. Positive consequences of bilingualism on cognitive abilities have been documented by such researchers as Peal and Lambert (1962), and Gardner and Lambert (1959, 1972), contrary to earlier studies that indicated that second-language acquisition was detrimental to native-language cognitive skills. Another aspect of Gardner and Lambert's substantial research on bilingualism has determined that motivational variables, such as positive attitudes towards another culture, play an important role in facilitating second-language learning. As to the relationship between bilingualism and personality traits, little research has been done, although Pesner's (1978) study indicated increased social self-esteem in bilingual students. For this study, Wylie's (1974, 1979) recommendations for exact definition of the construct being examined was followed. Thus it was anticipated that students who were fluent in both French and English would demonstrate better English word skills, more favorable attitudes towards the French culture, and enhanced self-esteem in interpersonal situations.

In total, 258 local elementary and high-school students answered a questionnaire designed to test the specific constructs being studied. Word skills were assessed by the Clarke Vocabulary Scale, cultural attitudes by items derived from the Royal Commission on
Bilingualism and Biculturalism (1969), and self-concept by the Janis-
Field Feelings of Inadequacy Scale and Jackson's Self-Esteem subscale
from the Jackson Personality Inventory. The students ranged from
Grades 6 to 11, with 124 fluently bilingual and 134 English unilingual
students participating. Index of Social Position (ISP) and language
spoken at home, as well as verbal ability scores were used as
covariates.

Results of analysis of covariance between the two language groups
clearly demonstrated that the bilingual students possessed more
favourable attitudes towards French language and culture, which
increased as grade level increased. In addition, for the unilingual
group, attitude scores decreased over grade level, providing some
evidence for a gradually developing prejudice. No differences
between groups were found on the vocabulary measure. Differences
between groups on the two self-esteem measures were significant;
however, this was determined to be attributable to differences in
social status. Nevertheless, there was no indication that the
achievement of bilingual proficiency was detrimental to English
language skills or social self-confidence.

It was concluded that, where bilingualism is viewed as an
additive experience, as among families of higher social class,
positive attitudinal, cognitive and personality consequences were the
result. Limitations of the study, as well as suggestions for future
research and implications for education were discussed.
ACKNOWLEDGEMENTS

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CHAPTER I
INTRODUCTION

Although Canada is a nation of two official languages, French and English, its unity is currently being threatened, largely because the Francophone minority feel that their language and culture may be doomed to extinction. The 1980 Québec referendum, in which René Lévesque's government promoted sovereignty as a means of gaining equality with the English majority, may be seen as a reflection of the pride and sense of identity that the French population has long been striving to maintain. In 1965, an opinion survey of Canadian youth (Johnstone, 1969) revealed that long-term relations between the two groups would improve, especially over a ten-year period. In spite of this, a recent annual report released by the commissioner of official languages (Riley, 1980) stated that the French language continues to suffer from second-class status and remains repressed in many sectors of the public service. That the French interpret this ongoing repression as a blow to its collective identity should not be surprising. In view of these facts, it is probable that the full acceptance, if not acquisition, of bilingualism by Canadians would be a necessary condition for realizing national unity.

Second-language learning has traditionally been studied from
the viewpoint of psycholinguistics and cognitive development (Ervin-Tripp, 1973). More recently, a substantial body of research (Gardner, 1979; Gardner & Lambert, 1959, 1972; Lambert, 1964, 1979) has focused on motivational variables in addition to aptitude and intellectual capacity. However, very little research has evolved that attempts to relate language acquisition to such psychological traits as self-esteem. The present study is an extension of a study by Pesner (1978), who examined both relationships.

Turning first to a consideration of factors associated with second-language acquisition, the work of Gardner and Lambert and their associates remains preponderant. To date, individual characteristics related to the achievement of bilingualism have been identified as intelligence, language aptitude, motivation and situational anxiety. As to the intelligence and language aptitude variables, Peal and Lambert (1962) determined that, contrary to previously reported findings which concluded that bilingualism had a detrimental effect on intelligence scores, bilinguals performed better on both verbal and nonverbal intelligence tests. This study showed that there were no significant differences between bilinguals and unilinguals, on tests of nonverbal intelligence that examine spatial-perceptual skills. However, on nonverbal tests requiring mental manipulation and reorganization, bilinguals performed better.

The authors hypothesized that, since bilinguals have two symbols, i.e., words, for each referent, they can more easily separate the sound of the word from the object itself, thus facilitating thought in terms of abstract concepts. Peal and Lambert thus propose that
bilingualism leads to greater mental flexibility and more diversified mental abilities. Their findings were also corroborated by Cummins & Gulutsan (1974), who determined that bilingually educated grade-school students gave significantly better performances than monolinguals on measures of cognitive ability. It would seem that fluency in two languages enhances, rather than diminishes, intellectual capacity.

The above research provided a basis for the following expectation.

Hypothesis I: It was predicted that the verbal ability skills of a sample of bilingual students, when compared to a sample of unilingual students, would be significantly higher, as measured by a vocabulary test.

This does not imply causation, however. It may still be true that the more intelligent children of intelligent parents are most likely to be encouraged to learn another language.

Most effort has been invested, however, in the study of motivational variables, with emphasis on attitudes towards the second-language group. Two factors have been isolated—the instrumental orientation and the integrative orientation (Gardner, 1966). Gardner postulates that instrumentally motivated persons study a language from a practical aspect, i.e., according to how useful it is likely to prove in one's future endeavours, whether occupational or educational. The integratively motivated individual, in contrast, has a more personal interest in the other cultural
community and may see himself/herself as a prospective member of this second group. Research results indicated that such an integrative orientation facilitates second-language acquisition to a greater degree than an instrumental one (Gardner, Smythe, Célement & Glicksman, 1976; Lambert, 1964). These authors contend that, because learning another language is a long-range proposition, it requires something more than fluency in the language itself; it also requires adopting the cultural characteristics of that group. Thus, the integrative motivation may be seen as similar to the identification process which Mowrer (1950, pp. 580-581) considers to be a necessary component of first language learning. Mowrer theorizes that language sounds achieve secondary reinforcement value to the degree that they are similar to the sounds produced by the parent. Since the reward (the repetition of the valued sound) is self-administered, he terms this learning 'autistic', whereby the initial imitation of sounds gradually evolves into an identification with the model. Lambert (1974) sees a similar process occurring in an individual learning a second language.

Gardner (1979, chp. 10) has recently refined a socio-psychological model of second-language acquisition. This model proposes that the manner in which the four individual characteristics, namely intelligence, language aptitude, motivation and situational anxiety, are affected by the cultural context determines the desired outcome. Of specific interest to this research is the motivation variable, which Gardner feels is associated with social attitudes towards the other culture that do not directly influence achievement,
but rather, act as motivational supports. He states (p. 206), "Individual differences in a number of social attitudes give rise to individual differences in motivation which in turn are responsible for variability in achievement." Thus, positive attitudes towards the other group would tend to facilitate achievement in learning their language, and this was confirmed when Gardner tested his model. Specifically, he found that the correlation between achievement and attitudes was lower when effects of motivation were eliminated. In other words, motivation was found to be the best predictor of bilingual achievement. When the effect of attitudes was partialled out, the correlation between motivation and achievement remained high. Gardner concluded that favourable attitudes are not major correlates of achievement, but increase the necessary motivation. Gardner's model offers support for Pesner's (1978) research wherein his sample of high school students, who had achieved proficiency in two languages, had more favourable attitudes towards the French language and culture. From the above discussion, a second hypothesis was formulated.

Hypothesis 2: It was predicted that a sample of bilingual students, when compared to a unilingual group, would display more positive attitudes toward bilingualism, English-French relations, and future employment prospects.

The second major consideration of the present study is the relationship between bilingualism and self-esteem. Although behaviourism dominated the field of scientific inquiry during the first half of the century, interest in the self as a psychological
construct has been revived in the past 30 years. This was brought about gradually, beginning with the writings of Mead (1934), who stated that social-psychological as well as biological factors influence development of the self. Following this, Lewin (1935) viewed the self as the central organization lending consistency to the whole personality; Maslow (1956) developed his influential self-actualization theory; Rogers (1959) saw the self as phenomenological because of the importance of the individual's perceptions in determining his behaviour; and Snygg and Combs (1949) similarly proposed that the individual strives to maintain and enhance the self as it is consciously perceived. These and other theorists realized the importance of examining behaviour from the point of view of the individual, which is not open to direct observation. This subjective approach purports to provide a more complete frame of reference for understanding individual behaviour. Basically, it assumes that there is a consistency between behaviour and self-interpretation, and that self reports, in spite of contaminating influences, continue to be valuable psychological tools.

Confusion and inconsistent results that abound in self-concept research may be due, to a large extent, to the use of diverse terms to define self-referents. Such terms as self-awareness, self-appraisal, self-confidence, self-regard, self-enhancement, self-image, self-esteem and self-respect have been used more or less synonymously and interchangeably in various studies. Thus, it is not surprising that attempts to compare and interpret research results only lead to further confusion.
As an aid to clarifying these problems, the writings and evaluations of Ruth Wylie (1968, 1974, 1979) have been of great value to the present study. Wylie (1968, p. 742) points out that researchers have erroneously assumed that "there is a strong general factor in self-evaluation, with little or no need to consider degrees of self-regard with respect to conceptually separate dimensions or characteristics." She suggests a subdivision of overall self-concept into actual-self and ideal-self concepts, then further differentiates the actual-self into social and private self-concepts. According to Wylie (1974), this problem of operational definition is compounded by poor methodology and inadequate instruments. She recommends that more specific theoretical constructs, as well as more limited measuring instruments having established reliability and construct validity, would greatly benefit the field of self-concept research. Since Pesner (1978) found that the items in his questionnaire that measured self-confidence and social ease were the best discriminators between the bilingual and unilingual groups, it would seem more profitable to focus on instruments developed to investigate social self-concept. As a result, items were selected that were relevant to this aspect.

A fairly large body of research exists on the relationship between self-esteem and racial/ethnic status, which is well summarized in Wylie (1979). However, the vast majority of these studies involves black/white differences. In spite of serious methodological flaws, in 58 publications that relate self-esteem to ethnic status, most show significant trends for the black minorities
to score higher on self-esteem than equivalent samples of white students, e.g., Rosenberg & Simmons (1972). These results tend to refute such theories as those of Lewin (1948), Clark (1963) and Erikson (1966), who generally propose that membership in minority subcultures leads to the development of self-hatred and feelings of inferiority. More modern theories argue that it is not the values of the dominant majority that influence minority self-appraisals, but rather those of significant others in one's own cultural group (Rosenberg, 1973). These latter opinions thus offer better support for the reported research conclusions.

It would be difficult to generalize from the black/white studies to the few others that attempt to establish differences in self-concept between other cultural groups. Hishiki (1969) found that sixth-grade Mexican-American girls were lower in self-concept than a control group of American girls. However, the Mexican-American girls were also lower in school achievement. Fisher (1974) concluded that a bilingual-bicultural program enhanced the self-concept of both first-grade Anglo and Chicano girls, but not boys. Pesner found significantly higher self-esteem scores in bilinguals on one scale, but not on two other measures. Except for the latter study, research on the effects of bilingualism on the learner's personality has been an area neglected by psychologists.

In order to specifically associate bilingualism with self-esteem, one must make the basic assumption that the acquisition of another language represents a valued achievement that serves to foster a higher self-evaluation, as a result of this particular accomplishment.
Research on the relationship between self-esteem and achievement has tended to demonstrate low but significant correlations between various self-concept measures and school grades or scores on achievement tests. Representative of some studies involving high school students that positively correlate grades to overall self-regard measures are Ullman (1967), Kunce, Getsinger & Miller (1972), Bachman (1970), Gill & D'Oyley (1970) and Rosenberg & Simmons (1972). Studies of self-concept of ability tend to yield higher correlations with grades (Anderson & Johnson, 1971; Bachman, 1970; Rosenberg, 1965). Some studies using elementary school samples yielded conflicting results. Coopersmith (1967) showed a positive correlation \( r = .30 \) between his Self Esteem Inventory and grade-point average in 10-12 year old children; however, Perkins & Shannon (1965) found no significant correlations between self-concept and average grades; using the same inventory. Various other studies cited in Wylie's (1979) comprehensive review of self-concept research that fail to demonstrate a positive correlation mostly involved mentally retarded, deaf or learning disabled subjects.

A body of research with better methodological criteria, in that ability scores were controlled, revealed that 13 out of 19 studies associating overall self-regard with grades yielded significant positive correlations, while none of them showed negative associations. In general, those studies (e.g., Quinby, 1967) using better known and more adequately standardized measures yielded a higher incidence of significant results, with the less common idiosyncratic instruments showing significant positive results in
approximately half of the studies (e.g., St. John, 1971; Wyer, 1965). Among those studies failing to show positive correlations were Borislow (1962) and Kubicke (1970). These two studies involved college students, however. Self-concept of ability research offered convincing evidence for stronger relationships between self-concept of ability and actual achievement. Baird (1969), Brookover, Thomas and Paterson (1964), and O'Hara (1966) were among those who found that self-ratings of abilities in specific subjects were the best predictors of actual achievement. However, these same studies did not demonstrate any association between self-reports of other personality characteristics unrelated to academic ability, and achievement variables. For example, Baird (1969) found that self-estimates of popularity, understanding, sociability, self-control, conservatism and cheerfulness were not related to academic ability, interests or achievement motivation.

In summary, the available research concerning the relationship between various academic measures and both overall self-regard and specific aspects of self-concept, especially self-concept of academic ability, gave evidence for weak positive trends between achievement and self-esteem.

That an increased self-esteem should be the result of successful language learning may be regarded from two viewpoints. First, as in the above discussion, it may be considered that achievement in general is associated with higher levels of self-esteem. But in the case of learning another language, what must also be taken into account is the
value that one places on the achievement. Coopersmith (1967) noted that self-esteem is heightened when one is successful in valued areas, particularly those valued by one's group. For French Canadians whose ethnic identity may be threatened by learning the English language, bilingualism may represent what Lambert (1974) has termed 'subtractive' bilingualism (Taylor, Meynard & Rheault, 1977). Taylor and Simard (1975) stated that developing proficiency in another language may lead to ethnic anomie, or partial loss of identity. This feeling would be even more prevalent where bilingualism is viewed as subtractive. Where there is no threat to ethnic identity, as in the instance of members of the dominant culture learning another language, the process would be considered by Lambert to be an 'additive' one. In the present study; the sample of bilingual students were selected from a geographical area where English is the dominant language. It was believed that, to this group at least, the study of French represented an additive process, or, in Coopersmith's terms, a valued achievement. This belief was due in part to the fact that the presence of a French high school and several elementary schools represented recognition of the francophone minority as a valued segment of the population, at least in this geographical area. In light of these points, the final hypothesis was formulated, bearing also in mind Wylie's recommendation of specificity in defining theoretical constructs.

Hypothesis 3: It was predicted that, where ability scores were controlled, bilingual students enrolled in a French immersion program would demonstrate higher levels of self-esteem than unilingual
students, on measures specifically designed to investigate social self-esteem and self-confidence in interpersonal situations.
CHAPTER II
METHOD

Subjects

The sample for the present study was drawn from the Windsor metropolitan area of Essex County in Southwestern Ontario. Essex County, according to the 1971 census (Information Canada, 1976), had a total population of 306,400, of which 85% reported English, 0.5% reported French, and 12% reported both as their official language. Eighty-five percent of the population spoke English most often at home; four percent reported French as their home language. Thus it is obvious that Essex County has a dominant English majority.

For the high school samples, a bilingual group, composed of 72 Grade 9, 10 and 11 students, was obtained from the French language secondary school that serves the county. This group consisted of 25 males and 47 females. The unilingual group of three classes, two Grade 9 and one Grade 10, from an English secondary school, contained 27 males and 37 females. Random selection of subjects was not possible, therefore intact classes were used. However, in both high schools, students are randomly assigned, via computer scheduling, into the various classes. Nevertheless, students may select different subjects, and a preference for specific areas of interest may discriminate the members of a particular classroom.
The elementary school subjects were obtained from a school board containing several French elementary schools. Two schools, one French and one English, were used, both in the same geographical area. Here again, intact classes, composed of those students from whom parental permission to participate was granted, formed both groups. The Grades 6, 7, and 8 students from the French school consisted of 23 males and 28 females; the same grades in the English school contained 31 males and 39 females. One completed questionnaire in the Grade 8 class of the French school did not indicate whether the respondent was male or female. The total sample yielded 258 subjects, 124 from the bilingual group and 134 from the unilingual group.

Prior to completing the questionnaire, subjects were asked how many languages they could speak. For the bilingual sample, those who knew a third language were omitted; only those who were French-English bilinguals participated. For the unilingual sample, students fluent only in English remained as respondents. In addition, socioeconomic status and language spoken in the home were determined for use in analysis of covariance. With the available sample of subjects, it was impossible to realize a matching procedure on all variables; analysis of covariance allows for some statistical control when differences are found between groups (Kerlinger, 1973, p. 373).

Materials

A 96-item questionnaire that attempted to maintain consistency and reliability of responses was assembled. An introductory
paragraph of the questionnaire stressed the importance of anonymity, the need for honesty and the necessity for providing one's own opinions and feelings in order to achieve valid scientific results.

Appendix A This questionnaire incorporated test items from instruments of known reliability and validity, that would best test the specific theoretical constructs under study.

Opinion Survey. The first 12 items of the questionnaire were assembled to form a scale that would assess attitudes towards bilingualism, English-French relations, and future employment prospects. Eleven of these items were provided by Johnstone’s opinion survey of Canadian youth for the Royal Commission on Bilingualism and Bilculturalism (1969). The twelfth item was similar to one written by Pesner (1978) using terms more easily understood by elementary-age students, i.e., "Do you think the issue of bilingualism has been emphasized too much in current Canadian affairs?" Out of these 12 items, seven of them, including the one written by the present author, constituted a scale of attitudes towards bilingualism on a personal level. Each was in a multiple-choice format with three alternatives. Three other items reflected judgments of the quality of present and future English-French relationships. The two remaining items were concerned with future job prospects in Ontario and the rest of Canada; these items were considered to be relevant to an instrumental orientation as a reason for learning French.

Self-Concept Measures. Two scales were chosen that seemed to best measure the social self-concept, specifically social self-esteem and interpersonal self-confidence.
The first measure used was the 20-item Janis-Field Feelings of Inadequacy Scale (Eagly's version, 1967). This revised scale uses a five-point Likert Format and has been balanced for response set, thus eliminating earlier criticism of this drawback (Wylie, 1974). Using this scale, Pesner (1978) found an alpha coefficient of .84. Crandall (1973) reported split-half reliabilities of .72 and .88 for this version, as well as convergent validity with four other measures of self-esteem, and some evidence for discriminant validity, i.e., low correlations with self-ratings of dominance and openmindedness, and a low correlation with the Marlowe-Crowne desirability scale. Since the assumption is made by users of the scale that feelings of inadequacy and self-esteem are opposites, the direction of the scoring was reversed. Crandall considered this to be the best available measure of social self-esteem. Items 1-20 of Attitudes Towards Yourself (Appendix) constitute this scale.

The second measure chosen was the Self-Esteem Scale of the Jackson Personality Inventory (1976). This was thought to be valuable and relevant to the present study because each scale of the inventory is based on specific trait definitions. Jackson described the high scorer as "Confident in dealing with others; not easily embarrassed or influenced by others; shows presence in interpersonal situations; possesses aplomb." This conceptually limits the definition to self-confidence in interpersonal situations.

For his inventory, Jackson used the method of rational test construction. Briefly, a preliminary scale containing a large number of items was analyzed for scale distribution, homogeneity and
correlations with irrelevant scales. Items for the final scale were selected using criteria of suitable endorsement proportion and item correlations with relevant and irrelevant scales. These items were again analyzed and refined into a final 20-item scale, keyed True or False. (See Items 21-40, Appendix). Thorough item-selection procedures were described in the Manual; these were designed to ensure reliability. Using Bentler's coefficient theta (1972) on two samples of college students, reliability estimates ranging from .75 to .95 were reported (Jackson, 1980). Convergent validity was found to range from .64 to .73. At the factorial level, convergent and discriminant validities ranged from .60 to .86. A study using Self and Peer Ratings reported correlations of .70 and .30 respectively with the scale. Correlation with an acquiescence measure was -.06, and with a desirability measure, .36.

Word Meaning List. Because of the requirement of subject anonymity and inaccessibility of school records, a self-administered vocabulary measure was needed. An adaptation of the Clarke-WAIS Vocabulary Scale, the Clarke Vocabulary Scale, was found to be suitable for this purpose (Paltich and Crawford, 1973). Its authors consider it to be superior to several other written vocabulary tests, such as the Shipley-Hartford Test which is more suitable for those of above-average intelligence, and the Mill-Hill Vocabulary Scale, which has a high incidence of infrequent words. It also has the advantage of being equivalent to the orally administered WAIS Vocabulary Subtest, a widely-used and well-standardized instrument. The authors reported a correlation of .92 between the oral and
written versions of this test. By means of a regression equation, WAIS Vocabulary raw scores may be determined, and scaled score equivalents calculated using the tables in the WAIS Manual. An approximate Verbal IQ may then be assigned. The format of the tests consists of a 40-word list, each having four definitions, from which the correct alternative is chosen. (Appendix).

Additional Data. In order to assess the effects of other variables pertinent to the study, four additional questions were asked of the students. Two of them were related to socioeconomic status. Blishen (1967) assigned numerical values to occupations listed in the Canadian census, using income and educational data. Index of Social Position using Hollingshead's Two-Factor Index (Myers & Bean, 1968) was calculated using weighted scale values for father's occupational status and level of education. The third and fourth questions asked the student the percentage of time English and/or French were spoken at home. These four items provided information for use in analysis of covariance.

Procedure

To ascertain the approximate length of time required for subjects to complete the questionnaire, and to discover any ambiguities in the wording of items that would be likely to cause problems, ten elementary and high school students were asked to fill out the forms. Suitable adjustments were made to the format, prior to conducting the actual experiment.

Administration of questionnaires for the study itself occurred in
four separate sessions, one at each high school and elementary school, after initial screening for language fluency was accomplished with the aid of school personnel.

Before group testing of subjects began, they were read the instructions and asked to fill out the questionnaire without consulting others. The author was present throughout all testing sessions, except for the unilingual high school, where teachers administered the questionnaire. Responses were then coded for inclusion on computer cards. The necessary correlational analysis and analysis of variance and covariance measures were completed using an SPSS program (Nie, Hull, Jenkins, Steinbrenner & Bent, 1975; Hull & Nie, 1979).
CHAPTER III

RESULTS

To provide an overview of the relevant data, the mean scores of the major dependent variables for the bilingual and unilingual groups are presented in Table 1, with Table 2 supplying a further breakdown of the measures by grade level and language group.

Verbal Ability

As measured by the Clarke Vocabulary Scale, the bilingual students as a whole demonstrated better vocabulary skills than the unilingual students. Figure 1 illustrates the mean scores found for both groups on this scale. There was a significant difference between the two groups, with $t(256) = 1.91, p = .05$. Using Index of Social Position (ISP) and language spoken in the home as covariates, analysis of covariance, as shown in Table 3, shows a significant effect for language and grade. As noted in Figure 1, the Grade 11 bilingual class received a substantially higher score on this measure. Since there was no equivalent Grade 11 unilingual class for comparison, further analysis of the data, eliminating the Grade 11 group, determined that the differences between groups was no longer significant; $t(229) = 1.13, p = .10$. Further t-tests performed on each grade level from 6-10 for both language groups were not significant at any level, and in the case of the Grade 8 students, the unilinguals received a higher mean score than the bilinguals. Since there was a correlation between the Clarke Scale and ISP, $r(217) = -.162, p = .009$, further analysis of covariance, using ISP as well as language spoken at home as covariates, again failed to show any significant difference between the two Grades
### TABLE 1

MEAN SCORES AND STANDARD DEVIATIONS
OF BILINGUAL AND UNILINGUAL STUDENTS
ON VOCABULARY, ATTITUDE, SELF ESTEEM
AND SOCIAL STATUS MEASURES

<table>
<thead>
<tr>
<th>Measure</th>
<th>Bilingual</th>
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<th>Unilingual</th>
<th></th>
</tr>
</thead>
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<td></td>
<td>$\bar{x}$</td>
<td>S.D.</td>
<td>$\bar{x}$</td>
<td>S.D.</td>
</tr>
<tr>
<td>Clarke Vocabulary</td>
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<td>5.00</td>
<td>23.18</td>
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</tr>
<tr>
<td>Royal Commission</td>
<td>37.02</td>
<td>3.62</td>
<td>33.82</td>
<td>5.72</td>
</tr>
<tr>
<td>Janis-Field</td>
<td>50.59</td>
<td>10.99</td>
<td>47.80</td>
<td>11.88</td>
</tr>
<tr>
<td>Jackson Self Esteem</td>
<td>12.81</td>
<td>7.11</td>
<td>11.06</td>
<td>4.57</td>
</tr>
<tr>
<td>Index of Social Position</td>
<td>46.52</td>
<td>22.78</td>
<td>50.28</td>
<td>18.72</td>
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TABLE 2
MEAN SCORES AND STANDARD DEVIATIONS ON ALL MEASURES
BROKEN DOWN BY GRADE AND LANGUAGE GROUPS

<table>
<thead>
<tr>
<th>Grade</th>
<th>(N)</th>
<th>Clarke Vocabulary</th>
<th>Royal Commission</th>
<th>Janis-Field</th>
<th>Jackson Self-Esteem</th>
<th>Index of Social Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>x</td>
<td>S.D.</td>
<td>x</td>
<td>S.D.</td>
<td>x</td>
</tr>
<tr>
<td>6</td>
<td>BI</td>
<td>(12)</td>
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<td>3.34</td>
<td>38.08</td>
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</tr>
<tr>
<td></td>
<td>UNI</td>
<td>(16)</td>
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<td>5.61</td>
<td>34.38</td>
<td>4.24</td>
</tr>
<tr>
<td>7</td>
<td>BI</td>
<td>(22)</td>
<td>23.18</td>
<td>3.59</td>
<td>36.23</td>
<td>3.99</td>
</tr>
<tr>
<td></td>
<td>UNI</td>
<td>(35)</td>
<td>22.29</td>
<td>4.59</td>
<td>33.49</td>
<td>5.81</td>
</tr>
<tr>
<td></td>
<td>UNI</td>
<td>(19)</td>
<td>24.26</td>
<td>3.81</td>
<td>34.89</td>
<td>4.53</td>
</tr>
<tr>
<td>9</td>
<td>BI</td>
<td>(22)</td>
<td>23.64</td>
<td>6.19</td>
<td>37.55</td>
<td>3.42</td>
</tr>
<tr>
<td></td>
<td>UNI</td>
<td>(46)</td>
<td>23.89</td>
<td>4.48</td>
<td>34.00</td>
<td>5.49</td>
</tr>
<tr>
<td>10</td>
<td>BI</td>
<td>(23)</td>
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<td>5.26</td>
<td>36.61</td>
<td>3.53</td>
</tr>
<tr>
<td></td>
<td>UNI</td>
<td>(18)</td>
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<td>3.98</td>
<td>32.39</td>
<td>8.17</td>
</tr>
<tr>
<td>11</td>
<td>BI</td>
<td>(27)</td>
<td>28.07</td>
<td>3.50</td>
<td>37.56</td>
<td>3.50</td>
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</table>

*Insufficient Information Provided on 41 Cases
TABLE 3
ANALYSIS OF COVARIANCE SUMMARY TABLE
FOR THE CLARKE VOCABULARY SCALE FOR
GRADERS 6 TO 11 BILINGUAL AND
GRADERS 6 TO 10 UNILINGUAL GROUPS

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<th>Mean Squares</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>78.22</td>
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<tr>
<td>Main Effects</td>
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<td></td>
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<td>Language</td>
<td>559.63</td>
<td>6</td>
<td>93.27</td>
<td>4.05</td>
<td>.05</td>
</tr>
<tr>
<td>Grade</td>
<td>491.11</td>
<td>5</td>
<td>98.22</td>
<td>5.81</td>
<td>.00</td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISP</td>
<td>266.25</td>
<td>2</td>
<td>133.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language of Home</td>
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<td>113.69</td>
<td>6.72</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>152.56</td>
<td>1</td>
<td>152.56</td>
<td>9.02</td>
<td>.00</td>
</tr>
<tr>
<td>Language x Grade</td>
<td>112.73</td>
<td>4</td>
<td>28.18</td>
<td>1.67</td>
<td>.16</td>
</tr>
<tr>
<td>Residual</td>
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<td>196</td>
<td>16.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4254.73</td>
<td>208</td>
<td>20.46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 1: Mean scores of bilingual and unilingual students in Grades 6 to 11 on the Clarke Vocabulary Scale.
6-10 language groups. The correlation between the vocabulary and ISP measures represents a positive relationship, since higher ISP scores indicate lower social status.

**Attitudes Toward Bilingualism**

The bilingual group showed more favorable attitudes toward the Canadian English-French culture than did unilingual students. Significant differences were found for the total Royal Commission Scale, \( t(256) = 5.33, p < .001 \). Examining the seven items that constitute a scale asking for opinions about the use of two languages in our culture, it was determined that the difference between groups was again highly significant; \( t(256) = 5.79, p < .001 \). Figure 2 compares the mean scores for both groups for the entire 12-item scale and for the seven-item bilingual attitude scale.

For those three questions in the scale pertaining to English-French relations, there were no significant differences between the groups. The two remaining questions asking for judgments about job prospects did differentiate the groups, with the bilingual group being more optimistic about obtaining employment in this province and elsewhere in Canada, \( t(256) = 4.20, p < .001 \). Analysis of covariance, as summarized in Table 4 for the whole scale, and in Table 5 for the seven-item bilingual attitude scale, showed that neither ISP nor language of the home had significant effects, while the effects of language remained highly significant. For the whole scale, \( F(1, 196) = 15.06, p = .000 \); for the seven-item scale, \( F(1, 196) = 22.63, p = .000 \). No significant grade or interaction effects were found. There was a negligible correlation between the Royal Commission Scale and ISP, with
Figure 2: Mean scores of bilingual and unilingual students in Grades 6 to 11 on the Royal Commission Attitude Scale for Total Scale and Seven-Item Bilingual Attitude Subscale.
### TABLE 4
ANALYSIS OF COVARIANCE SUMMARY TABLE
FOR THE ROYAL COMMISSION SCALE FOR
THE BILINGUAL AND UNILINGUAL GROUPS

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained</td>
<td>529.66</td>
<td>12</td>
<td>44.14</td>
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<td>Main Effects</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>450.40</td>
<td>6</td>
<td>79.57</td>
<td>230.86</td>
<td>.00</td>
</tr>
<tr>
<td>Grade</td>
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<td>1</td>
<td>387.65</td>
<td>15.06</td>
<td>.00</td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISP</td>
<td>19.78</td>
<td>2</td>
<td>9.89</td>
<td>.56</td>
<td>.46</td>
</tr>
<tr>
<td>Language of Home</td>
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<td>1</td>
<td>14.29</td>
<td>.56</td>
<td>.46</td>
</tr>
<tr>
<td>Language x Grade</td>
<td>59.48</td>
<td>4</td>
<td>14.87</td>
<td>.58</td>
<td>.68</td>
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<td>25.74</td>
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<td>Total</td>
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<td>208</td>
<td>26.80</td>
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</table>
TABLE 5
ANALYSIS OF COVARIANCE SUMMARY TABLE
FOR THE BILINGUAL ATTITUDE SUBSCALE OF
THE ROYAL COMMISSION SCALE FOR THE BILINGUAL
AND UNILINGUAL GROUPS

<table>
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<tr>
<th>Source of Variation</th>
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<th>p</th>
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<td>Main Effects</td>
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<td></td>
</tr>
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<td>6</td>
<td>239.69</td>
<td>22.63</td>
<td>.00</td>
</tr>
<tr>
<td>Grade</td>
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<td>239.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>34.40</td>
<td>5</td>
<td>6.88</td>
<td>.65</td>
<td>.65</td>
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<td>Covariates</td>
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<td>.05</td>
<td>.82</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>6.93</td>
<td>1</td>
<td>.69</td>
<td>.65</td>
<td>.42</td>
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<tr>
<td>Language x Grade</td>
<td>83.82</td>
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<td>196</td>
<td>10.59</td>
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</tr>
<tr>
<td>Total</td>
<td>2441.54</td>
<td>208</td>
<td>11.74</td>
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</tr>
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</table>
\( r (217) = -.07, p = .15. \)

Significant differences between the two groups were obtained at the .01 probability level or better, when analyses of covariance were performed after omitting the Grade 11 bilingual class from the sample.

Self-Concept Measures.

Janis-Field Feelings of Inadequacy Scale. When the two language groups were compared, this scale demonstrated significant differences between groups, \( t (256) = 1.95, p < .05, \) the bilingual students having a higher mean score. Figure 3 presents the mean scores for the two groups. Using vocabulary scores as covariate, as indicated in Table 6, analysis of covariance with language and grade as main effects just missed showing a significant difference for language, with \( F (1,246) = 3.75, p = .054. \) Pesner (1978), by means of a cluster analysis of scale items, found three relatively independent clusters for this scale that seemed to represent self-confidence in social situations, feelings of personal self-worth, and lack of shyness. Analysis of covariance of each of these three clusters showed that the items in the social self-confidence cluster were the ones that differentiated the groups, with \( F (1,246) = 4.54, p = .034. \) These scale items are numbers 3, 4, 11, 12, 13, 16, 17 and 20 in the Attitudes Toward Yourself section of the questionnaire found in the Appendix. Table 7 presents a summary of the results found for this cluster. Covariance analysis on the remaining two clusters, representing self-worth and lack of shyness, failed to show any significant differences between the two language groups.
Figure 3: Mean scores of bilingual and unilingual students in Grades 6 to 11 on the Janis-Field Feelings of Inadequacy Scale.
TABLE 6

ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
THE JANIS-FIELD FEELINGS OF INADEQUACY
SCALE, WITH VOCABULARY AS COVARIATE, FOR
THE BILINGUAL AND UNILINGUAL GROUPS

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<tr>
<th>Source of Variation</th>
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<th>p</th>
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<td>6</td>
<td>498.71</td>
<td>3.75</td>
<td>.05</td>
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<td>135.58</td>
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<td></td>
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<td>1.05</td>
<td>.01</td>
<td>.93</td>
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<td>132.76</td>
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TABLE 7
ANALYSIS OF COVARIANCE SUMMARY TABLE
FOR THE SOCIAL SELF-CONFIDENCE CLUSTER OF
THE JANIS-FIELD FEELINGS OF INADEQUACY SCALE,
WITH VOCABULARY AS COVARIATE, FOR THE
BILINGUAL AND UNILINGUAL GROUPS

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<td>.79</td>
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<tr>
<td>Language x Grade</td>
<td>32.66</td>
<td>4</td>
<td>8.16</td>
<td>.35</td>
<td>.85</td>
</tr>
<tr>
<td>Residual</td>
<td>5778.98</td>
<td>246</td>
<td>23.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6060.83</td>
<td>257</td>
<td>23.58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Since the Janis-Field Scale was correlated with ISP, $r (217) = -0.264$, $p = 0.001$, further analyses of covariance with ISP and language of the home as covariates were performed, with results demonstrating, as in Table 8 for the whole scale, and Table 9 for the social self-confidence cluster, that ISP had a highly significant effect. Thus even though differences remain after taking verbal ability into account, at least on the social self-confidence cluster, these differences are no longer evident when ISP is a covariate. This holds true for the total scale as well as for the three subscale clusters. Language spoken in the home was not a significant factor in these analyses, nor were there any significant grade or interaction effects.

Jackson's Self-Esteem Scale. The two language groups were significantly differentiated by this scale, $t (256) = 2.36$, $p = 0.010$. Taking verbal ability into account as shown in the Table 10 analysis of covariance summary, $F (1,246) = 5.63$, $p = 0.018$. However, with ISP as covariate, a highly significant effect for this variable was apparent, thus cancelling out any differences between the groups.

Jackson's scale was significantly correlated with ISP, with $r (217) = -0.22$, $p = 0.000$. Language spoken at home had no significant effect. Mean scores for the bilingual and unilingual groups are depicted in Figure 4.

Between-Grade Comparisons

Tests for linearity on the Clarke Vocabulary Scale showed significant linear trends upward for both groups with the bilingual sample having $F = 5.82$, $p = 0.002$, and the unilingual group, $F = 7.67$, $p = 0.0064$. There were no linear trends on the 12-item Royal Commission Scale;
TABLE 8
ANALYSIS OF COVARIANCE SUMMARY TABLE
FOR THE JANIS-FIELD FEELINGS OF INADEQUACY
SCALE FOR THE BILINGUAL AND UNILINGUAL GROUPS

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained</td>
<td>3205.97</td>
<td>12</td>
<td>267.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>1279.65</td>
<td>6</td>
<td>349.37</td>
<td>3.36</td>
<td>.07</td>
</tr>
<tr>
<td>Grade</td>
<td>930.29</td>
<td>5</td>
<td>186.06</td>
<td>1.79</td>
<td>.12</td>
</tr>
<tr>
<td>Covariates</td>
<td>1470.14</td>
<td>2</td>
<td>1451.68</td>
<td>13.94</td>
<td>.00</td>
</tr>
<tr>
<td>ISP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language of Home</td>
<td>456.18</td>
<td>4</td>
<td>114.05</td>
<td>1.10</td>
<td>.36</td>
</tr>
<tr>
<td>Language x Grade</td>
<td>456.18</td>
<td>4</td>
<td>114.05</td>
<td>1.10</td>
<td>.36</td>
</tr>
<tr>
<td>Residual</td>
<td>20406.58</td>
<td>196</td>
<td>104.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23612.55</td>
<td>208</td>
<td>113.52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 9
ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
THE SOCIAL SELF-CONFIDENCE CLUSTER OF THE
JANIS-FIELD FEELINGS, OF INADEQUACY SCALE FOR
THE BILINGUAL AND UNILINGUAL GROUPS

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained</td>
<td>462.00</td>
<td>12</td>
<td>38.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>238.15</td>
<td>6</td>
<td>39.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>58.87</td>
<td>1</td>
<td>58.87</td>
<td>3.06</td>
<td>.08</td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISP</td>
<td>176.28</td>
<td>2</td>
<td>88.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language of Home</td>
<td>176.15</td>
<td>1</td>
<td>176.15</td>
<td>9.16</td>
<td>.00</td>
</tr>
<tr>
<td>Language x Grade</td>
<td>.13</td>
<td>1</td>
<td>.13</td>
<td>.01</td>
<td>.94</td>
</tr>
<tr>
<td>Residual</td>
<td>3770.18</td>
<td>196</td>
<td>19.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4232.18</td>
<td>208</td>
<td>20.35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 10

Analysis of Covariance Summary Table for Jackson's Self Esteem Scale for the Bilingual and Unilingual Groups, with Vocabulary as Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained</td>
<td>609.37</td>
<td>11</td>
<td>55.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>496.60</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>196.50</td>
<td>1</td>
<td>196.50</td>
<td>5.63</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>300.10</td>
<td>5</td>
<td>60.02</td>
<td>1.72</td>
<td>.13</td>
</tr>
<tr>
<td>Covariate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>3.67</td>
<td>1</td>
<td>3.67</td>
<td>.11</td>
<td>.75</td>
</tr>
<tr>
<td>Language x Grade</td>
<td>109.10</td>
<td>4</td>
<td>27.27</td>
<td>.78</td>
<td>.54</td>
</tr>
<tr>
<td>Residual</td>
<td>8583.65</td>
<td>246</td>
<td>34.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9193.02</td>
<td>257</td>
<td>35.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 4: Mean scores of bilingual and unilingual students in Grades 6 to 11 on Jackson's Self Esteem Scale from the Jackson Personality Inventory.
however, the seven-item Bilingual Attitude Scale showed a significant test for linearity, with $F = 6.33$, $p = .013$ for the bilingual group and $F = 6.32$, $p = .013$ for the unilingual group. In the case of the bilingual students, the trend towards favorable opinions of the French culture rises, while for the unilingual students, there is a distinct downward trend, as inspection of Figure 2 shows. Jackson's Self-Esteem Scale shows a significant rising linear trend for the unilingual sample only, with $F = 6.6$, $p = .011$. Both the Janis-Field and ISP measures failed to demonstrate any significant differences between the groups in tests of linearity.

Correlational Analyses

There are six significant correlations between scales, as shown in Table 11. These are between the Royal Commission Scale and the Vocabulary Scale, as well as both self-esteem scales; between the Janis-Field Scale and ISP; between the Janis-Field Scale and Jackson's Self-Esteem Scale; between Jackson's Scale and ISP; and between the Clarke Vocabulary Scale and ISP.

Grade is significantly correlated with the Vocabulary measure and with Jackson's Self-Esteem Scale. Language group is significantly correlated with the Clarke Vocabulary Scale, the Royal Commission Scale, and both the Janis-Field and Jackson's Scale. However, language group is not correlated with ISP.

Reliability of Scales

For the Royal Commission Scale, alpha reliability is .64. Taking the first seven items as the attitude scale, coefficient alpha is .72.


**TABLE 11**

INTER-Scale CORRELATIONS (PEARSON'S r) FOR

VOCABULARY, ATTITUDE, SELF-ESTEEM AND SOCIAL

STATUS MEASURES

<table>
<thead>
<tr>
<th>Scales</th>
<th>Royal Commission</th>
<th>Janis-Field</th>
<th>Jackson</th>
<th>ISP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary</td>
<td>.16 (p=.01)</td>
<td>.02 (p=.40)</td>
<td>.02 (p=.39)</td>
<td>-.16 (p=.01)</td>
</tr>
<tr>
<td>Royal</td>
<td>1.000</td>
<td>.11 (p=.04)</td>
<td>.13 (p=.02)</td>
<td>-.07 (p=.15)</td>
</tr>
<tr>
<td>Commission</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janis Field</td>
<td>1.000</td>
<td>.57 (p=.00)</td>
<td>-.26 (p=.00)</td>
<td></td>
</tr>
<tr>
<td>Jackson</td>
<td>1.000</td>
<td></td>
<td></td>
<td>-.22 (p=.00)</td>
</tr>
<tr>
<td>ISP</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
</tr>
</tbody>
</table>
Additional reliability analysis on the self-concept measures yield alpha coefficients of .84 for the Janis-Field Scale and .73 for Jackson's Self-Esteem Scale.

**Comparisons Based on Home Language**

Within the bilingual group, 44 students reported French as their home language and 69 reported that they spoke English at home. Results of t-tests on these two groups showed that there were no significant differences on the Royal Commission Scale; however, for the seven-item Bilingual Attitude Scale, there was a difference at the .05 level of significance, \( t(111) = 2.16, p = .017 \). The groups also differed on ISP with \( t(96) = 2.11, p = .019 \), i.e., the students from English-speaking homes were of higher social status. There were no differences in vocabulary scores, nor on the self-concept measures.

When the bilingual students from English-speaking homes were compared to the unilingual (English) students, the former were found to differ significantly on all measures with t-tests between groups yielding the following results -- Royal Commission Scale \( t(201) = 4.03, p < .001 \); Bilingual Attitude Scale \( t(201) = 4.05, p < .001 \); Janis-Field Scale \( t(201) = 2.06, p = .021 \); Jackson's Self Esteem Scale \( t(201) = 2.86, p = .003 \); Clarke Vocabulary \( t(201) = 2.48, p = .007 \); ISP \( t(170) = -2.43, p = .008 \). On all measures, this group of bilingual students had higher mean scores, as shown in Table 12.
TABLE 12

MEAN SCORES AND STANDARD DEVIATIONS FOR VOCABULARY, ATTITUDE, SELF-ESTEEM AND SOCIAL STATUS MEASURES FOR BILINGUAL AND UNILINGUAL GROUPS BY LANGUAGE OF THE HOME

<table>
<thead>
<tr>
<th>Group</th>
<th>(N)</th>
<th>Vocabulary</th>
<th>Royal Commission</th>
<th>Bilingual Attitude</th>
<th>Janis-Field</th>
<th>Jackson</th>
<th>ISP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>x</td>
<td>S.D.</td>
<td>x</td>
<td>S.D.</td>
<td>x</td>
<td>S.D.</td>
</tr>
<tr>
<td>Bilingual</td>
<td>44</td>
<td>23.18</td>
<td>4.07</td>
<td>37.48</td>
<td>3.15</td>
<td>19.43</td>
<td>1.83</td>
</tr>
<tr>
<td>(French Home)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilingual</td>
<td>69</td>
<td>24.97</td>
<td>5.37</td>
<td>36.93</td>
<td>4.01</td>
<td>18.62</td>
<td>2.12</td>
</tr>
<tr>
<td>(English Home)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unilingual</td>
<td>134</td>
<td>23.18</td>
<td>4.61</td>
<td>33.82</td>
<td>5.72</td>
<td>16.55</td>
<td>3.97</td>
</tr>
<tr>
<td>(English Home)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ISP (N) 52.35 22.92
ISP (N) 42.59 21.78
ISP (N) 50.28 18.72
CHAPTER IV
DISCUSSION

Bilingualism and Verbal Intelligence

The prediction that French-English bilingual students would demonstrate enhanced verbal ability in the English language was not confirmed. Although the bilingual group as a whole had a higher mean score than the unilingual group, social status was a significant variable in eliminating group differences. Furthermore, with the Grade 11 bilingual class excluded from the analysis, due to the unavailability of a Grade 11 unilingual class, the means between the two groups were in fact identical. Differences were most obvious in the lower grades where bilingual students received higher mean scores, although not significantly higher. The extensive research of Gardner, Lambert and Peal determined that bilingual fluency was correlated with cognitive ability, represented by such tests as spelling, verbal analogies and using words in sentences. Such studies focused on second-language learning by majority group members. Studies outside of Canada as cited in McInnis and Donoghue (1980) where minority members attend schools in their own language, tend to demonstrate that these minority students are not as proficient in English skills as the English natives. A recent study (McInnis & Donoghue, 1980) compared English students in Grades 1-3 over a three-year period, in both French immersion (where students have all subjects in French) and French intensive programs
(with 90 minutes/day of French study). This longitudinal study showed that the immersion program produced improved French skills, but at the expense of some impairment of English skills. This is contrary to previous findings in Canadian research. These researchers also found that differences were greater at the first than at the third-year level.

In a review of studies on bilingualism, Wagner (1980) pointed out various problems encountered in such research. First, many early studies did not control for such variables as socioeconomic status, degree of bilingual proficiency and type of tests used. For example, proficiency ranged from native-like fluency to merely adequate reading or writing skills. Also, it is known that standardized tests usually discriminate against groups who were not represented in the standardization sample. In the present study, an effort was made to control for social status and degree of bilingualism; however, since the Clarke Vocabulary Scale is based on the Wechsler scale, the latter criticism may well be a valid one here. Another problem evident in studies that demonstrate that bilingualism has positive cognitive consequences (Ben-Zeev, 1977; Ianco-Worrall, 1972; Lambert, 1977; McInnis & Donoghue, 1980) is that such consequences seem to be limited to children in the lower grades. In this study, the differences are also greater at the lower Grades 6 and 7 levels than at the high-school level, a finding consistent with the above-mentioned research. Such results are surprising if one assumes that cognitive development increases over time; the cognitive advantages of bilingualism should likewise increase. Why they do not remains unexplained by these studies. Research designed to investigate the cognitive correlates of bilingualism seems indicated,
as it should not be assumed that bilingual proficiency and verbal intelligence are necessarily derived from the same mental processes.

In addition, it is interesting to note that when the bilingual group is examined in its entirety, their verbal skills are equivalent to their English counterparts. However, when the students are grouped according to ethnic background, differences in verbal ability become apparent. Those bilingual students from English-speaking families performed significantly better on the vocabulary scale than either the bilinguals from French homes or the English unilingual students. These particular English-background bilinguals were also from families of significantly higher social status. These results seem to fit with previously mentioned findings where the English majority learn French. It is probable that the more intelligent children from English homes of higher social status select themselves into the French schools, and that bilingualism is an achievement desired by parents who want cultural and career advantages for their children.

Overall, the results of this study indicate that fluency in French and English does not significantly enhance English skills; however, and more importantly, it is not detrimental to the acquisition of such skills.

**Bilingual Attitudes**

The second hypothesis that bilingual students would display more positive attitudes toward the French culture was confirmed. They hold bilculturalism in high value and expect that their job prospects will be enhanced in the future. Pesner (1978) found that his sample of students did not differ in their job expectations within the province, but they
did expect better opportunities elsewhere in Canada. The present group of students had higher expectations for success in Ontario as well as throughout Canada. Perhaps, as opportunities for a bilingual education increase, as has happened in this geographical area, students no longer feel they must move to other parts of the country to find employment.

The two groups in the present study did not differ, however, on their judgments of English-French relations, a finding identical to Pesner (1978). Both groups were of the opinion that relations are fair to good and will probably remain about the same as they are now. Thus it seems that some skepticism remains concerning the harmonious intermingling of the two cultures.

It would appear that the first seven items of the scale more accurately reflect bilingual attitudes than the scale as a whole, and should be used alone in future research. These seven items have three alternate choices and represent a more uniform scale; inclusion of the remaining items offering four or six choices is not concomitant with good scale construction. Further, when limiting the scale to these seven items, it becomes apparent that there is a trend for the bilingual students to have increasingly favourable attitudes as they proceed from grade to grade; for the unilingual group, there is an opposite trend, in that their attitudes become less favourable. Perhaps as these latter students grow older, there is a tendency to develop ethnic prejudice, although this must remain speculative at this point. Pesner's sample, in contrast, did not show increasing differences between his two groups. The present study offers more support for postulating that the French program created a more favourable
climate for enhancing attitudes toward the minority culture. Longitu-
dinal studies in various geographical areas over a wider range of
grade levels would provide more conclusive evidence for this
supposition:

Bilingualism and Social Self-Esteem

Considering the final prediction that the language program would
have an impact on social self-esteem, results are less clear-cut. On
the Janis-Field Scale, only the cluster of items found by Pesner (1973)
to reflect self-confidence in interacting with others distinguished the
two language groups. These results support Wylie's (1968, 1974) view
that specificity of self-referents is extremely important. When the
items from the entire scale are examined, it becomes clear that this
cluster does indeed contain statements that refer to the "social self-
concept" as suggested by Wylie (1968). Representative of such items
are "How often do you worry about whether people like to be with you?"
and "When you talk in front of a group of people your own age, how
pleased are you with your performance?" In contrast, the items from
the cluster that Pesner labelled "feelings of self-worth" are of a
personal nature, such as "How often do you feel inferior to most of the
people you know?" and "How often do you feel that you dislike yourself?"
This type of statement clearly reflects feelings that are related to the
"private self-concept", as Wylie described it. Differences in verbal
ability do not significantly affect the outcome; however, social status
does make a difference when analyzing this cluster. The students from
homes of higher social class have higher self-esteem scores, even on the
social self-confidence cluster.
Jackson's Self-Esteem Scale produced the same results as the social self-confidence cluster of the Janis-Field Scale. Again, social status was a significant factor in eliminating group differences. Jackson's scale seems to better comply with Wylie's requirements for exact definition of the construct under examination and should be more useful in future research of this type.

Nevertheless, even though language groups differed with ability scores controlled, the final hypothesis was not confirmed, due to the influence of social status. There was no evidence that participation in the French program per se enhanced social self-esteem, nor that self-esteem increases from grade to grade. In fact, the results from this study offered abundant evidence that family background and social status have the greatest effect on the students' social self-confidence. It is interesting to note that it was the bilingual students from English homes who received the highest scores on the self-concept measures, and for this group, it is probable that the acquisition of the second language was an 'additive' experience. There appears to be a trend in this geographical area for English Canadians of higher social status to view bilingualism as positive. Triandis (1980) states, "The ideal society is the one where those who are more powerful, and hence whose identity will not be lost by learning other cultures and languages, will acquire the language and culture skills of those less powerful, . . ." These particular Canadians may represent the forerunners of such a desirable pluralistic society.

Limitations of the Study

A discussion of the problems related to this research would be
relevant. Misleading interpretations must be avoided because of the ex post facto nature of the study (Kerlinger, 1973), wherein it was not possible to have direct control of independent variables, i.e., subjects could not be randomly selected and then placed into one of the two language programs, obviously. Nor was it possible to randomly select students from the available population. In the case of the elementary students, the total Grades 6, 7 and 8 classes were utilized, where parental approval was given, and if they met the language criterion. For the high-school students, classes designated by school personnel were given the questionnaire. In spite of the fact that such class members were randomly assigned by computer scheduling, nevertheless restrictions were built into the time-table to accommodate subject options. Thus the problem of self-selection into groups is a serious issue. There was also the problem that the sample consisted of groups, i.e., grade levels that were unequal and disproportionate. For this reason, sex differences were not examined. As a result, conclusions must remain tentative.

Yet, the results are encouraging in that they replicate quite closely those found by Pesner regarding attitudes toward bilingualism. Similarly, the results from the verbal ability and self-esteem measures, while not significant, were in the predicted direction. The data nowhere indicate that acquiring two languages leads to deficits in majority language skills, poor attitudes towards the minority French culture, or decreased self-esteem. It is felt by the present author that, where random sampling of schools and subjects within schools in various geographical areas, inclusion of French unilingual groups, and replication of studies is possible, one may then generalize beyond this
and Pesner’s study with greater confidence. Wagner (1980) also suggests relating cognitive abilities to individual differences in bilingual proficiency across a variety of language groups in a within-populations design, thus eliminating many of the confounding variables found in between-groups designs.

Summary and Conclusions

The aim of the present research was to investigate three specific correlates of French-language acquisition by English students, namely, English vocabulary skills, attitudes towards bilingualism, and self-esteem in interpersonal relationships. The expectations were that the achievement of bilingual proficiency would enhance basic English word skills, promote more favorable attitudes towards French culture and improve social self-confidence. Clear-cut evidence for more favorable French cultural attitudes was demonstrated for these bilingual students via analysis of covariance, using Index of Social Position and language of the home as covariates. Evidence in support of enhanced verbal ability and self-esteem was less conclusive. Differences between the two language groups on verbal ability and self-concept measures were shown to be attributable to differences in social class, i.e., where verbal skills and self-esteem scores were higher, the fathers of these students also possessed more education and better jobs.

Thus it was concluded that bilingual education does indeed enhance favorable attitudes towards the second-language group, with some evidence that those students who learn only English tend to
become more prejudiced towards the French language and culture as they advance from grade to grade. Some bilingual students also demonstrated better English skills and self-esteem; however, these students were from homes of higher social class. There seems to be a growing trend in this area of Southwestern Ontario for professional families to realize the value of a bilingual education in a bilingual country, and to provide such opportunities for their children.

The implications of these findings seem to be relevant to students, parents and educators. It seems reasonable to state unequivocally that learning a second language does not interfere with native language skills. Further, it is encouraging that more English parents are taking steps to see that their children become adults who are truly representative members of a bilingual country, who value the French culture and who may be more socially confident because of their acquired second language. These benefits are most worthwhile, beyond the practical aspects of bilingualism, such as employment prospects. Finally, studies of this type provide social scientists with additional information in an area that has been little investigated to date, especially concerning personality traits.
INSTRUCTIONS

I am asking you to help me with some research by filling out this questionnaire. It is not a test that has right or wrong answers; I only want to find out what your feelings and opinions are about different subjects.

I don't need your name, so please do not write it down on any of these pages. All I want you to do is answer every question as honestly as you can.

If there is something you don't understand while you are filling this out, please raise your hand and I will come over to you individually to answer your question.

Thank you for helping me.
OPINION SURVEY

Circle one answer only:

1. French and English should be required subjects in all Canadian schools.
   
   I'd agree  I'd disagree  I'm not sure
   with that      with that

2. It would be a good idea to have road signs printed in both English and French all over Canada.
   
   I'd agree  I'd disagree  I'm not sure
   with that      with that

3. As far as I'm concerned, Canada should have just one official language--English.
   
   I'd agree  I'd disagree  I'm not sure
   with that      with that

4. It would be a good thing if all Canadians could speak both French and English.
   
   I'd agree  I'd disagree  I'm not sure
   with that      with that

5. There is no reason why an English-speaking Canadian should have to learn French if he is never going to use it.
   
   I'd agree  I'd disagree  I'm not sure
   with that      with that

6. How important do you think being able to speak both French and English is in helping a young person to get ahead in Canadian life today?
   
   Very important  Slightly important  Unimportant

7. Here in Canada, do you think too much importance has been placed on being able to speak two languages?
   
   No  Yes  I'm not sure

8. Right now, how good would you say relations are between English-Canadians and French-Canadians---would you say good, fair or poor?
   
   Good  Fair  Poor  I'm not sure
9. Right now would you say that English-French relations in Canada are getting better, getting worse, or staying about the same?

Getting better  Getting worse  Staying about the same  I'm not sure

10. Over the next ten years, do you think English-French relations will get better, get worse, or stay about the same as they are now?

Get better  Get worse  Stay about the same as they are now  I'm not sure

11. After you have finished all your schooling, how good do you think your chances will be of finding a good job somewhere in this province?

Definitely good  Probably good  Fair
Probable not so good  Definitely not so good  I'm not sure

12. After you have finished all your schooling, how good do you think your chances would be of finding a good job somewhere else in Canada?

Definitely good  Probably good  Fair
Probable not so good  Definitely not so good  I'm not sure

ATTITUDES TOWARDS YOURSELF

Circle one answer only:

1. How often do you have the feeling that there is nothing you can do well?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

2. When you have to talk in front of a class or a group of people your own age, how afraid or worried do you usually feel? (e.g., very afraid)

Very afraid  Fairly afraid  Sometimes not very  Not at all

3. How often do you worry about whether other people like to be with you?

Very often  Fairly often  Sometimes  Once in a great while  Practically never
4. How often do you feel embarrassed when others are around?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

5. How often are you troubled with shyness?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

6. How often do you feel that you are not as good as most of the people you know?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

7. Do you ever think you are a worthless individual?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

8. How much do you worry about how well you get along with other people?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

9. How often do you feel that you dislike yourself?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

10. Do you ever feel so discouraged with yourself that you wonder whether anything is worthwhile?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

11. How often do you feel that you have handled yourself well at a social gathering?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

12. How often do you have the feeling that you can do everything well?

Very often  Fairly often  Sometimes  Once in a great while  Practically never

13. When you talk in front of a class or group of people your own age, how pleased are you with your performance?

Very  Fairly  Slightly  Not very  Not at all
14. How comfortable are you when starting a conversation with people whom you don’t know? (e.g., very comfortable)
   Very    Fairly    Slightly    Not very    Not at all
15. How often do you feel that you are a successful person?
   Very often    Fairly often    Sometimes    Once in a great while    Practically never
16. How confident are you that your success in your future job or career is assured? (e.g., very confident)
   Very    Fairly    Slightly    Not very    Not at all
17. When you speak in a class discussion, how sure of yourself do you feel?
   Very    Fairly    Slightly    Not very    Not at all
18. How sure of yourself do you feel when among strangers?
   Very    Fairly    Slightly    Not very    Not at all
19. How confident do you feel that some day the people you know will look up to you and respect you?
   Very    Fairly    Slightly    Not very    Not at all
20. In general, how confident do you feel about your abilities?
   Very    Fairly    Slightly    Not very    Not at all

Read each of the following statements and decide whether or not it describes you. If you agree with a statement or decide that it does describe you, circle T(TRUE). If you disagree with a statement or feel that it does not describe you, circle F(FALSE).

21. T    F    I make a better follower than a leader.
22. T    F    I am usually quite confident when learning a new game or sport.
23. T    F    I have never been a very popular person.
24. T    F    I rarely feel embarrassed in a strange group.
25. T    F    I am not the type of person one remembers after one meeting.
26. T    F    It is easy for me to strike up a conversation with someone.
27. T F I am uncomfortable when I am meeting new people.
28. T F I am seldom at a loss for words.
29. T F My behaviour would be quite awkward if I had to apply for a loan from a bank.
30. T F I am considered a leader in my social circle.
31. T F I often wish I were more outgoing.
32. T F I enjoy stating my opinions in front of a group.
33. T F I seem to do more listening than talking in conversations with others.
34. T F People seem to be interested in getting to know me better.
35. T F I like to remain unnoticed when others are around.
36. T F I usually try to add a little zest to a party.
37. T F I have trouble expressing my opinions.
38. T F I am able to talk intelligently to people in a wide variety of occupations.
39. T F I prefer to go to social functions with a group of people so as not to stand out.
40. T F I find it easy to introduce people.

WORD MEANING LIST

For each underlined word, circle the answer that is the best one in your opinion.

1. a book
   a. is to read
   b. is a ball
   c. is blue
   d. is to run with
2. a car
   a. is a dance
   b. is to drive
   c. is black
   d. is to eat
3. a horse
   a. has four legs
   b. is small
   c. lives in a house
   d. flies
4. a clock
   a. keeps you dry
   b. is deep
   c. tells time
   d. is for cats
5. a hammer
   a. grows on a tree
   b. is a tool
   c. is for your leg
   d. has a shell
6. a pillow
   a. is an animal
   b. is hard
   c. is to open jars
   d. is to sleep on
7. a glove  a. goes on your hand  b. goes on your head  
    b. is to work with  d. is a tree  
    c. is to point with  
8. a saw  a. is to cut with  b. is to sit on  
    c. is to point with  d. is a page  
9. fur  a. is blue  b. is animal hair  
    c. is sweet  d. is on birds  
10. jewel  a. round  b. sky  
    c. flower  d. diamond  
11. connect  a. spill  b. part  
    c. join  d. feel  
12. shovel  a. farm  b. spade  
    c. cry  d. ace  
13. weapon  a. sword  b. correct  
    c. lip  d. pecan  
14. nuisance  a. baby  b. help  
    c. worse  d. bother  
15. ridiculous  a. silly  b. ruined  
    c. poor  d. defenseless  
16. nimble  a. fat  b. active  
    c. brave  d. sick  
17. wager  a. court  b. dice  
    c. gamble  d. strike  
18. magnify  a. make smaller  b. distant  
    c. make bigger  d. handle  
19. fable  a. fur  b. watch  
    c. rhyme  d. story  
20. facetious  a. hungry  b. witty  
    c. weighty  d. ugly  
21. blemish  a. flaw  b. abuse  
    c. vaunt  d. clean  
22. strife  a. try  b. verse  
    c. battle  d. wine  
23. seclude  a. ensure  b. dream  
    b. isolate  d. obtain  
24. recede  a. withdraw  b. deny  
    c. repeat  d. dine
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<tr>
<td>25. profusion</td>
<td>a. glitter</td>
<td>b. plenty</td>
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<td></td>
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<td>c. noise</td>
<td>d. glory</td>
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<td>26. adversary</td>
<td>a. opponent</td>
<td>b. explosive</td>
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<td>c. light</td>
<td>d. grammar</td>
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<td>27. effrontery</td>
<td>a. bombing</td>
<td>b. boldness</td>
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<td></td>
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<td>c. triviality</td>
<td>d. belief</td>
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<td>28. impending</td>
<td>a. valuable</td>
<td>b. prominent</td>
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<td>c. imminent</td>
<td>d. obese</td>
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<td>29. abyss</td>
<td>a. confusion</td>
<td>b. suicide</td>
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<td></td>
<td></td>
<td>c. monastery</td>
<td>d. chasm</td>
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<td>30. diverge</td>
<td>a. asset</td>
<td>b. vacation</td>
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<td></td>
<td></td>
<td>c. distress</td>
<td>d. wander</td>
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<td>31. devoid</td>
<td>a. planet</td>
<td>b. vacant</td>
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<td></td>
<td></td>
<td>c. missing</td>
<td>d. insect</td>
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<td>32. arduous</td>
<td>a. laborious</td>
<td>b. shapeless</td>
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<td></td>
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<td>c. sterile</td>
<td>d. proud</td>
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<td>33. vigilant</td>
<td>a. watchful</td>
<td>b. careful</td>
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<td></td>
<td></td>
<td>c. literal</td>
<td>d. winning</td>
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<td>34. relinquish</td>
<td>a. food</td>
<td>b. plaque</td>
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<td></td>
<td></td>
<td>c. digress</td>
<td>d. surrender</td>
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<td>35. catacomb</td>
<td>a. deep valley</td>
<td>b. Japanese garden</td>
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<td></td>
<td></td>
<td>c. ruined city</td>
<td>d. underground cemetery</td>
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<td>36. indemnity</td>
<td>a. penalty</td>
<td>b. subsidy</td>
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<td></td>
<td>c. amity</td>
<td>d. ordinance</td>
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<td>37. reprobation</td>
<td>a. approval</td>
<td>b. censure</td>
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<td></td>
<td></td>
<td>c. slander</td>
<td>d. verification</td>
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<td>38. dilatory</td>
<td>a. slow</td>
<td>b. expanded</td>
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<td></td>
<td></td>
<td>c. selfish</td>
<td>d. uncertain</td>
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<td>39. requite</td>
<td>a. admonish</td>
<td>b. love</td>
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<td></td>
<td></td>
<td>c. repay</td>
<td>d. commend</td>
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<td>40. imprecation</td>
<td>a. inaccuracy</td>
<td>b. scruple</td>
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<td></td>
<td></td>
<td>c. curse</td>
<td>d. rarity</td>
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ADDITIONAL DATA

Answers to the following questions will help me to find out if any of these factors are related to your opinions.

1. What is your father's occupation? (Please be exact and state what he does for a living rather than where he works.)

   ________________________________________________________

2. How much education does your father have? (For example, state last grade completed or if he finished high school or has a university degree.)

   ________________________________________________________

3. How often is English spoken in your home?

   ________ % of the time.

4. How often is French spoken in your home?

   ________ % of the time.

5. Please complete the following:

   SEX:  Male  Female

   GRADE:  _____

   DATE OF BIRTH:  Year  Month  Day
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VITA AUCTORIS

1939 - Born Mary Anne Creede in Windsor, Ontario, November 16.

1957 - Graduated from St. Mary's Academy, Windsor, Ontario.
        Enrolled at Assumption University of Windsor.

1959 - Entered training in laboratory technology at
        Hotel Dieu Hospital, Windsor, Ontario.

1961 - Became a registered member of the Canadian Society
        of Laboratory Technologists.

1962 - Graduated from Assumption University of Windsor with
        a B.Sc. in Biology.

1963 - Married Edmund Johnston. They now have three
        children, Matthew, Christopher and Elizabeth.

1975 - Enrolled at the University of Windsor to complete
        undergraduate requirements in Psychology.

1978 - Graduated from the University of Windsor with an
        Honours B.A. in Psychology, receiving the Governor-
        General's Gold Medal in Psychology.
        Enrolled in the Master's program in Clinical
        Psychology at the University of Windsor.

1980 - Accepted into the Doctoral program in Clinical
        Psychology at the University of Windsor.