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ABSTRACT

An instrument to measure attitude toward the learning of French as a second language (ALFS) was developed. Instruments already developed to measure motivational intensity and orientations (instrumental and integrative) were modified to fit the local situation. The experimental subjects were 100 students from grades 7 and 8. Twenty-five students were selected randomly from each grade and sex, out of a total of 571, receiving instruction in French by "Le Francais International" method in a mid-western Canadian city. Each of the subjects was rated on achievement by their respective teachers on a 5-point scale. The ALFS scores intercorrelation matrix produced 4 principal factors which were rotated to varimax- and promax-criterion. These factors were interpreted to be pragmatic, possessive, perseverance, and reflective attitudes. The intercorrelation matrix of the 4 factor scores, motivational intensity, orientations, and achievement ratings, resulted in only one principal factor establishing ALFS factors as correlates of the other variables. A step-wise regression analysis revealed that perseverance factcr and motivational intensity were the most effective of the 7 competing predictors of achievement in French, accounting for 26.8% of the variance, whereas the entire set of predictors accounted for 30.6% of the variance. (Author)

DIMENSIONS OF A SCALE OF ATTITUDE TOWARD THE LEARNING OF FRENCH AS A SECOND LANGUAGE AND THEIR CORRELATES

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Abstract

An instrument to measure attitude toward the learning of French as a second language (ALFS) was developed. Instruments already developed to measure motivational intensity and orientations (instrumental and integrative) were modified to fit the local situation.

The experimental Ss were 100 students from grades 7 and 8. Twenty-five students were selected randomly from each grade and sex, out of a total of 571, receiving instruction in French by Le Français International method in a mid-western Canadian city. Each of the Ss was rated on achievement by their respective teachers on a 5-point scale.

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As early as the 1940's it was recognized that the factors of aptitude and intelligence alone could not account for the large degree of variation in levels of achievement in second language acquisition. Studies conducted soon began to place considerable importance on the attitudinal-motivational factors of the learner.

Perhaps one of the first comprehensive reports specifically related to second language learning was that of Dunkel (1948). He investigated the effect of affective variables on second language acquisition. Larsen, Wittenborn and Giesecke (1942) found that significantly more of the high achievers in College German showed an interest in German and had a desire to master the language.

Jordan (1941) assessed attitudes toward five school subjects including French of 231 boys in North London. He found that attitude toward French tended to be most favorable during the first year of study and declined steadily in the higher forms. Attitude toward French generally varies with the general standard of academic attainment, the brightest forms having the most positive attitude. It was also noted that achievement was related to the utilitarian motives of the Ss. Pritchard (1935) had earlier arrived at similar conclusions.

Jones (1949, 1950) assessed the effects of home background, sex, year level, and intelligence on attitude and achievement in Welsh. He found that attitude declined with experience in the subject and increased

age. There was a statistically significant sex difference in attitude scores, girls showing a more favorable attitude toward Welsh than boys. The significant positive correlation between attitude and achievement was obtained only in the third and fourth years of Welsh.

In a study involving two large groups of high school students receiving French instruction, Weldon (1951) found a correlation coefficient of .45 between attitude and achievement. Females had significantly more favorable attitudes toward French and scored significantly higher on measures of achievement.

As of about 1952 considerably more research has been devoted to the isolation of factors considered to be determiners of success in the acquisition of a second language. Carroll (1963) and Jakobovits (1969) have both proposed very similar models of the five complex elements which make for successful second language learning. They described these elements as the learner's aptitude, intelligence, and perseverance along with quality of instruction and the opportunity for learning afforded the student. According to Jakobovits' (1969) definition of perseverance, it encompasses the attitudinal-motivational factor and accounts for 33% of the variance in achievement in a second language.

Gardner (1958) obtained two orthogonal factors, linguistic aptitude and social motivation, related to achievement in a second language. In a follow up study, Gardner and Lambert (1959) examined one of the previous groups for language learning aptitude, verbal intelligence, attitude toward the French community and intensity of motivation to learn French. They concluded that aptitude and intelligence formed a factor that was independent of a second factor, comprising indices of motivation, type of motivation, type of orientation toward language and social attitudes toward French-

Canadians. Achievement in French was reflected with equal prominence in both the factors. Gardner (1960) further confirmed the above findings and extended them in a study involving 90 grade ten students from English speaking homes. Not only did he arrive at the same two independent factors once more but he also found that students integratively motivated (interested in meeting with and understanding more about members of the other community and having a desire to learn their language and willing to expend considerable effort toward this goal) achieved significantly higher scores in measures of achievement than did instrumentally motivated students (those learning French for utilitarian reasons). Lambert, Gardner, Olton, and Turnstall (1961) conducted a study in a cultural setting other than the bicultural Quebec scene and concluded that motivation and attitude were significantly related to achievement in French.

In a study involving four groups of subjects from over 80 countries with varying degrees of proficiency in the English language, Spolsky (1969) investigated Gardner and Lambert's (1959) theory of integrative motivation. His study reaffirmed the importance of attitude as one of the factors explaining degree of proficiency a student achieves in learning a second language. He found that a student's attitude toward speakers of the other language determined how well he learned, and that he learned better when he wanted to be a member of the group speaking the other language. Spolsky (1969) found the correlation between integrative motivation and English proficiency to be significant at the .01 level.

Politzer (1953-54) found that the majority of students had clearly extrinsic (or instrumental) motives in studying a second language. However, a breakdown of students by achievement scores in the language showed that more of the high achievers in the course had intrinsic motives than did the

low achievers. A very recent study by Reinert (1970) confirmed the findings of Politzer that the majority of students enrolled in second language courses do so primarily for the sake of fulfilling immediate requirements rather than through any intrinsic motivation, such as desire to learn the second language and its culture.

Several of the above studies indicated significant sex differences in attitude toward and motivation in second language learning and consequent achievement scores. Girls usually scored higher than boys on attitudinal-motivational measures and consequently scored better as well on achievement tests. Renard and Heinle (1968) proposed that this difference was almost certainly the result of motivational differences and general cultural influence of Western society; girls in general do better in language skills and worse in mechanical and scientific areas.

Although most earlier studies pointed to a decline in positive attitude with successive years of study in a second language, some of the more recent research such as that of Miller (1965) would tend to suggest that perhaps the newer audio-lingual or audio-visual-lingual methods sustain greater interest or at least maintain the interest of those who were highly motivated from the beginning.

In a bilingual country like Canada, it is becoming more and more important to be able to speak, read, and write French as well as English. This is partly due to the recent increased emphasis by the Federal Government on its employees to be completely bilingual. Moreover, federal civil positions require the applicants, in almost all instances, to be completely bilingual. It remains an interesting proposition to determine how students who are learning French as a second language are predisposed to the learning of it. Later on it would become an even more interesting question to determine the change in this

predisposition. Hence this study was an attempt--to construct a scale of attitude toward the learning of French as a second language (ALFS) in elementary schools (grade 1-8); to determine the underlying dimensionality of ALFS; and to determine the correlates of these dimensions with achievement, motivation, and orientation. Also sex and grade differences on all these variables were examined in an effort to determine if the previous results were replicable.

Method

Sample.-- The subjects were 100 students from grades 7 and 8. Twenty-five students were selected randomly from each grade and sex out of a total of 571, receiving instruction in French by Le Francais International method in a mid-western Canadian city.

Procedure.-- A scale, to measure attitude toward the learning of French as a second language (ALFS), consisting of 26 items was constructed. A preliminary pool of 89 descriptive five-point scale items was prepared. The five-points of the scale were described by 'disagree very much', 'disagree', 'undecided', 'agree', and 'agree very much' respectively. Several sources, including modified items used in attitude scales for the learning of foreign languages (Bartley, 1970; Jacobovits, 1969; Jordan, 1941; Shaw & Wright, 1967), students' responses to open ended questions, etc. provided items for the preliminary pool.

This item pool was administered to 65 pupils from the same population but not in the experimental sample. The Pearson product moment inter-correlation matrix of the items and the total score was computed. On the basis of these intercorrelations, 26 most discriminating items, comprising ALFS, were selected.

Gardner (1960) developed a motivational intensity scale and an orientation index. The motivational intensity scale measured the amount of effort an

individual was willing to expend in learning a second language. The orientation index differentiated an individual between "instrumental" and "integrative". An instrumentally oriented individual reflected the utilitarian value of linguistic achievement whereas an individual with integrative orientation reflected a willingness to learn more about the other cultural community as if he desired to become a potential member of the other group. Both of these instruments were modified slightly to fit the local setting. The motivational intensity scale consisted of 7 Likert-type items and orientation index consisted of 10 items[1].

The three instruments described above were administered to the experimental sample in the spring, 1970. The teachers were asked to grade their respective pupils included in the sample on a 5-point descriptive scale.

Analysis and Results

The raw data for the study were the item scores in ALFS, total motivational intensity score, instrumental orientation score, integrative orientation score, and achievement rating of each S. The KR-20 estimate of internal consistency of ALFS was 0.96 and that of the motivational intensity scale was 0.90.

The product moment correlation matrix was calculated for the 26 ALFS items. The principal factor solution yielded 4 factors (Harman, 1967). These factors were rotated orthogonally using varimax criterion (Kaiser, 1958). The results of this rotation are given in Table 1. The varimax factors were further rotated to oblique simple structure by the promax technique

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Insert Tables 1 and 2 about here

(Hendrickson & White, 1964). The results of oblique solution are provided in Table 2.

Factor I has substantial loadings on items 1, 3, 7, 9, 10, 17, 21, 23, and 26 (See Table 1 for item descriptions) as a result of both varimax and promax rotations. This factor appears to reflect utilitarian or pragmatic attitude toward the learning of French. High score on this factor would indicate that an S has a realistic pragmatic attitude toward French instruction.

Possessive attitude is manifest through Factor II. This factor produced high loadings on items 2, 4, 8, 11, 15, and 22 primarily in the promax solution. It is indicated by the high scores on this factor that Ss would like to acquire enough facility so that they could speak the language and learn as much of the language as possible because it is a great language.

Substantially high correlations were obtained between items 5, 13, 20, and 25 and Factor III both in varimax and promax rotations. This factor seems to represent an attitude of tolerance toward the learning of the subject. It is likely that the learners simply put up with the instruction in French but nevertheless find some aspects of the course interesting.

Factor IV could be regarded a specific factor because it has a loading of 0.94 with item 18 (My parents feel that studying French is a waste of time) and a moderate loading (0.44) with item 14 (I think that we should spend a little less time in school learning French). This factor could be representing a reflective attitude. An S's attitude is a reflection of the attitude of other influential individuals, parents, as far as the learning of French goes.

Factor scores were calculated using the formula $F = Z R^{-1}S$; where F is

the N x M factor matrix, N being the number of observations, and M the number of variables; Z is the normalized score matrix; R is the correlation matrix; and S is the factor structure matrix from an oblique rotation. The intercorrelation matrix of the motivational intensity, orientations, achievement, and factor scores was calculated which is provided in Table 3.

Insert Table 3 about here

This matrix resulted in one general principal factor which accounted for 57% of the total variance. This factor indicated that achievement, motivational intensity, and orientations are correlates of the attitude factors. A similar factor was reported elsewhere (Gardner & Lambert, 1959).

The four factor scores, motivational intensity, achievement, instrumental orientation, and integrative orientations were treated as dependent variables for each S in a 2 x 2 crossed fixed factor multivariate analysis of variance (MANOVA) design. The first factor was grade (7 and 8) and the second factor was sex (male and female). The only significant effect was sex ($F(8, 89) = 3.41$, $p < .01$). The univariate F-ratio was significant beyond the .01 level for each of the dependent variables except integrative orientation and factor IV (reflective attitude). The girls, in general, had significantly higher scores on all the variables than the boys. This finding is consistent with the results obtained in similar studies elsewhere (Jones, 1949, 1950; Weldon, 1951). It is quite possible that this difference reflects the cultural influence of Western society as far as differences in attitude, motivation, orientation, and achievement are concerned.

The average within correlation between achievement rating and the four factor scores in the 2 x 2 design was 0.36 whereas the average correlation for the total group was 0.44. Weldon (1951) obtained a correlation coefficient

of .45 between achievement in French and attitude toward the learning of French for a large sample of high school students. On the basis of our data and that of Weldon (1951) it is postulated that the correlation between attitude and achievement is relatively stable over the educational spectrum. A longitudinal study is desirable to make a firm statement about this relationship.

Step-wise regression analyses and analyses of covariance (ANCOVA) on different groupings of the covariates were performed using the 2 X 2 crossed factorial design described above. The achievement ratings were the dependent variable and motivational intensity, orientation scores, and the 4 factor scores were the independent variables. The seven covariates as a group accounted for 30.6% of the variance in achievement such that the multiple correlation coefficient was 0.553 which was significant beyond the 0.01 level. The ANCOVA main effects and the interaction were all non-significant. Even the significant sex difference on achievement observed earlier in ANOVA did not occur in ANCOVA. This could mean that girls superior achievement in French may be due to their higher scores on motivational intensity, orientations, and attitude factors.

Perseverance factor (Factor III) accounted for 23.6% of the variance in achievement when entered as the first covariate in the step-wise regression. Similarly, motivational intensity and instrumental orientation respectively accounted for 19.2% and 11.6% of the variance in achievement. However, when Factor III, motivational intensity, and instrumental orientation were entered in order in step-wise regression, motivational intensity and instrumental orientation accounted for 3.2% and 0.8% of the variance in achievement. The total variance accounted for by this set was 27.6%. It was concluded from these data that the most effective

predictors, out of a set of 7 considered here, were perseverance and motivational intensity which accounted for 26.8% of the variance in achievement as a pair in step-wise regression. The remaining five predictors, nevertheless, accounted for a total of 3.8% of the variance in the dependent variable.

Discussion

The attitude scale considered here resulted in four factors which were labelled as utilitarian-, possessive-, perseverance-, and reflective-attitude respectively. These factor labels are in no way free from the allegation of arbitrariness usually placed on any interpretative factor labels. But the labels associated with these factors of attitude have inherent in them the definitional constraints of an attitude as well as the basis of attitude formation.

This research has shown that affective variables such as attitude, motivation and orientation are very important for an effective learning of French as a second language just as it may be expected for any other subject. Perhaps it is due to the advance in instructional methodology to audio-lingual or audio-visual-lingual methods in the teaching of French as a second language for the population investigated that Miller's (1965) hypothesis has been substantiated. It can be expected that these newer approaches tend to sustain affective predispositions and that the attitudinal-motivational variables account for approximately 1/3 of the variance in achievement in a second language. Jakobovits (1969) reported that attitudinal-motivational factor (perseverance) accounted for 33% of the variance in achievement in a second language.

Since the superior achievement of girls was primarily attributed to the higher motivation, positive attitudes, and desirable orientations

regardless of the genesis of such predispositions, it is desirable to find ways and means of fostering such predispositions in boys. The result of such an effort would be a reduced wastage of instructional efforts, higher achievement, and hopefully better classroom environments.

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Footnote

1 Details on the various instruments are available in Korpan (1970).

TABLE 1

Item Descriptions, Varimax Factor Matrix, and Communalities*

Item No.	Description	I	II	III	IV	h^2
1	In a bilingual country like Canada I think that all schools should teach French.	60	11	37	32	62
2	I think that French is dull.	49	56	13	04	56
3	When I leave school I shall give up the study of French entirely because I am not interested in it.	66	51	25	04	76
4	French is really great.	36	76	16	03	73
5	I find some of the things we learn in French interesting.	28	22	75	--	70
6	After the French lesson is over I don't think of French again until the next one.	18	43	37	44	55
7	Living in Saskatchewan I see no use for French.	56	27	15	26	60
8	I intend to work hard at French until I can speak the language fluently.	23	68	10	39	68
9	I would never do any French if I were not forced to.	55	40	36	10	61
10	French is a waste of time.	68	20	43	21	73
11	I plan to learn as much French as possible.	31	60	40	10	62
12	French is an important part of the school program.	29	43	49	-01	51
13	All in all French isn't so bad.	32	19	76	12	73
14	I think that we should spend a little less time in school learning French	20	46	20	52	55
15	I love learning French.	24	78	18	18	73
16	I think that we should include a French club in our extra-curricular activities.	13	41	31	47	50
17	I have no desire at all to learn French.	59	25	28	34	61
18	My parents feel that studying French is a waste of time.	28	07	-04	82	75
19	Most of the time I find the French lesson a bore.	28	44	21	33	42
20	French is O.K.	20	18	67	43	71
21	I don't think French should be taught in the elementary school.	69	36	15	11	64
22	I really enjoy French.	19	69	30	32	70
23	I would like to see French dropped from the school program completely.	71	25	28	37	78
24	I would rather spend my time on subjects other than French	38	53	29	28	59
25	I hate French.	49	33	56	20	69
26	I think it is important to learn to speak and read French.	58	27	39	19	60
	Total Variance	520	512	375	260	1666

* Two decimal places assumed.

TABLE 2

Promax Factor Matrix for the ALFS Items *

Item No.	I	II	III	IV
1	61	-25	26	22
2	49	53	-17	-14
3	71	36	-05	-18
4	-20	100	-04	-18
5	06	-02	91	-26
6	-08	34	29	32
7	75	03	-13	16
8	04	77	-21	26
9	52	22	18	-10
10	71	-16	29	05
11	12	57	26	-14
12	12	35	46	-25
13	09	-11	91	-11
14	-02	41	01	44
15	04	91	-10	-02
16	14	35	22	37
17	59	-02	08	24
18	23	-14	-26	94
19	14	38	03	22
20	-10	-10	79	30
21	81	16	-15	-04
22	-09	75	10	13
23	76	-08	03	26
24	24	45	08	11
25	36	07	50	-01
26	57	-01	25	03

* Two decimal places assumed.

TABLE 3

Correlation Matrix of Motivational Intensity, Achievement, Orientations, and Factor Scores

	1	2	3	4	5	6	7	8
1. Motivational Intensity	1.000	0.524	0.478	0.460	0.642	0.766	0.674	0.427
2. Achievement Rating	0.524	1.000	0.248	0.422	0.492	0.429	0.570	0.260
3. Integrative Orientation	0.478	0.248	1.000	0.387	0.289	0.502	0.591	0.304
4. Instrumental Orientation	0.459	0.422	0.387	1.000	0.517	0.438	0.536	0.366
5. Factor I	0.642	0.492	0.287	0.517	1.000	0.621	0.699	0.511
6. Factor II	0.766	0.429	0.502	0.438	0.621	1.000	0.669	0.539
7. Factor III	0.674	0.570	0.591	0.536	0.699	0.669	1.000	0.543
8. Factor IV	0.427	0.260	0.304	0.366	0.511	0.539	0.543	1.000