

INDIVIDUAL DIFFERENCES & SECOND
LANGUAGE PROFICIENCY

By

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ABSTRACT

This study examines the language proficiency of Late French Immersion students in relationship to the affective variables: self-perceived competency and intrinsic motivation. The sample was comprised of 40 students, ages twelve to thirteen years, who attended a dual-track school in a suburban setting of British Columbia. The Piers-Harris Children's Self-Concept Scale was utilized to ascertain a subscale score of academic self-concept. An estimate of the students' motivational orientation, expressed along an intrinsic/extrinsic continuum, was measured by the Nowicki-Strickland Locus of Control Scale for Children.

Secondary data on affective variables associated with the students' and their parents were determined through the administration of self-report items selected from the Attitude and Motivation Test Battery of Gardner and Associates. Competency was measured by a standardized instrument, The French Immersion Achievement Test (FIAT) and the B.C. Ministry Assessments of 1987 and 1988.

A descriptive analysis of all the variables (aptitude, linguistic & affective) was conducted. Various statistical procedures (Pearson correlation, chi-square and linear regression) were effected with attention to the correlational relationships between: aptitude, language performance, intrinsic motivation, self-perceived competency and integrative orientation. The interrelationship of situational factors such as, standard characteristics of the French Immersion environment and pertinent information on parental student support, was presented.

TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	ii
TABLE OF CONTENTS	iii
LIST OF FIGURES	vi
LIST OF TABLES	vii
ACKNOWLEDGEMENTS	viii
DEFINITION OF TERMS	ix
CHAPTER I — INTRODUCTION	1
Background to Contemporary Programs and Practices	1
CHAPTER II — EMPIRICAL WORK: A REVIEW	5
Features of Early and Late French Immersion	5
B.C. Assessment of 1987	6
B.C. Assessment of 1988	8
Features of Second Language Acquisition	11
Conceptual Foundations	12
Motivation	12
Motivational Systems	17
Perceptions of Ability	18
Situational Influences and Individual Differences	19
Affective Variables and Second Language Acquisition	21
A Socio-educational Model of Language Acquisition	22
CHAPTER III — SPECIFIC DISCOURSE LEADING TO THE PROBLEM	28
Reward and Motivation	28
Locus of Control and Self-Efficacy	29
The Gardner Model and Social Learning Theory	31
Multidimensional Model of Motivation:	32
The Problem	34

Questions	36
Limitations of Study	37
CHAPTER IV — METHOD	38
Objectives	38
Sample	38
A Students:	38
B Parents:	38
Testing Procedures	38
Design	39
Instrumentation	41
Otis-Lennon Mental Ability Test	42
Intrinsic-Extrinsic (I-E) Scale for Children	42
Piers-Harris	42
Reliability of the Piers-Harris	43
Validity of the Piers-Harris	43
B.C. Assessment 1987 criterion-referenced	44
B.C. Assessment 1988: criterion-referenced	44
Student/Parent Questionnaires	44
Operational Definition of Language Proficiency	46
Aggregates of Student Affect	46
Aggregates of Parental Influence	47
CHAPTER V - RESULTS	48
Analysis	49
A PRIORI QUESTIONS	49
Affect and Achievement (Question #1)	49
Abilities and Achievement (Question #2)	50
Intellective Factors	50
Non-Intellective Factors	55
Motivation and Achievement (Question #3)	56
Motivation and Affect (Question #4)	56

Parental Support and Student Affect (Question #5)	57
Motivation and Proficiency (Question #6)	57
Emergent Questions	58
Motivation and Goal Orientation (Question #1)	58
Relationship of Orientational Goal Factors (Question #2)	59
Addenda (Table E)	64
Parental Influence	64
CHAPTER VI - DISCUSSION	69
Special Features of the Research	69
The Research Questions Revisited	71
Intellective Influences	72
Non-Intellective Influences	73
Summation	83
Educational Implications	84
Suggestions for Future Research	85
ENDNOTES	86
BIBLIOGRAPHY	87
APPENDIX A	98
APPENDIX B	100
APPENDIX C	121
APPENDIX D: TEST REVIEWS	124

LIST OF FIGURES

	<u>Page</u>
Figure 1: Garner's Socio-educational Model (1985)	24
Figure 2: Expanded Design of the Gardner Model (Colletta, 1983)	26
Figure 3: Interaction of goal orientation & motivational preference	34
Figure 4a. Student Instrumental Orientation as Dependent Variable	60
Figure 4b. Student Integrative Orientation as Dependent Variable	61
Figure 5a. Parental Instrumental Orientation as Dependent Variable	62
Figure 5b. Parental Integrative Orientation as Dependent Variable	63

LIST OF TABLES

	<u>Page</u>
TABLE A — CORRELATIONAL MATRIX FOR ALL PUPIL VARIABLES (N=40)	51
TABLE B — CORRELATIONAL MATRIX FOR SUBSET * OF 23 PUPILS AND THEIR PARENTS (N=23)	52
TABLE C — FIAT ACHIEVEMENT FOR COMPREHENSION & SPELLING DISTRIBUTION OF SAMPLE (N=40) IN RELATION TO AGE- COHORT PERCENTILE NORMS (From Early Immersion Pupils) . .	53
TABLE D — INTERRELATIONSHIP OF INSTRUMENTAL AND INTEGRATIVE ORIENTATIONS FOR STUDENTS AND THEIR PARENTS	65
TABLE E — PERCENTAGES FOR PERCEPTION OF ENCOURAGEMENT GIVEN	66
TABLE F-1— FREQUENCY DISTRIBUTION FOR SAMPLE (N=40)	67
TABLE F-2— FREQUENCY DISTRIBUTION FOR SUBSAMPLE (N=23)	67
TABLE G — PERCENTAGE OF SUBJECTS WITHIN STANDARD DEVIATIONAL RANGES	68

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DEFINITION OF TERMS

communicative competency - the formal and logical representation of what a person knows or can do in an ideal environment (Flavell & Wohlwill, 1969, p. 71).

communicative performance - the demonstration of actualized communicative competency.

discrete-point response mode - a matching, true-false, multiple choice or fill-in-the blank format in which a response is either selected from among alternatives provided or otherwise restricted by the nature of the context provided.

discrete-point task - one that focuses on an isolated bit of language, typically features of phonology, morphology, syntax or lexicon. (Savignon, 1983, p.249)

dual-track school - a school in which English and French programming generally function separately.

integrative task - several features combine to convey the meaning upon which a response is then based.(Savignon, p.250)

language proficiency - may be used interchangeably with communicative performance.

CHAPTER I — INTRODUCTION

Background to Contemporary Programs and Practices

The Quiet Revolution in the Province of Quebec during the 1950's and 1960's embraced the French language and culture within Quebec and encouraged the federal government's affirmation of French language rights throughout Canada as a whole. The political climate of the time precipitated the emigration of a significant portion of the English business population to Ontario and elsewhere. Confronted with the necessity of educating their children in French, a number of the remaining Anglophone parents came together to research a means of instruction which could be an effective alternative to the traditional forms that had been practised for half a century.

Wilder Penfield, an expert in the knowledge of neuroanatomy and language, as well as Wallace Lambert, a scholar in the socio-psychological aspects of bilingualism, formed a team with the parents and so gave impetus to the development of French Immersion (FI) training in Canadian schools and beyond (Genesee, 1984, p. 34). The new approach to language instruction was influenced by a model of natural, meaningful and interactive first language learning (Penfield, 1965). Since the inception of the first Canadian immersion class in 1968, enrollment outside the province of Quebec has grown to 203,692 students, according to the latest census information (Statistics Canada, 1988).

A sense of historic experience in second language (L2) training helps one view the Canadian experience with more understanding. It is not commonly

known that education in a language different from the home actually dates back to antiquity (Lewis, 1977). More recently, linguistic practices similar to the Canadian immersion experiment have occurred in Ireland, Wales, the Philippines and Africa. In the early 1920's there was an attempt in Ireland to re-establish the use of Gaelic (the Irish language) for English speaking students. Although the number of immersion schools in Ireland reached a total of 300 in the 1930's, within a decade they dwindled, due in part to the perception of educators that the academic performance of students had suffered from L2 instruction (Cummins, 1983).

The implementation of bilingual instruction in Wales is particularly noteworthy. Parental choice and support of programs is a distinguishing feature of this system which is nationally organized and has continued for almost a century. Interestingly, Welsh bilingual education was motivated by educational goals, not political ones (Lewis, 1977).

The Canadian immersion experience is distinguished from international precedents, by, among other things, the ongoing practice of systematic evaluation of FI programs. From the outset, researchers were keen to observe the comparative effectiveness of programs within Quebec and those in other provincial settings where there was a smaller or even minimal French social presence in the community.

This evaluative feature, however, has not always encompassed designs that take into account individual differences among young language learners. The attention directed to individual differences, in second language and educational

research at large, amounts to a change in focus from learning outcomes and instructional procedures to learner characteristics. Early evidence of this transition in thought was apparent at the symposium on Intrinsic Motivation in Education, a landmark occasion when an overview of theoretical positions on the subject was presented (Day et al. 1970). Inherent to that discussion was a concerted effort on the part of the authors to relate their theoretical positions to educationally-relevant problems.

At the beginning of the last decade researchers in the domain of English as a Second Language (ESL) acknowledged the importance of examining how the learner learns, with attention to such matters as communicative competence and student self-esteem (Haskell, 1980). Even earlier, Gardner had encouraged second language specialists to examine the language learning process from a socio-psychological perspective (Gardner & Lambert, 1959; Gardner, 1979). Through the years Gardner has drawn attention to the intuitively obvious position that language learning comes more easily for some individuals than for others. Perhaps there are factors, he would argue, underlying a learner's motivation that go beyond a certain combination of aptitudes: namely, "attitudes and readiness to identify" and orient "to the whole process of learning a foreign language" (Gardner, 1985, p.132). Noting that successful FL students in British Columbia reported high levels of motivation for L2 learning, Shapson recommended in his provincial assessment of student attitudes that further studies be undertaken to examine the ability and background characteristics of FL students (1987).

Of current and timely significance is the question put by the 1988 Sullivan Royal Commission on Education: "Who are the learners of British Columbia ?" (Marx et al., 1988, p. 5). The Sullivan Commission explored the B.C. school system between March, 1987 and July, 1988. In the ensuing report, A Legacy for Learners, the commission considered societal changes that have impinged on the learner over the past twenty years. The members of the panel emphasised the importance of educators helping the learner to develop a positive self-regard and a willingness to participate in the learning environment. Furthermore they challenged educators to gain a comprehensive understanding of the student by seeking information pertinent to the individual's home language, family income and the family involvement in support of learning.

Apparently the Commission sensed it had a well-timed opportunity for giving emphasis to the importance of individual differences. This perspective seems fitting for research in the world of language learning in general, and second language learning in particular.

A review of research, pertinent to second language learning in the French Immersion milieu, follows.

CHAPTER II — EMPIRICAL WORK: A REVIEW

In a broad sense this study deals with certain characteristics of adolescent students in a particular second language setting. More specifically it focuses on the self- efficacy or intrinsic motivation of a sample of late French Immersion students. The intent in the following review is to consolidate current psychological work on motivation and learning, with relevant data from the domain of French Immersion research. The review begins with a discussion of the latter research.

Features of Early and Late French Immersion

Prior to 1976 in the province of British Columbia, French second language instruction took one of two forms: either core or early immersion programming. The former is the teaching of the French language as a subject; the latter is the teaching of school curriculum in French. The standard early immersion (EI) program commences in kindergarten and continues with one hundred percent L2 instruction through the second grade. French instruction is reduced to eighty percent in grade three and varies between fifty and seventy percent in grades four through seven. By contrast late immersion (LI) is only a two year program that extends through grades six and seven with instruction in French ranging between sixty to one hundred percent.

In order to both evaluate individual learning and compare characteristics of the early and late approaches to immersion, the B.C. Ministry of Education has

commissioned two university team studies during the past decade (Day, Shapson & O'Shea, 1987; Ardanaz, Roy, Lamarr & Wormeli, 1988).

The groundwork had been laid by researchers in Eastern Canada who had found no statistically significant differences between comparable groups of early and late immersion students when proficiency in French was evaluated in grades eight to eleven (Bruck, Lambert & Tucker, 1977). In an eleven year longitudinal study concluding at grade twelve Pawley (1985) also found no appreciable difference in achievement between early and late FI students. However, Genesee (1982, 1984) has argued that the limitations on experimental design of the samples (such as the absence of random assignment) and the inequivalence of test measurements may camouflage some true disparities of the two programs.

In attitudinal and affective outcomes, there do not appear to be any clear cut differences between the two immersion programs. Nevertheless, one study in New Brunswick (Lapkin & Swain, 1984) indicates that early FI students have a stronger sense of self-perceived French competency, including ease of usage, when compared to their late FI counterparts.

B.C. Assessment of 1987

Cognizant that the majority of studies had primarily measured linguistic achievement a team, composed of Day, Shapson and O'Shea (1987), incorporated affective and attitudinal measures in their study of FI language proficiency . The researchers found that grade seven FI students had fairly positive attitudes towards bilingualism and a high motivation for learning French. On a five-point

scale ranging from a one, signifying most positive, to a five signifying most negative, there was a mean rating of 2.0 for attitudes to bilingualism and 1.9 for motivation in learning French. Generally, the students expressed an appreciation for the French culture and claimed to be comfortable speaking the French language in and out of class.

Achievement scores in the same study revealed that the LI students had overrated their own individual L2 proficiency. However, it is important to note that on a multiple regression analysis the self-rating of all immersion students on knowledge of French highly correlated with one aspect of the total L2 proficiency battery: namely, reading achievement. Early immersion students were significantly more proficient in both listening and reading comprehension than the late immersion pupils, possibly due in part to the differences between the two groups in time exposure to the language. Although the range of scores on a frequency distribution was similar for both groups, the mean of correct responses for the EI group in listening comprehension was 70 per cent, and for the LI group, 55 per cent; in reading comprehension the mean scores for the EI and LI groups was 73 per cent and 65 per cent, respectively. Finally, early and late immersion students on a French speaking test compared favourably with a peer group of Francophone Manitobans in discussion and description of ideas. The latter group significantly exceeded their Anglophone cohorts in fluency, pronunciation and oral usage of grammar (Day et al., 1987, p. 17).

Based on an estimate made of the socio-economic status of most FI students, a sample of eighteen Francophone Manitobans was chosen as a control

group. This sampling procedure has obvious limitations due to inadequate sample size and a potentially inaccurate characterization of the socio-economic status of the B.C. Anglophone and Manitoban Francophone populations.

Reading comprehension objectives for this assessment were drawn from provincial curriculum guides, prescribed reading materials and other reliable sources. Items were selected from a variety of stimulus materials such as textbooks, anthologies and children's magazines. Various judges, after examining the items for congruence with stated objectives, proposed deletions and changes where necessary. The test items were divided into two forms and an equivalent number of students in each class completed one.

A pilot study was then conducted on 400 grade eight EI and LI students in the Fall of 1986. (The manner of selecting the participants was not stated in the study.) The critical opinions of students and other test observers contributed to the shaping of a new form of the assessment.

B.C. Assessment of 1988

A later B.C. ministerial assessment (Ardanaz et al., 1988) also reported on attitudes of FI students. The items receiving the highest response on motivational measurements were: the perceived financial advantage of being bilingual; the desire to be at ease with French Canadians; a willingness to be more open to cultural groups. However, most students reported that they had not used French outside the classroom and claimed that they had little opportunity to use the language outside the learning situation.

In the Ardanaz et al. study (1988), 711 B.C. late immersion students were compared with 862 B.C. early immersion students in relation to a group of 114 Quebec Francophones on measures of written competency at the seventh grade level. The writing tasks proved to be challenging for each group; only in the verb conjugation and verb tense tasks did the Quebec students demonstrate a mastery performance. LI students attained higher scores than EI students in verb conjugation, verb form and sentence completion. Immersion students exceeded Francophone cohorts in punctuation and sentence enrichment but performed less favourably in spelling. The EI students achieved a somewhat higher mean score than LI students in self-confidence in speaking French possibly due to their longer experience with the French language. Of the opinion scale variables, the confidence item correlated most highly with achievement in the dictation task (i.e. spelling).

It would seem that French Immersion researchers are showing a growing interest in examining learner characteristics. In the aforesaid studies, the items on the student questionnaires were drawn from a pool of statements contained in the Language Group National Test Battery (Gardner & Smythe 1975). The findings (through student self-report measures) indicate that early (EI) and late (LI) students share positive attitudes toward bilingualism and the French-speaking community. The LI students reported higher motivational levels than their EI counterparts as expressed through their preference for French recreational reading materials (Day et al., 1987). There are discrepancies between the Day (1987) and Ardanaz (1988) studies, regarding the willingness of EI and LI students to speak

French outside the school setting. The former report indicated that the students use French both in and out of class while the latter report suggested that the majority of students do not function in the second language outside the school situation.

Both these studies, one may conclude, are designed for the benefit of the practitioner - teacher/curriculum specialist - in the field of French Immersion. They demonstrate a thorough description of the linguistic skill development of FI students at a given point in time in the province of British Columbia. From a research point of view, the writers make general rather than precise situationally-based statements regarding the attitudes of FI students towards second language learning.

It may be presumed that students who enter LI are likely to be willing participants in the program. There is always the chance that there could be obstructive factors such as displeasure with the instruction or personnel which would influence the student's attitude. It should be observed that it is difficult to measure the attitudes of students towards the second language community when the environmental milieu predominantly embraces the first language of the students. It is likely that students have adopted the attitudes of their parents who in turn are influenced by, and who also influence, the attitudes of the immediate community in question.

The B.C. ministry studies provide a baseline from which one may examine the achievement of subsequent groups of FI students. The replicability of the achievement testing is a worthwhile endeavour, and an examination of their

reliability over time, in conjunction with other standardized measures, could reveal valuable information about successive groups of FI students.

Features of Second Language Acquisition

Various features of how students learn and how they are taught have been commonly observed in FI studies to date. Both Bain (1975) and Lambert (1975) report evidence which they claim shows that students who pursue advanced bilingualism derive cognitive benefits if the first language is nurtured at home while the second languages is taught at school. There is also strong evidence that second language achievement is directly proportional to instructional time (Carroll, 1975). However there may be variables affecting that relationship, such as mode and quality of instruction, the nature of the curriculum itself, the socio-cultural context and individual differences. (Cummins, 1985; Gardner, 1985).

By contrast, concurrent first language development for FI students does not bear a direct relationship to instructional time. In fact there is reason to believe that a crosslingual transfer can occur in literacy skills between the first and second languages. This supports the supposition that there is a common underlying source of linguistic proficiency. (Cummins, 1980).

Although there is compelling argument that students at a very young age are more likely to acquire effective communicative skills, older language learners progress more rapidly in linguistic analytical tasks (Cummins, 1983).

When considered together, the meaning of all these various observations is not readily apparent. Further work is needed to clarify their significance. One dimension which might prove a fruitful avenue of exploration is pupil dispositions.

Conceptual Foundations

An appreciation of the nature of motivation and related factors, such as self-perceived competency, is useful when considering second language proficiency. These dispositional constructs are briefly examined below.

Motivation

Motivational theory is of continuing interest to educational psychologists. Ball (1984) did a content analysis of articles published in the Journal of Educational Psychology from 1910 to 1980 and found that, every second decade, motivation ranked in the top half of categories commanding attention.

Motivation, according to Hebb (1955), is an energizer but not a guide. Earlier, Woodworth (1918) construed this energy to be a "drive". McDougall (1921) then identified three aspects of motive, instinct or drive: the perceptual, the emotional and the behavioural.

The presumed physiological foundations to which these psychological processes correspond are the organic substrates, the sensory and neuroendocrine processes, and the processes of the central nervous system. Hull (1943), in the pattern of behaviourist and psychoanalytic thinkers, delineated a motivational theory that was based on primary drives. According to Hull's S-R drive theory,

every response has its corresponding stimuli. As an external stimulus could not be found to explain a response, Hull made inferences about the presence of internal motivational stimuli which, when acted upon, would reduce drive.

Hunt, on the other hand, has endeavoured to transcend the limitations of drive theory with what he regarded as a complete formulation of motivation (1970). He proposed that motivation exists within information processing and action. He argues against the adequacy of drive theory on the grounds that it by-passes any explanation of creative adaptation of the organism and overlooks the functioning of intelligence and wisdom. Furthermore Hunt postulates that drive theory relegates motivation to the influence of factors that are extrinsic to information processing and action.

Other researchers acknowledge existing evidence that organisms will engage in explorations in the absence of stimulation. For example, Berlyne (1960) reported that rats showed persistence in exploring objects in proportion to their availability and variety. McGill studies illustrated that students with well-met personal needs were not content to remain docile in the absence of stimulation (Bexton & al., 1954; Heron et al., 1956). Harlow was one of the first researchers to use the term "intrinsic motivation", inferring that a basis for motivation is activity itself (1954). Hebb (1955) originated the term "spontaneous activity" but acknowledged a lack of explanation for the gap between the activity and its instigation within the organism.

There were two main motivational constructs that followed drive theory. First, Hebb theorized that an organism needs an optimum level of arousal in the

central nervous system in order to function effectively: responses that move the organism in the direction of the optimum are strengthened. Secondly, White (1959) postulated that individuals have a motivational directedness which energizes them to explore, attend, think and play. Furthermore, a need exists within the individual to interact with the environment in a purposeful or competent way, much in the manner of a causative agent (deCharms, 1968).

In contemporary thought, there may be found echoes of the sixteenth century writings of Thomas Reid who postulated that actions can be due to instinct, appetite, desire, and affection, which come under the activating or inhibiting force of the personal will. Perception also, according to Reid, frames one's world view (Cofer 1985, p.155). The present day interest in a person's capacity for choice can also find its origins in precartesian modes of thought.

Weiner (1972) endorses attribution theory as having the capability of drawing together the many motivational theories that have been presented. The theory of attribution was proposed by Heider (1958) who claimed that people make sense out of the world by attributing (or inferring) causes to events in the world, including human behaviour. Furthermore, Weiner says that an educationally relevant motivational theory must embrace the emotional state of the learner and that no single theory on its own can explain classroom motivation.

The concept of internal and external reinforcement (or locus of control) was developed by social learning theorists like Julian Rotter, who integrated reinforcement and cognitive theories. Rotter described this line of thought:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action then...it is perceived...as under the control of the forces surrounding him. When the event is interpreted in this way by an individual, we have labelled this a belief in external control. If the person perceives that the event is contingent upon his own behaviour... we have termed this a belief in internal control. (Rotter, 1966, p.1)

The work of Deci (1975, 1980) - following upon White, Hunt, deCharmes and others - spoke of the personal need to be competent and self-determining in relationship to the environment. Deci explained that a self-determining person has the flexibility to choose behaviour among a number of alternatives that are available in any given situation. Another expression of this self-determining flexibility is plasticity in a situation that permits few options of behaviour.

The evolution of Bandura's (1977) thinking involves the influence of behavioural, social and cognitive elements. Accordingly, Bandura (1986) now calls his theory "social cognitive theory"; he acknowledges the precedents of other research, which "centers on people's sense of personal efficacy to exercise some control over...their lives." (1986, p. 391). He explains that a person's expectation that an action will achieve a definite outcome is efficacious or cognitively satisfying to the individual. By definition, perceived self-efficacy is a judgment of one's ability to achieve at a certain performance level. For the development of competency to take place, there needs to be a coupling of both the self-belief of efficacy and the possession of skill development. Thoughts about one's own efficacy influence (or mediate) motivation and hence affect

performance. Schunk (1989, p. 21) affirms the principles of self-efficacy theory in situations where the performer can draw upon the prior learning of skills. He cautions, though, that students may misjudge their own efficacy on occasions when a task is highly complex and composed of component parts.

Perceived competency can act as a mediating variable for intrinsic motivation. In cognitive evaluation theory, interest is spurred on by a drive for competence (Deci, 1975). In attribution theory, interest is linked to a judgment of the causes of performance (Weiner, 1972). In social-cognitive theory, interest comes with meeting challenges and fulfilling standards aligned with self- precepts of efficacy (Bandura, 1986).

Bandura (1986) points out three types of contingencies between action and effects which he believes comprise intrinsic motivation:

- (1) behaviour may be influenced by the senses i.e. learning not to touch a hot stove element,
- (2) behaviour may be influenced by internal states of the organism i.e. physical exertion leading to fatigue,
- (3) self-evaluation may provide an intrinsic feedback i.e. making judgments about one's performance against personal standards.

Bandura adds that intrinsic interest develops over time - it is not inherent to the organism, nor does it arise in the immediacy of the moment. Newly acquired self-efficacy may precede, by a significant time period, the actual appreciation of an activity. Self-assurance may rise to such a high level that an activity loses its challenge and interest in the activity wanes. Rather than thinking of intrinsic

motivation as being characterized by the absence of external reward, Bandura describes it "as a continuous interaction between personal and situational sources of influence" (1986, p. 242).

Motivational Systems

The work of Ames (1986) sets forth a cognitive-attributinal framework for appraising motivational processes within varying goal structures. Ames delineates three main goal structures with accompanying motivational systems: competitive/egoistic; cooperative/moral responsibility; individualistic/task mastery. In the first structure, social comparison is of primary concern along with self-evaluation of one's own ability. The focus turns to the group goal in the second system. In the third system, task mastery becomes paramount.

The Ames (1984) framework suggests that a competitive environment fosters a survival mentality with the view to outdoing another with the intention of winning. Students' self-perceptions of their ability fluctuate in relation to their performance.

Cooperative groupings, says Ames (p. 187), are more likely to elicit a social dependency among group members where the achievement of the group takes precedence over the performance of the individual. According to Ames (1981) a low performer is spared the impact of a negative evaluation where there is successful group outcome. Group failure, however, may lower the self-evaluation of a high performer.

From the Ames perspective, an individualistic structure may contain an element of competition if achievement is compared to norm-referenced data or an individual's prior performance. The inclusion of self-effort and task awareness minimizes the competitive element when reward is based on self-improvement. Such observations underscore the importance of taking individual differences into account.

Perceptions of Ability

The research of Nicholls et al. (1984) portrays the development of perspective to be initially self-referenced, then increasingly external or norm-referenced. At about five years of age children often choose tasks according to their probability for success; ability and difficulty are frequently kept separate. By seven years or so children develop an objectivity about task complexity. They seem to think that effort is all that is required to meet the demands of a situation. By the age of eleven, luck (or good fortune) becomes distinct from effort and ability. Students may recognize situations where effort would be fruitless. Older students when faced with a difficult challenge may weigh the merits of applying effort and still risking failure. (At this point, ability is seen as learning capacity.) Conversely, they may withhold effort and accept the failure: at least the poor result may be paired with low effort rather than an implied lack of ability.

Apparently then, personal dimensions, as suggested by various theorists (Bandura, 1986) through such constructs as locus of control and self-efficacy, have

a developmental character. This study reflects an appreciation of this position and the implications for the importance of individual differences in studies of school learning. Clearly by the age-range of students in late immersion, individual differences in self-efficacy become important.

Situational Influences and Individual Differences

Adolescents and adults find it is possible to monitor their learning in the sense of meeting personal goals of mastery without reflecting on the achievements of others. Thus they experience feelings of competency learning through the expending of effort much as a young child experiences. Where learning is seen as an end in itself, such students may be regarded as intrinsically motivated.

With the introduction of an extrinsic reward system, such as an evaluative achievement setting, the learning can become the means to the end. A differentiation of ability with reference to others takes effect. A perspective of ego- involvement takes shape through such questions as: "How am I doing compared to others? Am I as smart? Do I look stupid?"

Nicholls agrees with Harter and Connell (1984) who contend that perceived ability and intrinsic motivation are positively correlated. Students with higher perceived ability experience greater feelings of competency and more positive success in ego-involving situations. Nicholls summarizes:

It might be that in competitive settings one must be assured of one's ability relative to that of others

before one can become task involved...the best strategy ...is to maintain task involvement. (p. 279)

Finally, Nicholls observes that outstanding achievement is most often associated with a disposition that favours more task involvement than ego-involvement.

A situational effect, such as would result from a transition in learning environment, can influence individual differences in the motivation of young adolescents. One may conjecture that the principles applying to a movement from an elementary to junior-high school may have application to the transition from regular English programming to the FI environment. Investigators in transition research (Eccles, Midgley, & Adler, 1984) have underlined the significance of the nature of the particular change: "...transition to a more facilitative environment, even at a vulnerable age, should have a positive impact on children's perceptions of themselves and their educational environment ..." (Eccles et al., 1984, p.140). Should the emphasis in the new environment be on "...competition, social comparison, and ability self- assessment at a time of [adolescent] heightened self- focus ... " the transition, says Eccles, could be harmful (1989, p.141). He adds that children's standards for self-assessment may not be as stable at such a time. Harter (1982) has found the lowest correlation between self- perceived academic competency and school achievement to be among seventh graders in transition.

Affective Variables and Second Language Acquisition

Safty (1988) argues that motivation and attitude play a significant role in L2 achievement and may even exceed the strength of aptitude as a predictor of second language learning. The work of Gardner (1985) has made a substantial impact on the advancement of research into the underlying attitudinal and motivational variables associated with second language acquisition. Where personality variables or instructional style statistically correlate with second language achievement it is because, Gardner claims, they are operating through the motivational dimension. His construct of motivation includes effort [intensity], cognitions [attitude], and affect [desire] (p. 11).

Group and context-related attitudes affect the level of motivation. Gardner singles out the integrative motive as being particularly significant. By this, he connotes a willingness to interact with the second language community (which may be the classroom language environment). This motive reflects or marks an advantageous disposition. Important as well is the student's view of self: a warm, accepting community can aid the student in affirming self-identity, and provide a secure sense of safety and security [for risk -taking] in ordering thought, deed and communicative interactions in a second language.

In the early stages of language learning, the communicative exchanges are sufficiently contrived that an uncertain participant may not yet be vulnerable to doubts regarding the social self. However, as individual and group language proficiency increases, social interactions also become more complex. Gardner concludes that once a student seeks out opportunities to utilize language skills,

self-identity can come into play, interfering with or facilitating the process of learning the language.

A Socio-educational Model of Language Acquisition

In addition to a linguistic description of the universal processes of language learning as postulated by Carroll (1981), Krashen (1981), and Bialystok (1978), [which exceeds the scope of this study] individual variables within a social context are considered to have a dynamic part in language learning.

In his social psychological model, Lambert (1967, 1974) gave place to language aptitude and intelligence but also emphasized the role of attitudes, orientation and motivation. He drew a distinction between two types of orientation (or motivational goal) toward learning a second language: the integrative and the instrumental. The former reflects an interest in the people of the second language group and the latter, the practical benefits to be gained from learning the language.¹ Lambert stressed that the process of becoming proficient in another language requires a willingness on the part of the learner to adjust behaviour in conformity with the second language group. Such modifications can affect individual self-identity.

Gardner's socio-educational model builds on the former and attends to four major classes of variables: the social environment, individual differences, language acquisition contexts and outcomes. Community beliefs about the meaningfulness of learning the second language will influence the attitude, and hence the degree of achievement, of the individual. The model distinguishes

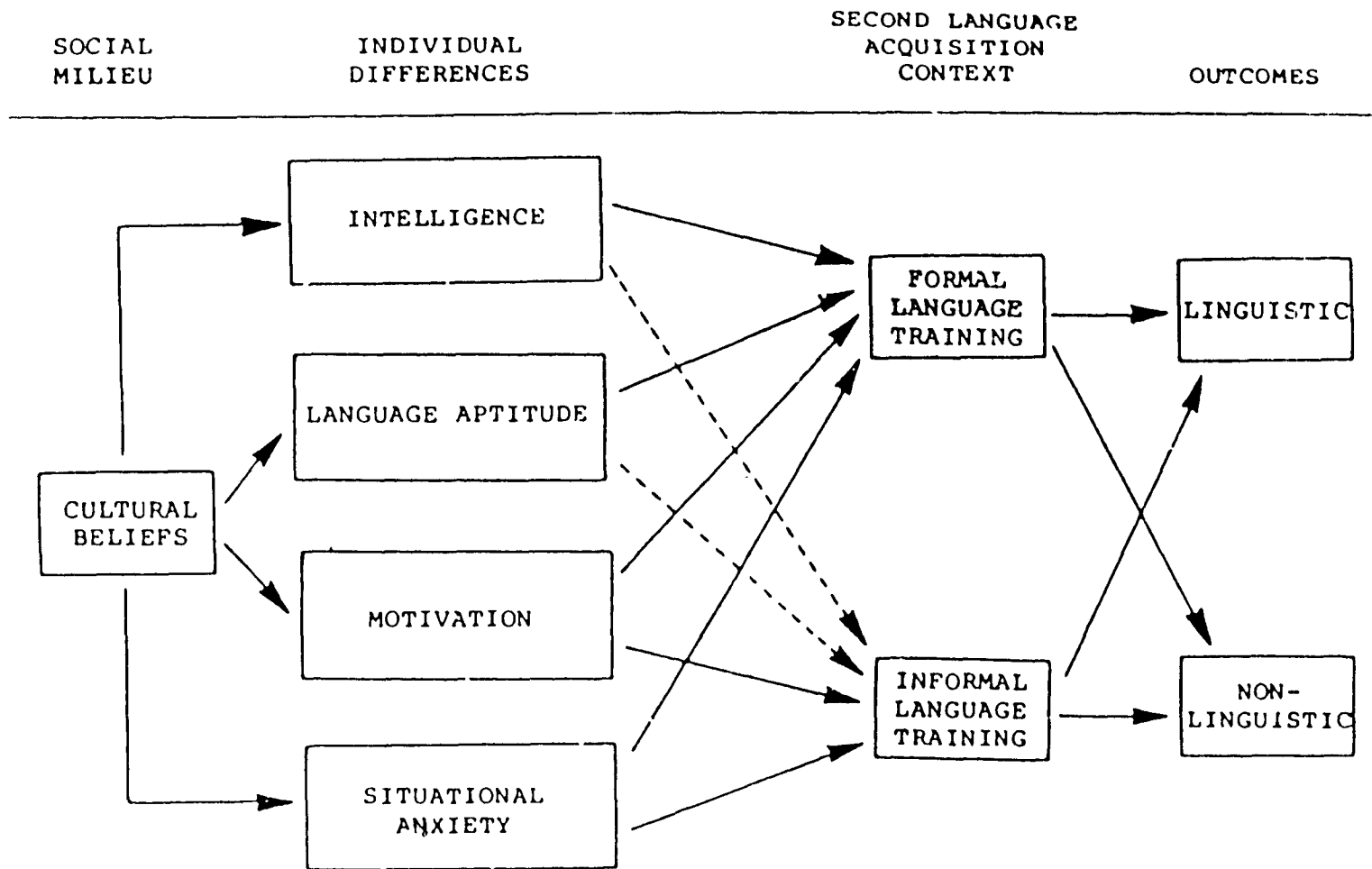
between formal and informal contexts, or situations involving training and instruction as opposed to language exposure for entertainment or communicative purposes.

Furthermore the model suggests that individual variables, such as intelligence level and language aptitude will relate more strongly to achievement in formal contexts. On the other hand, in informal learning situations, motivational and anxiety variables will more strongly relate to language learning (Gardner 1985, p.148).

Although attitudes are not included in the charted representation (fig.1) they are considered to be a foundational support for motivation. That is to say, attitudes "are seen as the determinants of motivation" (Gardner 1989, p.149). For motivation to be activated there are important facets of attitudinal support which need to be in place, such as an openness to the second language community and a positive view of the learning situation.

In summary, the Gardner model acknowledges the role of community and home environment in contributing to the initial motivational thrust for language learning. The influence of the learning situation interacts with affective and aptitudinal variables that affect both linguistic (proficiency) and nonlinguistic (attitudinal) outcomes (Gardner, 1983, p. 222-223). In the author's opinion, the model allows for a dynamic, as opposed to static, interchange between "...individual-difference variables and the language- learning context and/or language achievement..." (Gardner, 1988, p. 101).

Figure 1: Garner's Socio-educational Model (1985)

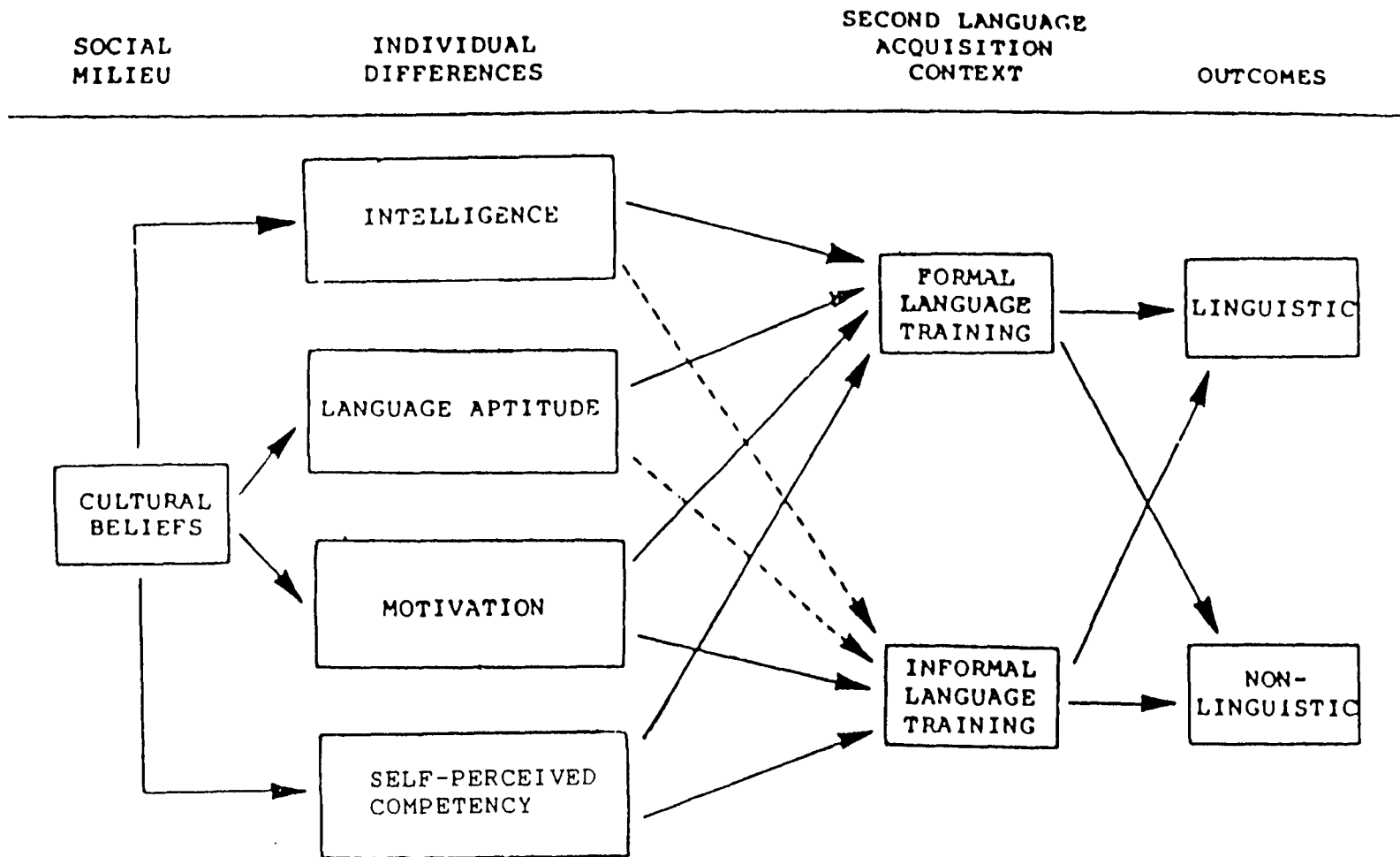


Edwards (1976) endorses the model but recommends some adjustments. He says that personality characteristics which may influence communicative competency should be considered. There is a need for greater specificity in detailing important elements of the social milieu. Finally, the dimension of non-verbal cues should be added. The language instructor may be the only model of non-verbal cuing; hence the student may transfer first language non-verbal behaviour to the second language expression.

Colletta (1983) has proposed and researched an expanded model of the Gardner design. (fig. 2). Parental influence was described as having passive and active components: in the first sense shaping early developmental attitudes to language learning, and in the second, influencing ongoing attitudes. Social economic status was added as well as an exchange of self-confidence for the situational anxiety variable. Significant relationships existed between the following variables: language aptitudes and linguistic outcomes; motivation and nonlinguistic outcomes; student attitudes and motivation; active parental influence and student confidence; socioeconomic status and active parental influence (p. 1).

There seems to be a division of opinion with respect to the self-confidence factor. Both language aptitude and student motivation, Colletta concludes, are significant factors in L2 acquisition. It is thought, by Colletta, that self-confidence plays a role in L2 acquisition through the support of attitudes. The degree of one's self-confidence influences attitudes and hence, motivation. Clement (1980) has expressed a contrary opinion, suggesting that self-confidence

Figure 2
Expanded Design of the Gardner Model (Colletta, 1983)



in French provides support for motivational strength, which in turn would influence attitudes. Viewed from a self-efficacy perspective (Bandura, 1986), one tends to lean towards the position that there is a reciprocal influence between factors.

With the Gardner model as a theoretical framework, the factors of language aptitude, student motivation and self-confidence in French come to the fore in the research of Colletta (1983) and Edwards (1976). In fact, the latter researchers recommend that further work be done on examining the role of self-confidence in the learning process, particularly in the light of traditional motivational theory. In the next chapter, a discussion of the Gardner model, with respect to locus of control and self-perception, will lead to the delineation of the problem which the present study addresses.

CHAPTER III — SPECIFIC DISCOURSE LEADING TO THE PROBLEM

Reward and Motivation

In the preceding chapter, we saw that motivational theorists refer to an external orientation² implying that learning is a means toward a goal that is external to the learner. The external orientation is contrasted with an intrinsic orientation which refers to learning that is internally directed by a desire to seek challenges and conquer them (de Charms, 1968).

In some instances, external events such as rewards (monetary or otherwise), may eventually increase intrinsic motivation -if they provide an element of choice and informational feedback from which a feeling of competence may ensue (Deci, 1975). Generally though, extrinsic rewards do not enhance the initial level of intrinsic interest (Lepper et al., 1989).

Lepper (1989, p. 83-88) discusses the multiple functions of rewards. The evaluation of their effect on the student may be considered in light of the processes of social control, evaluation and instrumentality. He points out that each of these sources of information, which are "separate and potentially conflicting", may "exert a [distinct] influence on children's later motivation in subsequent settings" (p. 84):

- (1) Instrumentality: Children may choose over time to continue in an activity for which they have no intrinsic interest provided that the promise (or reality) of extrinsic reward is sufficiently large.

- (2) Evaluation: Teacher feedback or grading may influence the student's self-efficacy and the likelihood of success or failure in the future.
- (3) Social control: Children's own sense of their reasons for engaging in particular activities plays an important role in motivation. If children believe, or assume, that their own activity is extrinsically constrained, rather than intrinsically controlled, their subsequent interest will be reduced.

Based on the foregoing three strands of thought, Lepper emphasizes the complexity of any motivational reward system:

any specific extrinsic incentive may simultaneously produce multiple effects on subsequent motivation through the existence of potentially opposing forces.
(1989, p. 87)

It would seem appropriate that due thought and consideration be given to the management of motivational elements in any given learning setting.

Locus of Control and Self-Efficacy

Phillips points out that locus of control is one of the most prominent constructs in cognitive-developmental theories of achievement motivation (1981, p.2001). Based on his own review of the literature on locus of control, MacDonald suggests that "internals engage in more instrumental goal-directed activity ... externals more often manifest emotional non-goal-directed responses" (1973 p.171). In other words, there may be circumstances wherein an

instrumental or goal-directed orientation is likely to be more characteristic of internals than of externals (Saminy, 1989).

Since an intrinsic learner typically is more internally driven, he or she may be less adaptive to an environment which contains strong extrinsic cues. By contrast, the extrinsic learner may be more responsive to external cues in the learning situation and hence be able to gain benefit from the environmental cues.

Locus of control measurements, in conjunction with measured self-conceptions of ability, are said, by Phillips, to differentiate orientations in motivation and identify the children (compared to their more self-assured peers) who have a low, but inaccurate, perception of their ability (1981, p.2001). Harter (1983) claims that children with a low sense of self-efficacy are more likely to attribute lack of success to internal rather than external factors.

Motivational orientation, according to Harter (1984), is open to environmental manipulation. Furthermore, self-perceived competency is related to motivational orientation - the higher one's self-perceived competency, the stronger the intrinsic motivation. However, Au (1988) claims that there is a modest link between self-perceived competency and L2 achievement.

In her literature review on the illusion of incompetence among children, Phillips (1981) points out that the child's perception of reality is a strong predictor of achievement motivation. Of considerable interest is the realization that actual ability may be independent of "motivational determinants of achievement" (p.2001). In her own study Phillips found that teachers had lower

expectations of students with a low self-perceived competency and those students, in turn, accurately perceived their teachers' expectations (p.2010).

Although self-perceived competency is influenced by aptitudes and accumulative experience, it is also shaped by the student's own perception of performance in relation to that of others. Teachers who provide assistance to students may help to increase skills but do little to contribute to enhanced feelings of self-efficacy (Schunk, 1989). However, as Lepper points out (1989), the inclusion of informational feedback on the part of the teacher, may contribute to a stronger sense of personal success for the student.

The Gardner Model and Social Learning Theory

Language theorists such as Lambert and Gardner speak of integrative and instrumental orientations: - the former connotes a willingness to identify or merge with the second language community; the latter suggests the inclusion of specific goals in learning a second language which may not involve an interest in the second language community. As stated in chapter two, Gardner (1989, p. 15) considers the motivational construct of orientation to contain a goal component. It is conceivable that the motivational expressions, integrative or instrumental, could be influenced in varying degrees by a continuum of intrinsic/extrinsic factors. (fig. 3). With respect to their motivational constructs, social learning and social language theorists share common views. Rotter has assumed that internal-external control approximates a continuum which is best described by the normal curve (1975 p. 56). In turn, he has negated the possibility of a bi-modal

distribution. Supposedly, says MacDonald (1973), a person would take a position on the continuum according to his or her degree of measurable internality or externality.

In the same vein, Gardner and Lambert have acknowledged that their early work in measuring goal orientations for second language learning led to the formation of a simplistic instrumental-integrative dichotomy. They have mentioned their intent to expand their measurement index to include a dimensional scale or continuum (Gardner & Lambert 1972; Gardner, 1985).

It may be seen then, that the locus of control scale permits the measurement of internality-externality by degree; the orientation index allows for the measurement of instrumental-integrative by category. For the purposes of this study, we will accept the notion of a continuum for the locus of control scale and presume the existence of a continuum for the orientation construct. We know, however, that the measurement of the latter can only be treated dichotomously.

Multidimensional Model of Motivation:

The two dimensions of integrative/instrumental and intrinsic/extrinsic orientations are concerned with goals and rewards respectively. It is conceivable, for example, that a student may wish to integrate (merge) with the second language environment due to internal (intrinsic) motives or situationally-based (external) rewards. Possible, but not exhaustive, combinations for the two continua are as follows:

- (1) Instrumental-Intrinsic: A student has specific goals to achieve in the L2 setting; his or her reason for being there is based on an internally-directed desire to achieve the goals.
- (2) Instrumental-Extrinsic: A student has specific goals to achieve in the L2 setting; his or her reason for being there is due to an external stimulation emanating from the home and/ or the L2 setting i.e. activity, peer interaction, teacher feedback.
- (3) Integrative-Intrinsic: A student is willing to merge his or her identity with the L2 community; his or her reason for doing so is due to a genuine interest in assimilating with the community and learning the language.
- (4) Integrative-Extrinsic: A student is willing to merge his or her identity with the L2 community; his or her reason for being there is due to an external stimulation emanating from the home and/ or the L2 setting i.e. activity, peer interaction, teacher feedback.

To date, there has been justification in the literature for considering an interaction between the two orientations or dimensions (MacDonald, 1973; Saminy, 1989). Gardner finds simplistic the view that an integrative orientation is synonymous with an intrinsic interest in language and an instrumental orientation is equivalent to an extrinsic interest in language. Rather, he would argue that the two components be regarded as extrinsic - language learning takes place to satisfy goals, not only intrinsic desires (1985, p. 11). The paradigm presented in this study might provide the refinement for which Gardner has need.

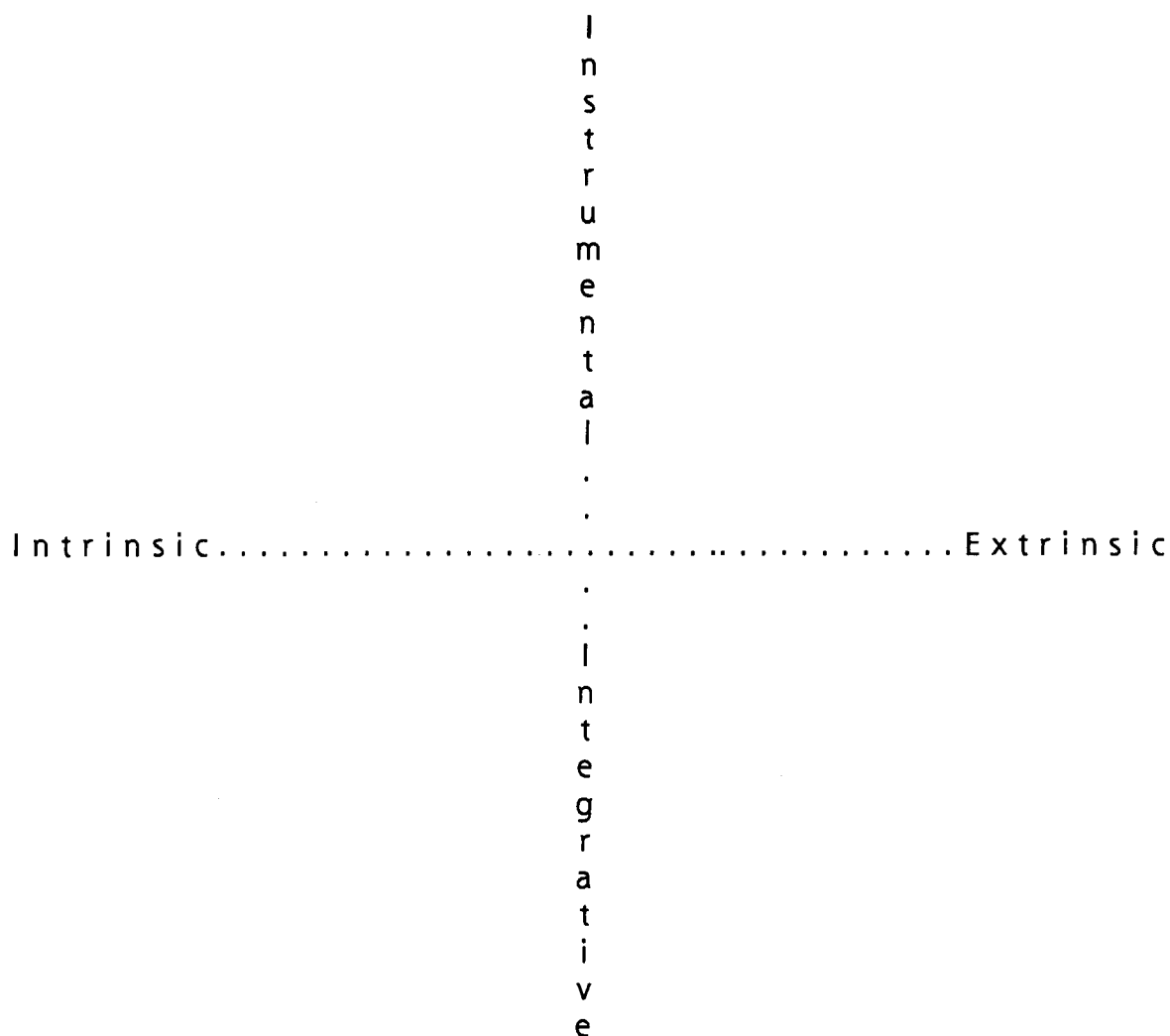


Figure 3: Interaction of goal orientation & motivational preference

The Problem

The language learning situation into which the adolescent FI students enter is in some particular ways at variance with their accustomed milieu. Most notable is the fact that the competency which the student has known with the first language is no longer functional. The majority of the new information comes

from external cues in the environment. Some degree of dependency replaces the autonomy a student may previously have developed, since learning the new language is now contingent on the input of significant others. Social interaction, a striking feature of the environment, is facilitated through cooperative groupings for work projects and conversation. Moreover, adolescent youngsters are, in varying degrees, undergoing developmental changes in the cognitive, physiological, and social areas so that the whole person is thrust into a state of flux and uncertainty. Support from the home and community also may vary.

Students may adjust to the new learning environment by endeavouring to adapt to the extrinsic demands of the classroom structure and teacher-expectations. Students who are extrinsically oriented may adapt more readily than others who are typically intrinsic in orientation. Another confounding variable is their reason for being in the situation - are they really keen to learn the French language for the challenge and pleasure of it, or are they motivated by long-term gains, such as increased job opportunities in the future?

The purpose of this study was to examine a sample of late French Immersion grade seven students in a suburban setting of British Columbia with the view to exploring and considering:

- a) the relationship of self-perceived competency and motivation to second language proficiency,
- b) the influence of parental support on L2 learning as viewed by parent and child.

2

Questions

[Refer to chapter IV (p. 46-68) for operational details concerning each factor.]

I A Priori Questions

1. What is the relationship of self-perceived academic competency to L2 proficiency?
2. How do the intellectual factors I.Q. and language aptitude relate to L2 proficiency, as opposed to the non-intellectual factors intrinsic motivation and parental influence?
3. How does locus of control relate to intrinsic motivation, and L2 proficiency?
4. Is there a significantly positive relationship between self-perceived competency and intrinsic motivation?
5. How does parental support relate to student self-confidence (Piers-Harris)?
6. Does an instrumental orientation differ from an integrative orientation with regard to general L2 proficiency?

II Emergent Questions

1. Are the student's motivational beliefs (internal/external) on the locus of control scale, related to goal orientation on Gardner's scale (integrative/instrumental)?

2. Is there justifiable reason to regard the integrative/instrumental orientation as a continuum?

2

Limitations of Study

The scale of the present study only allowed for the exploration of these questions with regard to FI students in the second year of their program. The student sample was restricted to forty grade seven students in one dual-track school with a near balance of gender in the subjects pool. With the exception of an informal attitudinal survey completed a year ago, no pre/post measures have been conducted in the affective domains. Due to the stimulating nature of the FI setting, coupled with a philosophy of integration with the English programs, there were numerous interruptions in regular timetable scheduling which made data gathering less predictable and even interruptive in itself. In spite of these limitations the sample is adequate for the exploration of relationships of affective factors to language proficiency gauged in relation to norms previously established in the province of B.C. and across Canada.

CHAPTER IV — METHOD

Objectives

The purpose of the study was to examine the inter - relationships of motivational variables with respect to the second language learning of early adolescent students. The relationship, of parental influence to motivational variables and second language achievement, was a secondary consideration of this study.

Sample

A Students:

There were forty grade seven students (21 female and 19 male) from one dual track school in Delta B.C. All students claimed English as their first language. Five per cent had a French background; twenty-five per cent had a second language, other than French, in their family heritage.

B Parents:

Forty family heads (defined as one parent or guardian of the student participants) were given the opportunity to complete a questionnaire but only twenty-three complied.

Testing Procedures

Group measures were administered by the researcher in two classroom settings. The F.I.A.T. subtests were individually administered by a qualified French Immersion Learning Assistance teacher. The testing commenced on May 14 th, 1990 and concluded on June 26th, 1990.

Design

The design for this study was based in part upon the design and theory of a research project supported by the International Centre for Research on Bilingualism, Laval University. The study, entitled "Community and Parental Influence: Effects on Student Motivation and French Second Language Proficiency", obtained data from 68 anglophones in grades 7-10 enrolled in a French Immersion program, and also from their parents (Colletta et al. 1983).

The authors' review of their rationale indicated that the FI literature has established the influence of affective or non-cognitive variables (and their interaction) on second language acquisition. They argued that environmental variables also interact with affective variables to influence L2 achievement. Parental encouragement was selected as an important influential factor on student achievement.

The Gardner socio-educational model was utilized in this study, but modified to include the variable, self-perceived competency (fig.2), in place of the anxiety variable. The former is considered to be a more complex index, that is to say, it includes more sources of anxiety beyond that which pertains to the situation alone. The authors adopted the position of Clement (1978) that one's degree of confidence would inversely correspond to the degree of anxiety present. Therefore the situational anxiety variable as proposed by Gardner (1975) has been omitted. [Recently, Gardner and MacIntyre (1989) have proposed a more language-specific anxiety variable - one they describe as communicative anxiety.] Au (1988, p. 89) points out that Clement's measure for assessing

self-confidence refers to L2 proficiency only, not academic ability in general. The measure used in this study was chosen to reflect the latter. For the purposes of this study the Colletta model has been adopted. However, the omission of the situational anxiety variable should not be taken as an indication that such factors are unimportant.

The individual differences variables which were incorporated in the Colletta study include: intelligence, language aptitude, motivational orientation, student affect, parental encouragement and self-perceived competency of the student. These individual differences were analyzed for their relationships to the learning outcomes which are L2 proficiencies.

With the exception of the student and parent questionnaires, the measures used in this study differed from the Colletta research tools. The questions were extracted from the Colletta research but reduced in number for ease of administration. There was also direct correspondence between some items to which children and parents have addressed themselves. For purposes of brevity, a limited selection of variables, associated with the questionnaires, was used.

The other selected measures for this study consisted of well-studied and described instruments that have appropriate norms: the Canadian Cognitive Abilities Test, the Otis-Lennon Ability Test, the Nowicki-Strickland Locus of Control, the Piers-Harris Self-Concept Scale, the B.C. Provincial Assessments of 1987 and 1988 and the French Immersion Achievement Test (F.I.A.T.). A brief description of the instruments follows (reviews of the C.C.A.T. and F.I.A.T. may be found in Appendix D).

Instrumentation

Canadian Cognitive Abilities Test (C.C.A.T.) - multilevel edition, 1988, form 7: verbal and nonverbal

The C.C.A.T. is based on the original Lorge-Thorndike Intelligence Test (1954). It has evolved from its predecessors, the Cognitive Abilities Test (standardized in the United States), and the Canadian Cognitive Tests forms 1-3. In the Fall of 1987, the C.C.A.T. was jointly standardized throughout Canada with the Canadian Test of Basic Skills (C.T.B.S.).

The multilevel edition, grades three to twelve, provides three classifications of ability with the assessment of corresponding skills as follows:

- 1) verbal battery: verbal classification, sentence completion, verbal analogies.
- 2) quantitative battery: quantitative relations, number series, equation building.
- 3) nonverbal battery: figural classification, figure analogies, figural analysis.

The recommended time allotment is 30 minutes for each individual battery. As this is a power test, and not one of speed, the test developers allow for flexibility in time administration.

For the purposes of this study, only the verbal and nonverbal batteries were administered. The former is a strong indicator of school achievement; the latter is an estimate of abilities among students for whom reduced competence in English may be an influential factor. (see Appendix D)

Otis-Lennon Mental Ability Test

Elementary II Form J This Mental Ability Test (OLMAT, 1967) was the precursor to the Otis Lennon School Ability Test (OLSAT, 1979). The intermediate level for grades 6-8 will be used in this study. It is a multiple choice, group administered instrument for use in a school setting, grades 1-12. It was designed to assess the Spearman "g" or verbal-educational group factor. The OLMAT claims to tap the student's reasoning ability and the handling of verbal, symbolic and figural materials.

Intrinsic-Extrinsic (I-E) Scale for Children

Nowicki-Strickland Locus of Control (1973) This I-E scale is a 40-item yes/no self-report test that has been used with students from third grade to college level. It is considered by one user (MacDonald, 1973) to be the best measure of its kind for use with children. The forced-choice scale measures the extent to which students select external over internal response items. Estimates of internal consistency using the split-half method with Spearman Brown correction are $r = .63$ (grades 3-5), $r = .68$ (grades 6-8).

Piers-Harris

This scale consists of eighty yes/no items yielding a standard score which is claimed to be indicative of the child's self-concept. The following subscales are delineated: behaviour, intellectual and school status, appearance, anxiety, popularity, happiness and satisfaction. It is a group measure, twenty minutes in duration.

Reliability of the Piers-Harris

- (1) On a test/retest basis for both normal and special populations the reliability was in the range of .42 (after an eighth month interval) to .96 (after a three or four week interval). Temporal stability was reported by Shavelson (1982) with a reliability coefficient of .81 for white upper class seventh graders covering a five month time span.
- (2) For the purpose of internal consistency Piers found a range of .88 to .93 using the KR20 for dichotomous items on a normative sample of 297 sixth and tenth graders.
- (3) The standard error of measurement is based on an overall reliability of .90 and a standard deviation of 13.87.

Validity of the Piers-Harris

- (1) Concerning construct validity, self-concept is considered by the authors, Piers and Harris, to be relatively stable and multifaceted with developmental characteristics. Self-report is the means of gauging self-concept in this measure.
- (2) The internal consistency among the six clusters (as listed) ranges between .73 and .90. Their stability across studies is moderate; different clusters have surfaced in various assessments. Harter states that the first three factors (behaviour, intellectual status and school status, and physical appearance) have been supported across different populations and age groups (1983).

B.C. Assessment 1987 criterion-referenced *

multiple choice comprehension. There is a possible global score of thirty-three. Provincial norms are available with a reliability of .79. The items were drawn from a wide range of stimulus materials, such as textbooks, tradebooks, anthologies.

B.C. Assessment 1988: criterion-referenced *

(a) dictée

Thirty-seven items assess correct spelling, word agreement and conjugation of spelling. An instructor reads the entire text and students fill in missing words in the written text.

(b) verbs

Nine items form a composite assessment of verb conjugation, agreement and sentence construction. Students are instructed to write an 8-10 word sentence using the expression provided. Each response is scored three times dichotomously [1,0] for correct choice, correct form, adequate phrasing.

- * All the B.C. Assessments were scored by a FI practitioner, according to ministry guidelines.

Student/Parent Questionnaires

Assessment of affective variables, adapted from the Colletta (1983) study which was, in turn, originally based on the Language Research Group National

Test Battery: Form A (Gardner and Smythe, 1975). All students and 23 parents completed a matching questionnaire consisting of Likert-type and multiple choice scales. See Appendix C for the explication of the questionnaire variables.

Schedule for Spring Testing - 1990

<u>Tests</u>	<u>Dates</u>
Otis-Lennon	June 21
CCAT-verbal	June 11
CCAT-nonverbal	June 12
Nowicki-Strickland IE	June 11
Piers-Harris subtest #2	June 26
Gardner National Battery:	
student questionnaire	June 18
parental questionnaire	June 18
verb tense & agreement	May 29
dictee	May 29
FIAT - spelling	May 14 - June 26
FIAT - cloze	May 14 - June 26
multiple choice comprehension	June 12

Operational Definition of Language Proficiency

Language proficiency may be operationally defined in a broad sense to include a dimension of discrete-point and integrative measures which could include teacher grades, criterion-referenced and standardized tests. For the sake of simplicity, proficiency indices have been limited to five standardized measures.

An outline of all indices, with their corresponding variables, follows.

VARIABLES:	DATA SOURCES:	UNITS OF MEASURE
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Independent

I.Q.	Otis-Lennon	%iles
language aptitude	CCAT-verbal	%iles
nonverbal aptitude	CCAT-nonverbal	%iles
locus of control	Nowicki-Strickland IE	raw scores
(group 1 = intrinsic motivation)		
(group 2 = extrinsic motivation)		
academic self-concept	Piers-Harris subtest #2	%iles
(or self-perceived competency)		

Aggregates of Student Affect

student's perception of parental encouragement	#1,4,5,8,9,11	raw scores
student's instrumental orientation	#2,3,7	
student's integrative orientation	#6,10	
(also represents intrinsic motivation)		

Aggregates of Parental Influence

parent's perception of parental #1,4,5,8,11

encouragement

parent's instrumental orientation #2,3,7,9

parent's integrative orientation #6,10

Dependent

Writing and Reading: L2 proficiency indices

verb agreement	B.C. Assessment 1988	discrete point
spelling	FIAT	discrete point/ integrative
dictée	B.C. Assessment 1988	discrete/integrative
cloze	FIAT	integrative
multiple choice compre.	B.C. Assessment 1987	discrete point/ integrative

CHAPTER V - RESULTS

In keeping with the recent precedents of second language investigators (Shapson, 1987; Ardanaz, 1988) due consideration has been given in this study to the particulars of second language proficiency, as well as to certain affective and motivational factors that influence student learning. Attention has been directed to the place of academic self-concept, intelligence, and aptitude in relation to intrinsic motivation and academic proficiency. Information about student motivation was supplied through the Nowicki-Strickland Locus of Control Scale for Children (1973) and the questionnaire material of the Gardner Battery (Gardner, 1975). The cooperation of parents in completing questionnaire items, similar to those done by their children, assisted in the examination of parental support in the language learning process. Finally, a proposed model of motivation was delineated which considered, among other things, the interactional effects of the internal/external dimension of the locus of control scale with the integrative/ instrumental dimension of the Gardner Battery.

Tables A (student variables: N=40) & B (student/parent variables: N=23) show the significant correlations between each of the proficiency, motivational and affective measures that have been included in this study. Information concerning the measures may be found in chapter four where a listing of the associated variables is given.

Analysis

The purpose of this study was to explore, at a descriptive level, relationships between a variety of motivational and ability variables and achievement indices. To this end, achievement test scores, as well as those from the other measures, were analyzed. Frequencies, percentages, means, standard deviations and ranges of scores were tabulated for the variables. Pearson product-moment correlations were conducted between all the individual variables. Chi-square analyses, where appropriate, were also tabulated for the measures of locus of control, the instrumentality/integration dichotomy, and parent/student interactions. A regression analysis was conducted to test the notion that the dichotomous integrative/instrumental factors together may form a continuum. The alpha level of $p < .05$ was utilized, unless otherwise indicated.

In the next section, the substance of each question presented in chapter three will be addressed. Additional consideration will be given to the performance of students ($n = 23$) whose parents completed questionnaires as well as to the overall sample ($n = 40$).

A PRIORI QUESTIONS

Affect and Achievement (Question #1):

The first question was concerned with the relationship of self-perceived competency to the language proficiency variables. Accordingly, five measures of second language proficiency (FIAT - spelling; Verbs - verb tense; and Comp - comprehension) and one measure of self-perceived competency (Piers-Harris) were

taken for the entire sample ($n=40$). Of the five correlations, only one was significant. As shown in Table A, one significant correlation was found between self-academic competency (Piers-Harris) and the F.I.A.T. Comprehension ($r=.4379$; $p<.01$). Similarly, for the sample subset (Table B) there was a positive significant correlation at $r=.3874$ ($p<.01$).³

The distribution of student performance on the FIAT Comprehension in relation to percentile norms derived from EI students is described in Table C. It is evident that 35% of the students scored at or above the mean on the F.I.A.T. Comprehension. According to the FIAT classification index (Wormeli, 1987), 17.5% of the students performed in the significantly below average category while there were no students who scored in the significantly above average category.⁴

Abilities and Achievement (Question #2):

Intellective Factors

I.Q. (Otis-Lennon), verbal and non-verbal aptitude (CCAT Verbal, CCAT Non-Verbal respectively) were considered in relation to the language proficiency indices: FIAT Spelling, FIAT Comprehension, Dictation, Verbs, Comprehension.

(a) Table A contains the correlations for the entire student sample. All the aptitude measures intercorrelated significantly with one another. However of the three ability measures, only the Otis-Lennon was significantly correlated with all five second- language proficiency measures (with FIAT- spelling, $r=.4556$,

TABLE A — CORRELATIONAL MATRIX FOR ALL PUPIL VARIABLES (N=40)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IQ														
CCAT1	.4413**													
CCAT2	.4527**	.3747**												
FIATS	.4556**	.1963	.2495											
FIATC	.5042***	.5386***	.3351*	.5872***										
DICTEE	.3027*	-.0882	.2058	.5396***	.5360***									
VERBS	.3830**	-.0114	.0688	.5159***	.4733***	.6885***								
COMP	.4676***	.4484**	.2725*	.5322***	.7559***	.4129**	.3545**							
ASELFCON	.4080**	.3413*	.1812	.1004	.4379**	.2323	.1751	.2114						
LOCUSCTR	-.3437*	-.1331	-.2096	-.2613*	-.1363	-.1235	.0882	.0796	-.2612*					
LCTRGPI	-.3573*	-.1186	-.0636	-.3770*	-.2558	-.2064	-.1809	-.2591	-.1505	1.000***				
LCTRGP2	-.2189	-.6801*	.2092	-.2560	-.2704	-.0881	-.3553	-.5412	.0394	1.000***	.000			
SINSOR	-.1771	-.1785	-.1050	-.0549	-.1338	-.0774	-.2905*	-.1739	-.1429	.0998	.1282	.8453**		
SINTOR	-.0912	-.1854	-.0955	-.0470	-.0729	-.0003	-.0804	-.1062	-.0262	-.2574	-.3131*	.5316	.4407**	
SPE	-.2177**	-.1687	-.3987**	-.0119	-.1247	-.1668	-.0743	.0445	-.1760	.1735	-.0169	.3311	.4817**	.3804**

* 1. IQ — Intelligence Quotient

2. CCAT1 — C.C.A.T. Verbal

3. CCAT2 — C.C.A.T. Nonverbal

4. FIATS — F.I.A.T. Spelling

5. FIATC — F.I.A.T. Comprehension

6. DICTEE — Dictation

7. VERBS — Verb Tense

8. COMP — Comprehension

9. ASELFCON - Academic Self-Concept (Piers-Harris)

10. LOCUSCTR - Locus of Control

11. LOCUS GP1 - Internals: N=32

12. LOCUS GP2 - Externals: N=7

13. SINSOR - Student instrument orientation

14. SINTOR - Student integrative orientation

15. SPE - Students' perception of encouragement given

* p ≤ .05

** p ≤ .01

*** p ≤ .001

* Variable categories: 1-3 — aptitude/ability; 4-8 — achievement/L2 proficiency; 9 — affect/confidence; 10-15 — motivational

TABLE B — CORRELATIONAL MATRIX FOR SUBSET * OF 23 PUPILS AND THEIR PARENTS (N=23)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
IQ																	
CCAT1	.4910**																
CCAT2	.5665**	.4623*															
FIATS	.3515*	.1604	.4230*														
FIATC	.4081*	.6799***	.5666**	.4004*													
DICTEE	.0964	.0859	.3080	.4103*	.4885**												
VERBS	.0054	-.0800	.0834	.3187	.3058	.7145***											
COMP	.3185	.4867**	.5062**	.3642*	.7898	.4567**	.2678										
ASELFCON	.3243	.2037	.1772	.0022	.3874**	.2129	.1061	.1824									
LOCUSCTR	-.5706**	.1514	-.4761**	-.3121	-.3141	.0001	-.0678	.0522	-.2498								
LOCUS GP1	-.3343	.3650	-.3937*	-.5558*	.5558*	-.0723	-.0917	-.3484	-.0224	1.000***							
LOCUS GP2	-.9837	.0000	.8072	.0000	.8660	.7462	.4271	.0000	.2402	1.000***							
SINSOR	.1466	.1578	-.0256	.2321	.1467	.1344	-.1692	-.0418	.1435	-.0517	.0641	.5000					
SINTOR	.1079	-.0468	-.0512	-.0872	-.1510	.0400	.1786	-.0474	-.0922	-.3548*	-.2623	-.5000	.4217*				
PINSOR	-.0468	-.2022	-.1655	-.0878	-.2637	-.3202	-.1851	-.1976	-.3901*	.1630	.2985	-1.000***	.2835	.3416			
PINTOR	-.1497	-.0840	-.1935	-.0002	-.1762	-.1467	-.0250	-.1466	-.3703*	.3261	.2643	-.5000	.1903	.4620*	.5753**		
SPE	-.3082	-.4104*	-.3735*	-.1034	-.2998	-.0072	-.1845	-.1175	-.2968	.2291	.2523	-.3273	.4854**	.4325*	-.5459**	.2875	
PPE	-.2528	-.1054	-.1675	-.1737	-.2463	-.2693	-.1780	-.2004	-.2191	.2829**	.2839	-.5000	-.0203	.0949	.4919**	.5632**	.1151

1. IQ — Intelligence Quotient
2. CCAT1 — C.C.A.T. Verbal
3. CCAT2 — C.C.A.T. Nonverbal
4. FIATS — F.I.A.T. Spelling
5. FIATC — F.I.A.T. Comprehension
6. DICTEE — Dictation
7. VERBS — Verb Tense
8. COMP — Comprehension
9. ASELFCON - Academic Self-Concept (Piers-Harris)
10. LOCUSCTR - Locus of Control
11. LOCUS GP1 - Internals: N=20

* Those pupils whose parents provided questionnaire data

12. LOCUS GP2 - Externals: N=3
13. SINSOR - Student Instrumental orientation
14. SINTOR - Student Integrative orientation
15. PINSOR - Parent Instrumental orientation
16. PINTOR - Parent Integrative orientation
17. SPE - Student perception of parental encouragement
18. PPE - Parental perception of encouragement given

* p ≤ .05
 ** p ≤ .01
 *** p ≤ .001

* Variable categories: 1-3 — aptitude/ability; 4-8 — achievement/L2 proficiency; 9 — affect/confidence; 10-18 — motivational

TABLE C — FIAT ACHIEVEMENT FOR COMPREHENSION & SPELLING
 DISTRIBUTION OF SAMPLE (N=40) IN RELATION TO
 AGE-COHORT PERCENTILE NORMS
 (From Early Immersion Pupils)

Percentile Range	Classification Index	%age for comprehension		%age for spelling	
96	Significantly Above Average	35%	2.5	32.5%	67.5%
84-95	Above Average		5.0		
62-83	High Average		10.0		
35-61	Average		15.0		
16-34	Low Average		22.5		
5-15	Below Average	65%	32.5	67.5%	
4	Significantly Below Average		12.5		

(Wormeli et al. 1987)

$p < .01$; FIAT-comprehension $.5042$, $p < .001$; Dictation, $r = .3027$; Verbs, $r = .3830$, $p < .01$; Comprehension, $r = .4676$ $p < .001$). Both CCAT measures yielded significant correlations with two of the five achievement measures (CCAT-nonverbal with FIAT-comprehension, $r = .3351$ and with Comprehension, $r = .2725$; CCAT-verbal with FIAT Comprehension, $r = .5386$ $p < .001$ and with Comprehension, $r = .4484$, $p < .01$).

In this study, the best single predictor of the various measures of second language achievement is the Otis-Lennon abilities measure. However, the CCAT verbal aptitude measure provides a more precise estimate of French comprehension proficiency.

(b) Table B contains correlational data for the paired student-parent questionnaire responses ($n = 23$). For the sub sample, the Otis-Lennon correlated significantly with two of the proficiency measures: FIAT Spelling ($r = .3515$) and the FIAT Comprehension ($r = .4081$). Both CCAT verbal and nonverbal measures correlated significantly with the FIAT Comprehension ($r = .6799$, $p < .001$; $r = .5666$, $p < .01$, respectively) and with the Comprehension ($r = .4867$, $p < .01$; $r = .5062$, $p < .01$, respectively). It follows, for the sub sample, that the CCAT verbal and nonverbal aptitude measures take precedence over the Otis-Lennon in predicting comprehension proficiency.

Non-Intellective Factors

Intrinsic motivation and parental influence were examined. Intrinsic motivation may be thought of as the internal factor on the locus of control scale or as the integrative factor on the goal-orientation scale. Standard procedures were used to differentiate Internals from Externals. The locus of control group ($n=40$) was split into Internals with net negative scores, and Externals with net positive scores. One subject who tested neither Internal nor External was dropped from this portion of the analysis. The I-E groups were labelled #1 and #2 accordingly.

(a) As indicated in Table A ($n=40$), the internal locus score (Nowicki-Strickland) was significantly but negatively related to FIAT Spelling ($r=-.1833$). It is helpful to consider that the I locus factor embraced thirty-two students of the total sample, thereby accounting for 80% of the student proficiency performance. With regard to the intrinsic variable (Gardner Battery: student integrative orientation) there were no significant correlations with any of the proficiency variables.

(b) Considering the above independent variables in the context of the sub sample (Table B, $n=23$), the internal locus factor (Nowicki-Strickland) showed negative significant relationships to both the FIAT Spelling ($r=-.3515$) and the FIAT Comprehension ($r=-.5558$ $p<.01$). There were no significant relationships demonstrated between the intrinsic variable (student integrative orientation) and

the proficiency variables. Similarly, there were no significant relationships evident between the parental variables (Gardner Battery: parental instrumental, parental integrative, parental encouragement) and achievement.

Motivation and Achievement (Question #3):

Further attention was turned to locus of control, intrinsic motivation and proficiency. The overall locus of control (Nowicki- Strickland), in Table A (n=40), showed no significant relationship to intrinsic motivation (Gardner Battery: integrative orientation) but correlated negatively and significantly with one proficiency measure, the FIAT Spelling ($r = -.2613$).

In the reduced portion of the sample (Table B, n=23), the locus of control variable showed a significant negative correlation with the student's integrative orientation ($r = -.3548$). There were no significant relationships between locus of control and the five proficiency variables.

Motivation and Affect (Question #4):

Reflection was then given to intrinsic motivation and academic self-confidence. In Tables A (n=40) or B (n=23), no significant relationships were reported between self-perceived competency (Piers- Harris) and the measures of student intrinsic motivation (Locus of Control: Nowicki-Strickland ; student integrative orientation: Gardner Battery).

Parental Support and Student Affect (Question #5):

Parental support was viewed in relationship to academic self-confidence (Table B). The factors of the Gardner Battery (1975) which pertained to parental support were: parental instrumental orientation, parental integrative orientation, parent's perception of parental encouragement. (For this measure, the subtest scores of the questionnaires were grouped into composites).

Of the three factors, only two (parental instrumental and parental integrative orientations) established significant but negative correlations with the Piers-Harris academic self-confidence measure (for the former, $r = -.3901$; for the latter, $r = -.3703$).

Motivation and Proficiency (Question #6):

Student responses (Table B, $n = 23$) on the integrative/instrumental goal orientation scale (Gardner Battery) were examined in light of their relationships to the proficiency subtests: FIAT Spelling, FIAT Comprehension, Dictation, Verbs, Comprehension. As evident in Table B, no significant relationships were found.

EMERGENT QUESTIONS

II

Motivation and Goal Orientation (Question #1):

- (a) The interrelationship of motivation and goals was examined through a chi-square analysis. The orientation composite scores [$n = 39$] (Gardner Battery: student/parental instrumental orientation & student/parental integrative orientation) were recoded to approximate a three-response pattern (disagree, undecided, agree) rather than a five-response Likert pattern (strongly disagree, disagree, undecided, agree, strongly agree). This procedure was necessary to accommodate the narrow cell requirements of the chi-square analysis with respect to the small data sample. A chi-square analysis was then conducted to determine if locus of control groups #1 and #2 were independent of each other when measured, firstly on the integrative scale, and secondly on the instrumental scale. A crosstabulation analysis was considered appropriate for the noncontinuous (nominal) items contained in the questionnaires. Parental responses were also included in the tabulation. The I-E groups demonstrated no significant independence from the student or parental instrumental/integrative factors.
- (b) From the perspective of the Pearson correlation analysis (Tables A & B), the internal locus of control factor was negatively related to the student integrative measure ($r = -.3131$). The external locus of control, for the full sample, showed a strong significant positive relationship with the student instrumental factor

($r=.8453$, $p<.01$) and, for the sub sample, a perfect negative relationship with the parental instrumental factor ($r=-1.000$, $p<.001$).

Relationship of Orientational Goal Factors (Question #2)

The integrative /instrumental factors may be separate or related as on a continuum (Table D). A multiple regression analysis was conducted for the student and parental scales. Arbitrarily, the instrumental orientation (sintor,pintor) was chosen as the independent variable, and the integrative orientation as the dependent variable (sintor,pintor). Using the regression equation,

$$Y' = a + bX$$

$$\text{sintor} = 3.34 + 0.38 [\text{sinsor}] \quad (p=.005)$$

$$\text{pintor} = 1.45 + 0.46 [\text{pinsor}] \quad (p=.004)$$

There was found to be a significant positive linear relationship between the instrumental and integrative factors on the student and parental scales indicating that there is evidence to think that these factors are related on a continuum ($r=.38$, $p<.005$; $r=.46$, $p<.005$, respectively). Scatterplots (figures 4a,b & 5a,b) show the relationships between the instrumental and the integrative orientational factors on the student and parental scales (Gardner Battery, 1975). The interchange of the orientational factors as independent and dependent variables can be noted in the figures.

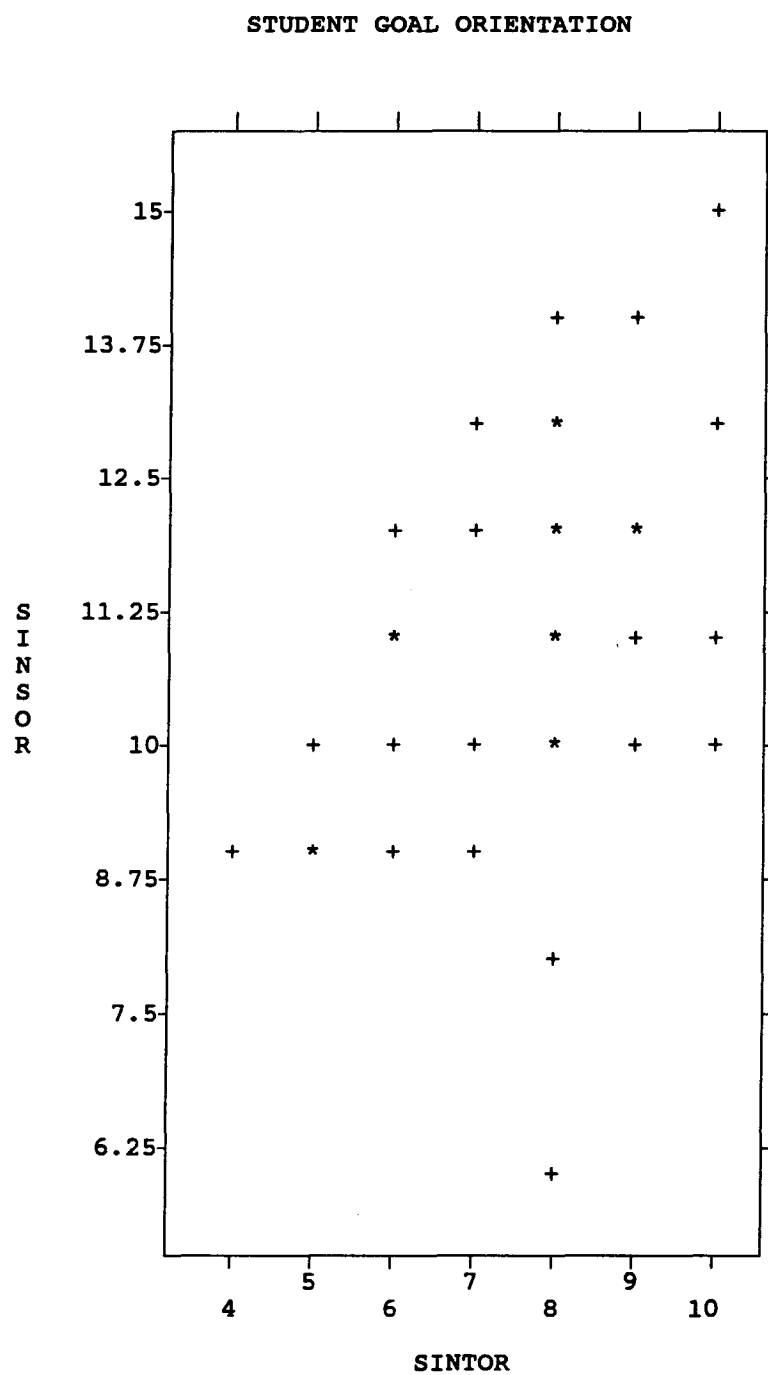


Figure 4a. Student Instrumental Orientation as Dependent Variable

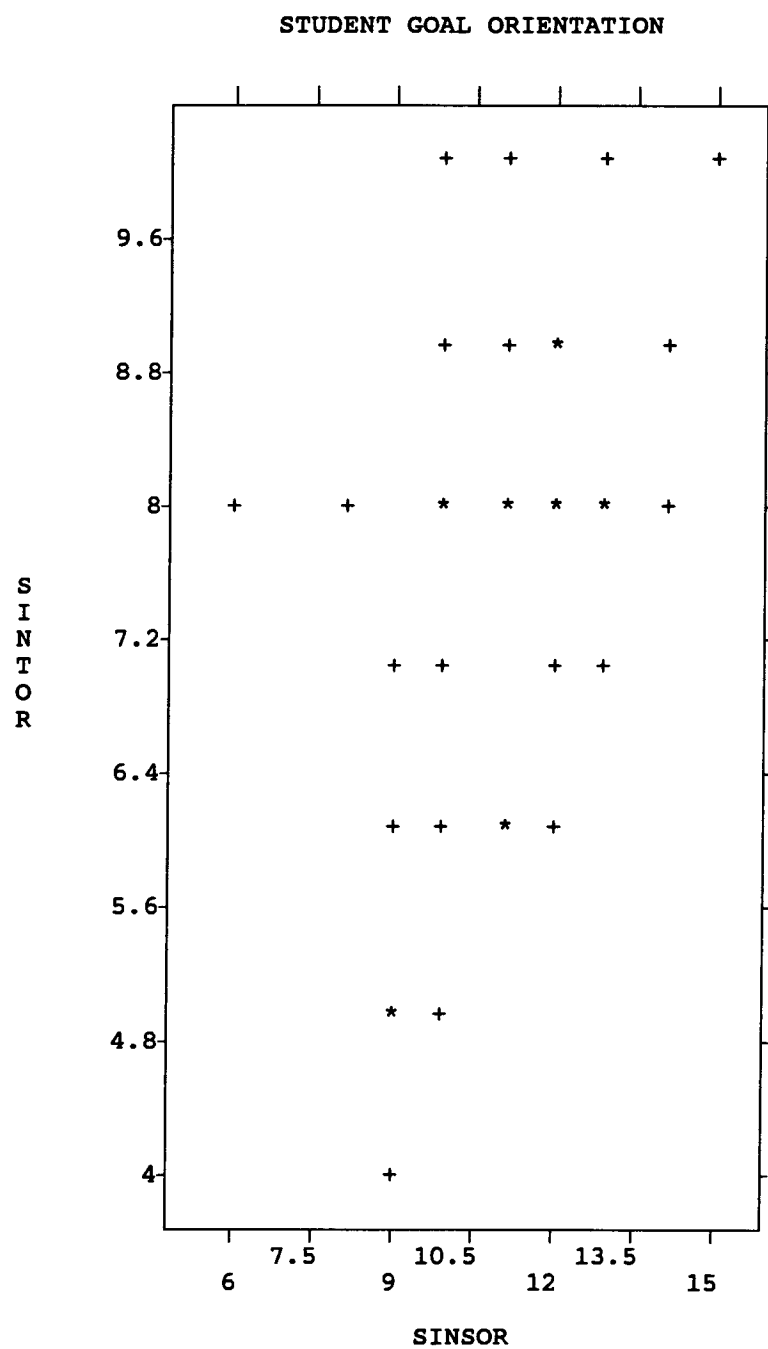


Figure 4b. Student Integrative Orientation as Dependent Variable

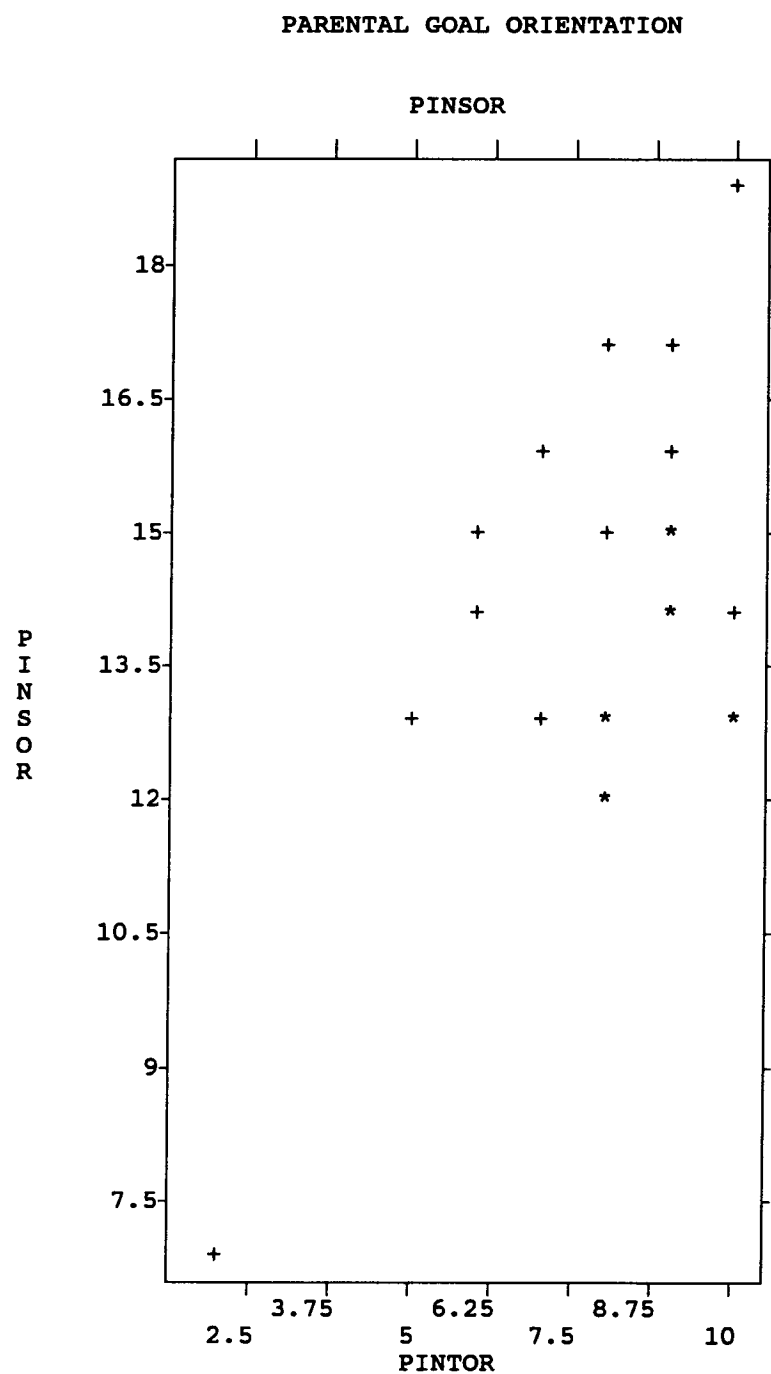


Figure 5a. Parental Instrumental Orientation as Dependent Variable

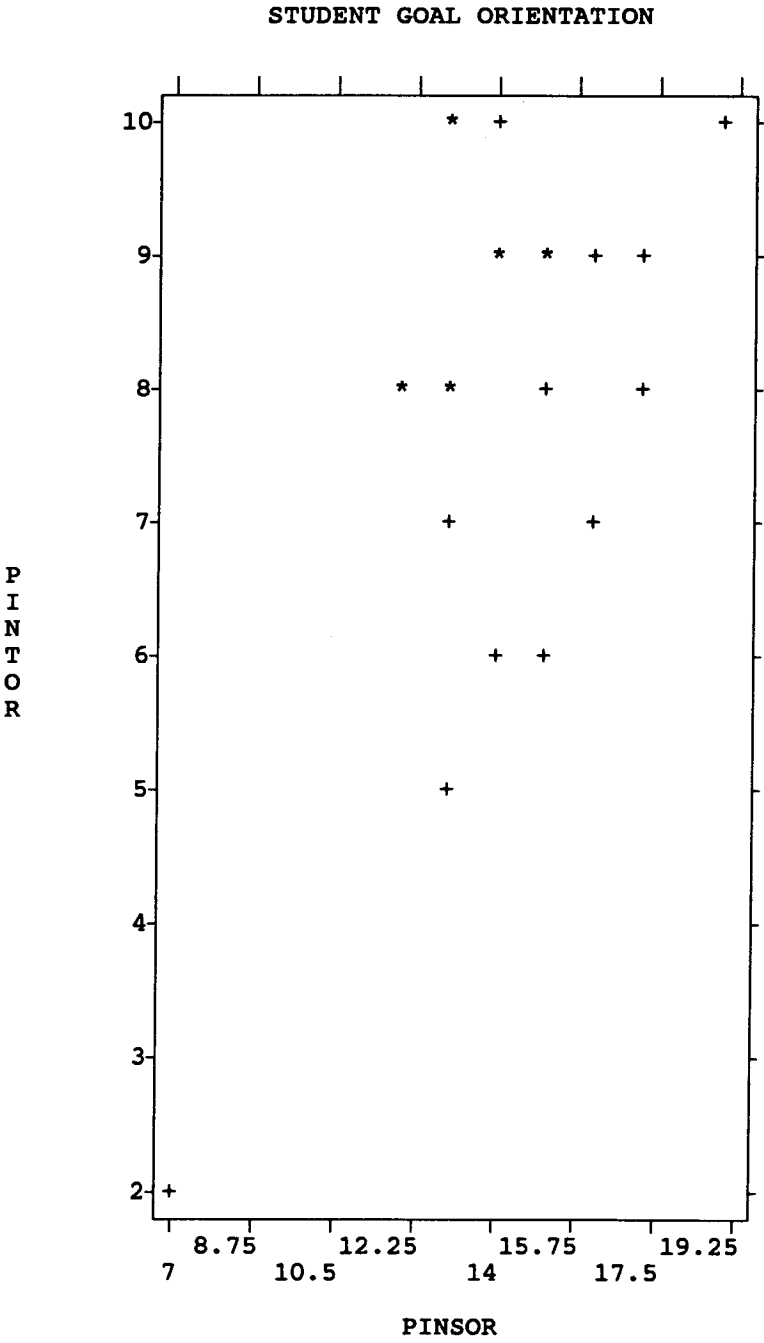


Figure 5b. Parental Integrative Orientation as Dependent Variable

Addenda (Table E)

Parental Influence

The shared perspectives of parents and their children on the parental encouragement variables were submitted to a chi-square analysis ($n=23/n=23$). The student /parent variables were found to be independent ($\chi^2 = 23.41$, $p < .001$, $df=4$). Thus there was a significant discrepancy between the way students and parents viewed the encouragement given by the parents to their children with respect to second language learning (Table E). The parents perceived (91.3%) the strength of their encouragement to be greater than that perceived (69.6%) by their children.

(1) It can be noted (Table B) that students' perception of parental encouragement is negatively and significantly related to parental instrumental orientation ($r = -.5459$, $p < .01$).

(2) The parental perception of encouragement is positively related to the locus of control factor ($r = .2829$, $p < .01$)

(3) The students' perception of parental encouragement (Table A) is negatively and significantly related to the Otis Lennon measure ($r = -.2177$, $p < .01$), and to the CCAT nonverbal measure ($r = -.3987$, $p < .01$).

**TABLE D — INTERRELATIONSHIP OF INSTRUMENTAL AND INTEGRATIVE
ORIENTATIONS FOR STUDENTS AND THEIR PARENTS**

Multiple Regression of Instrumental and Integrative Orientations

a ¹	Variable	B	SE B	Beta	T	Sig. T
	SINSOR	.379032	.126939	.440655	2.986	.0050
a ²	(Constant)	3.343466	1.414558		2.364	.0235
	PINSOR	.432719	.143564	.575293	3.223	.0041
	(Constant)	1.458333	2.042398		.714	.4831

a¹ Independent Variable:sinsor (student instrumental orientation)

Dependent Variable:sintor (student integrative orientation)

Equation F = 8.91580; Significance of F =.0050 ; DF =38

Multiple R = .44066; R Square =.19418; Adjusted R Square = .19418

a² Independent Variable:pinsor (parental instrumental orientation) Dependent

Variable:pintor (parental integrative orientation)

Equation F = 10.38835; Significance of F =.0041 DF =22

Multiple R = .57529; R Square =.33096; Adjusted R Square = .29910

TABLE E — PERCENTAGES FOR PERCEPTION OF ENCOURAGEMENT GIVEN

Responses	Low 1	Medium 2	High 3
Parents	4.3	4.3	91.3
Students	4.3	26.1	69.6

The table represents the degree to which parents and their children perceive encouragement to be given.

TABLE F-1 — FREQUENCY DISTRIBUTION FOR SAMPLE (N=40)

Variable	Mean	Standard Error	Standard Deviation	Minimum	Maximum
IQ*	71.600	2.838	17.951	29.000	97.000
CCAT1*	78.200	2.667	16.869	33.000	99.000
CCAT2*	74.924	3.184	19.887	16.000	99.000
FIAT S*	30.300	4.311	27.265	2.000	96.000
FIAT C*	30.200	4.289	27.123	1.000	95.000
DICTEE**	28.375	.839	5.389	18.000	36.000
VERBS**	32.487	1.148	7.170	19.000	43.000
COMP**	21.175	.807	5.103	12.000	30.000
ASELFCON*	40.200	4.958	31.358	1.000	98.000
LOCUSCTR**	13.375	.715	4.522	6.000	22.000
LCTR GP1** N=32	11.788	.547	3.140	6.000	17.000
LCTR GP2** N=7	20.857	.404	1.069	19.000	22.000
SINSOR**	11.000	.289	11.000	6.000	17.000
SINTOR**	7.513	.249	1.554	4.000	10.000
SPE**	21.162	.570	3.468	16.000	29.000

* = Percentile ** = Raw score

TABLE F-2 — FREQUENCY DISTRIBUTION FOR SUBSAMPLE (N=23)

Variable	Mean	Standard Error	Standard Deviation	Minimum	Maximum
IQ*	76.087	3.314	15.894	38.000	97.000
CCAT1*	80.130	3.007	14.420	49.000	97.000
CCAT2*	75.136	3.995	18.737	46.000	99.000
FIAT S*	34.783	5.719	27.429	4.000	96.000
FIAT C*	35.913	5.689	26.902	1.000	95.000
DICTEE**	29.043	1.070	5.130	20.000	36.000
VERBS**	35.182	1.213	5.687	23.000	43.000
COMP**	22.087	.930	4.461	15.000	29.000
ASELFCON*	41.043	6.500	31.173	2.000	98.000
LOCUSCTR**	12.957	.776	3.723	7.000	21.000
LCTR GP1** N=20	11.900	.589	2.634	7.000	15.000
LCTR GP2** N=3	21.000	.577	1.000	19.000	21.000
SINSOR**	16.636	.419	1.965	6.000	15.000
SINTOR**	6.955	.339	1.588	4.000	10.000
PINSOR**	14.043	.485	2.2325	7.000	19.000
PINTOR**	7.957	.390	1.870	2.000	10.000
SPE**	20.524	.675	3.092	16.000	24.000
PPE**	18.826	.664	3.186	10.000	24.000

* = Percentile ** = Raw score

TABLE G
PERCENTAGE OF SUBJECTS WITHIN STANDARD DEVIATIONAL RANGES

	-3σ	-2σ	$\pm 1 \sigma$	$+2 \sigma$	$+3 \sigma$
* IQ			70.0	27.5	2.5
** CCAT1			47.5	42.5	10.0
*** CCAT2			88.3	4.1	7.6
**** ASELFCON	5.0	27.5	50.0	15.0	2.5

* Otis-Lennon

** Canadian Cognitive Verbal Aptitude Test

*** Canadian Cognitive Nonverbal Aptitude Test

**** Piers-Harris Academic Self-Concept Scale

CHAPTER VI - DISCUSSION

Special Features of the Research

The development of this study was both nurtured and facilitated by the researcher's on-site presence in a French Immersion setting. Dialogue with resident FI personnel contributed to the lines of inquiry that gradually shaped the investigation. For such reasons, this research is more exploratory than deterministic in its purpose and goals. The availability of subjects provided the opportunity to consider a wide range of variables in a mode that was more naturalistic than controlled. As the researcher was known to the students and staff (and sensitive to the situational constraints of time and agenda), the test administration was more flexible than rigid.

The writings of Gardner (1983; 1985) and his socio-educational language model provided the stirrings for this project. Gardner's surveys formed the foundation for recent provincial assessments of the attitudinal correlates of French language achievement (Day et al, 1987; Ardanaz et al., 1988). Although the attitudes of French Immersion students have generally been shown to be positive, the area of student motivation has not been extensively or persuasively explored in French Immersion research. The inclusion of academic self-regard, though not well-supported in psychological literature (Wylie, 1979), was influenced by the current interest among educators in matters of self- esteem. Lastly, it was the view of the researcher that the time had come for a merging of psychological theory with the flow of thought about second language achievement and motivation.

Individual differences between students in academic learning, according to Vernon (1950), can be delineated by three main factors: the general intellectual factor of "g" (perception of relationships); aptitude for "book learning" (vocabulary, spelling, general information); a non-intellectual factor "X" (complexity of affective traits, interests and background characteristics). This model for student assessment broadly fits the overall design of the present study.

In review of the findings, the general I.Q. (Otis-Lennon), aptitude (CCAT verbal and nonverbal) and five proficiency variables intercorrelated significantly for the forty subjects. The academic self-concept measure (Piers-Harris) correlated significantly with ability (Otis-Lennon) and with a proficiency measure, the FIAT-C (highest achievement correlate of ability). Locus of control, as expected, correlated significantly and negatively with ability and achievement. Thus, in terms of Vernon's organization, the first two factors for the most part showed predictable stability. It was in the area of Vernon's factor X (as measured by student and parent questionnaires) that dynamic variability was found.

As an historical note, the research was conducted during a time of a constitutional crisis in the nation. The federal government was attempting to ratify the Meech Lake Accord which promised to give to the province of Quebec the status of a distinct society. The process resulted in a polarization of attitudes among Canadians towards French Language rights. The Gardner (1985) socio-educational model gives a prominent place to the influence of cultural community beliefs upon second language learning. Needless

to say, there were likely some residual effects at work among the students and, particularly, the parents who responded (or did not respond) to the questionnaires.

With the foregoing as background, the discussion, which follows, is organized around the research questions that were addresses by this study. Comments dealing with the overall significance of the findings, and suggestions for further research in second language learning, follow the discussion pertinent to the research questions.

The Research Questions Revisited

The first question focused on the extent to which the measure of achievement - the five L2 proficiency measures - were related to a measure of academic self-concept.

The highest (and only significant) degree of relationship for the academic self-concept measure was found in association with the FIAT comprehension. As the Piers-Harris accounted for only 16% of the common variance with one proficiency variable, any stress on this construct seems exaggerated and unwarranted. The evidence from this study contradicts the popular view shared by Phillips (1984) and Colletta (1983) that a significant relationship between academic self-confidence and proficiency is viable.

In so far as affective factors are important in achievement generally, and in second language learning in the late immersion context in particular, something other than academic self-concept must be looked to, for explanation and understanding of the relation of achievement to the affective aspect of the psyche.

As a subordinate point, the Piers-Harris self-concept measure provided a fairer estimate of students' school ability (as represented by I.Q. or aptitude) than of proficiency. This notion is supported by the interrelationship of the FIAT subtest to both the self-confidence subtest (Piers-Harris) and the ability measures. This oral cloze comprehension task involved the use of semantic and syntactic clues to provide the missing word in a phrase or passage. Clearly, it was the most difficult comprehension task that the students encountered. One may speculate that the FIAT comprehension was a demonstration of actualized competency encompassing what the students knew and could do.

The second question focused attention on the relationship of abilities to achievement. It asked: how do the intellectual factors, I.Q. and language aptitude, relate to L2 proficiency, as opposed to the non-intellectual factors, intrinsic motivation and parental influence?

Intellectual Influences

Of primary interest is the finding that the ability measures, especially the verbal (Otis and CCAT-verbal), were the best predictors of L2 proficiency. The Otis was the strongest (significant on all five areas) whereas the CCAT-verbal was significant on only the comprehension measures.

Tyler (1965) affirms the consistency of the relationship between intelligence and achievement. If, she says, the variability of the distribution is limited to the selection of average and above average students (Table G) correlations with achievement will be

lower than if a wide range of ability were included (Tables F-1 & 2). Although the type of achievement test is not a factor, the subject area is a determinant of the strength of relationship. Interestingly, Learned and Wood (1938) report, for urban high-school groups, a correlation of .46 between the Otis Intelligence Test and French achievement. The finding closely corresponds to the relationship between the comprehension indices and I.Q. in the present study.

As a point of observation, the CCAT-nonverbal aptitude in the subsample showed significant correlations with a number of the proficiency items (Fiat-comprehension, $r = .56666, p < .001$; comprehension, $r = .5062, p < .01$). The authors (Appendix D: Test Review) of the CCAT do not consider the CCAT nonverbal to be a predictor of academic achievement. However, Genesee (1980, p.106) has suggested that nonverbal reasoning ability may be associated with a field independence factor or an ability to "analyze and structure complex information ". Among young children, the latter variable was found by Genesee to be significantly related to French listening and reading comprehension. One is inclined to consider this nonverbal aptitude as a type of social intelligence that assists the student interpret nonverbal cues.

Non-Intellective Influences

The relationship between parental influence and proficiency is only implied by the data - there were no significant correlational relationships established between the parental affective variables and the language proficiency of students.

An informal scan of the frequency distributions (Tables F-1 & 2) shows an overall increase in mean scores between the main sample and the subsample. Examination of

the actual data, for the aptitudinal measures, reveals that the parents of students who scored in the overall sample, below the minimum range point of the subsample, did not participate in the questionnaire. As the lower ability students were excluded from the subsample (by self/parent selection), one is inclined to wonder why this phenomenon occurred. Perhaps parents' active involvement in the schooling of their children was contingent upon their (conscious or unconscious) estimates of the students' chances of making strong gains. Of course, such decision-making does not preclude the influence of familial socio-educational factors.

The apparent lack of a significant relationship between intrinsic motivation and proficiency is not surprising. The fact that most subjects scored as internals (or intrinsically directed) on the locus of control scale allowed little opportunity for individual differences between subjects to form in relation to ability or proficiency. For grade seven students, Nowicki-Strickland report an expected correlation with achievement to be $r = -.335$, $p < .01$ (1973, p.152). The marginal ($r = -.2613$, Table A) negative and significant relationship, between the locus of control scale (student's degree of externality) and the FIAT- spelling, gives insufficient grounds for making inferences about students with an internal disposition with respect to proficiency. Hence, there is very little basis in the data to speak to the relationship between motivation and proficiency.

The third question focused on motivation and L2 achievement. Here, locus of control is at the centre of attention.

The locus control measure negatively correlated with only the FIAT-spelling. The anticipation of a relationship existing between locus of control and proficiency is based on the following rationale: the individual who takes ownership for personal successes and failures is likely to show initiative and persistence in the face of problematic tasks (Morgan, 1966). Nowicki and Strickland (1973) report a clear relationship between the locus of control measure and achievement. The correlations are consistently negative and tend to be significant at seventh grade. Furthermore, they would lead us to anticipate that internality on the locus of control scale is associated with stronger achievement than is externality. However in this sample no such conclusion can be drawn.

Due to the nature and size of the sample, the locus of control scale had definite limitations. The authors of the scale have indicated that, based on a sample of 65 students, the mean and standard deviations are estimated to be 13.15 and 4.87, respectively (1973, p.149). The corresponding statistics from the distribution of scores for this study were 13.375 and 4.522 (Table F-1). However, we have observed that the majority (thirty-three) of the students were "internals". This indicates that the present sample is skewed overwhelmingly from that pole.

The method of calculating internality and externality according to standard responses, representing either I-E factors, subsumes a transituational application of trait characteristics defined as a "pattern of relationships within the individual's behavioural relationships" (Tyler, 1965, p.367). Even assuming a generalized disposition for externality and internality, the influence of the situation could bring interactional effects that would moderate one's degree of externality or internality. Rotter (1975) adds - in

competitive skill situations externals, due to their dispositional variability, may act as internals are expected to act. Given that notion, we ask ourselves whether externals might adapt more readily and/or appropriately to the stimulation of an FI classroom and, hence, make gains in proficiency performance. It would seem that the additional component of a situation-specific approach to the measurement of locus of control would be critical to the comparing of that variable, for example, to the orientational dimension of goal-setting (instrumental/integrative).

There is no evidence of any significant relationship between locus of control and intrinsic motivation as measured by the Gardner battery (1975) in the overall sample. The occurrence of a negative and significant relationship accounted for 12% of the variance in the subsample. Therefore the numbers are too small to clarify the situation. The relationship between locus of control and intrinsic motivation as (assessed by the integrative items of the Gardner Battery) is still unclear.

From a philosophical or developmental point of view, the idea that locus of control represents a degree of intrinsic or extrinsic motivation should be challenged. By definition, it is a position of power which has attributes that are supposedly internal or external to the individual. Students who are just entering adolescence may have learned a degree of autonomy that helps them stand their ground in relation to peers, teachers and parents. This attribute of being self-affirmed is not necessarily synonymous with a true intrinsic interest in learning the French language for its own sake. An exception may apply in the cases of gifted students who have mental ages (cognitive maturity) far beyond their years. More precise information about the students in relation to how they

deal with personal responsibility and initiative would be gleaned by examining the individual student's responses on the Nowicki-Strickland scale.

The fourth question asked if there were a significantly positive relationship between self-perceived competency and intrinsic motivation. Based on the findings of this study, there appears to be a modest negative correlation between students who are externally inclined (Nowicki-Strickland Locus of Control Scale) and academically self-confident (Piers-Harris). It may then be only inferred that students who are intrinsically inclined are more positive in their academic self-regard. Otherwise, there is no evidence to support Harter and Nicholls (1986) in saying that intrinsic motivation and self-perceived competency are positively related.

Question five asked: how does parental support relate to student self-confidence as measured by the Piers-Harris? In considering this question, in light of the data from the present study, a posture of modesty is warranted, as only 29 parents answered the questionnaire. This must be considered when we observe that both parental goal orientation variables (instrumental and integrative) correlated negatively with academic self-confidence. It would seem that parental support, accounting for about 16% of the variance of academic self-concept, is associated with a somewhat negative student affect.

The data of the subsample (despite statistical limitations) speaks to a discrepancy by degree between the students' view of the encouragement given by parents and the parental view of the encouragement given (Table E). Most parents (91.3%) gave a high

rating to the encouragement given and a portion of the students (69.6%) concurred. Yet other students (26.1%) interpreted the encouragement given by parents to be moderate. One is inclined to wonder whether the students were considering the amount, and/or the qualitative value, of the encouragement? The parents were possibly reporting a mixture of supportive and ambitious involvement in their children's education .

The parental instrumental goal orientation (unlike its integrative counterpart) reportedly decreased as students' perception of encouragement increased. The converse, then, could be true that the students who received less encouragement were associated with parents who were higher in instrumental orientation.

Addenda:

The dynamics of encouragement require further consideration in light of current motivational theory. There is evidence to think that students are more influenced by parental estimates of their ability than by their own school performance. Eccles and her colleagues have found that "...students' achievement attitudes were influenced more heavily by their parents' attitudes about their abilities than by their own earlier performances." (Eccles-Parsons, Adler, & Kaczala, 1982, p.141). Furthermore, parents who accentuate the autonomy and self-regulation of the child are likely to use intrinsic motivational strategies (Elmen, 1991). Communication patterns generated within the family, such as the capacity for constructive and coordinated thinking, are linked with perceived competence and academic achievement (Carlson, Hsu, & Cooper, 1990).

Parental encouragement (with respect to status aspiration) predicts educational attainment for boys, but harsh and inconsistent discipline on the part of their mothers is related to low cognitive self-worth. (Wentzel, Feldman, & Weinberger, 1991; Cassidy & Lynn, 1991).

As discussed in chapter two, the Colletta (1983) design delineated, for the parental encouragement variable, two dimensions: the passive and the active. The passive role is indirect and implicit to what the parent says and does; the active role is direct and integral to the tuition of the student. Colletta described the parental instrumental and encouragement factors as active, and the integrative factor as passive. Language researchers (Colletta, 1983; Gardner, 1985) favour the influence of the passive component over the active.

Question six called for an exploration of motivation with respect to the distinction between instrumental and integrative orientations to the culture of the second language. It asked: does an instrumental orientation differ from an integrative orientation with regard to general L2 proficiency?

With one modest exception, there were no significant relationships between the goal factors on the Gardner scale and the proficiency indices. The student instrumental variable, which is commonly considered to have extrinsic attributes, demonstrated a very strong negative relationship with the external locus of control ($n=7$) and a mildly negative relationship with the "verbs task" ($r = p < -.2905$). At first glance this finding seems to be unworthy of attention. The inference can be made, however, that students

who are more extrinsically inclined may be less fastidious in attending to the rigours of learning French verbs. Unless there are regular occurrences which would reinforce the students' efforts, there may not be the incentives to develop the skill of verb usage in extrinsically inclined students.

In his critique of the Gardner model of second language learning, Au (1988) challenges the view that an integrative orientation is positively related to L2 proficiency. He proposes that integratively oriented individuals are linguistically gifted in the first place. Their desire and motivation to learn a language follow naturally. In support of Au (Table A), it can be noted that the students' instrumental orientation was positively correlated to the external locus, ($r = .8453$, $p < .01$) which, in turn, was strongly and negatively correlated with language aptitude ($r = -.6801$). Gardner (1988) rebuffs the argument on the grounds that the integrative motive is not measured adequately. There needs to be a comprehensive number of items from his battery to reflect the complexity of the integrative motive. (In this study only two questionnaire items represented the integrative motive for the parental and student scales. See Appendix B.)

II

- 1. Are a student's motivational beliefs (internal/external) on the locus of control scale connected to goal orientations on the Gardner scale (integrative/instrumental)?**

Consideration of the two scales in a multidimensional sense could potentially provide more information than do the four individual dichotomous variables. Prior to this we have discussed the issue of measurement for locus of control. The results were skewed in favour of internals and we must work within that parameter. The significant relationships were confined to the students' integrative orientation in negative relationship with locus of control, and the students' instrumental orientation in positive relationship with the external locus. There does seem to be an interconnection among factors. The perfect relationship between external locus of control ($n=3$) and the parental instrumental factor, though striking, can be explained by the minuscule number of cases. However, the relationship does lend support to the thinking that the parental instrumental variable has external attributes. Directing attention to the multidimensional model in chapter three, four interactions were proposed between the two dimensions. Two of the four are represented: instrumental-extrinsic and integrative-intrinsic. The components of both pairs are thought to share common elements. There was no crossing between integrative-extrinsic, for example. From this small amount of evidence we are encouraged to think that a correspondence exists between the factors of the Nowicki-Strickland Locus of Control (IE) scale and the integrative-instrumental dimensions in Gardner's scales. Some caution should be used in endorsing Gardner's view (1985, p.11) that the orientational goal factors are both extrinsic. Because we are considering both dimensions as continua there is the obvious need to find new ways of measuring gradations of instrumentality/integrativeness, much in the way the global locus of control is calculated.

2. Is there a justifiable reason to regard the integrative/instrumental orientation as a continuum?

The evidence for linearity between the parental instrumental and parental integrative is clear even though the sample is small. However, the regression coefficient between the factors on the student scale is not as strong. It can also be noted that, in the overall dynamics of correlational relationships (Pearson r), the parental goal factors and the students' integrative factor correlate more widely than does the students' instrumental factor. The students' integrative factor appears to share some common properties with the parental integrative factor, by virtue of their significant relationship ($r = .4620$). Therefore, the student instrumental factor, which does not demonstrate a significant relationship with its counterpart on the parental scale, appears to be somewhat distinct from the other three factors.

The reliability of the Gardner measures would be increased if parallel measures could be given over a short period of time. (The issue here is whether or not enough items would be available in the Gardner material to suffice.) Another approach would be a test/retest with an interval of several months. The average of the intercorrelations would be used as an estimate of the reliability coefficient. The practice of using the same instrument reduces the chances of measuring a wide range of traits.

It is quite conceivable that an individual could be both integrative and instrumental in orientation. One could conceivably be interested in the strategic advantages of

learning the second language, while at the same time wanting to participate in the language community.

Gardner has made a contribution to motivational research with his construct for long term goal-setting. The principles he has used in defining purposes for undertaking language learning could be applied to motivational studies in various educational pursuits beyond the language learning setting.

Summation

The Otis-Lennon ability measure was the strongest predictor of overall second language achievement followed by the CCAT verbal aptitude measure, a reliable predictor of language comprehension. Conversely, the Piers-Harris academic self-concept measure showed no predictive strength with respect to achievement. The association of the latter to intrinsic motivation was marginally evident. The Piers-Harris instrumentation put into question the value of examining academic self-concept as a variable associated with motivation and achievement.

Due to the truncation of the range and the limited size of the sample, locus of control showed no clear relationship with proficiency. Similarly, no conclusions could be drawn concerning the relationship of locus of control to intrinsic motivation as measured by the Gardner Battery.

The integrative variable was shown to be somewhat intrinsic in character and the instrumental variable somewhat extrinsic. At the same time the two variables formed a

continuum which indicated an interrelationship . between them - the implication being that a student could possess varying degrees of both properties.

A modest claim can be made that the two aptitudinal variables (verbal and nonverbal) may act together as predictors of success in learning a second language in a formal setting. The latter may represent a certain social intelligence which could be an important prerequisite for understanding the unspoken cues and cultural gestures of the FI environment. Moreover, the features it shares with the integrative motive are of interest, and worthy of further exploration.

The actual influence of parents may be two-fold. There is a positive strand evidenced by the intrinsic properties of the relationships between parental instrumental, parental integrative and student integrative orientations. Parental support seems to enable the students to merge with the language environment. There is a seeming contradiction in the data that student affect is reduced in relation to parental encouragement (or a certain aspect of it). It can be can be seen that there are positive and negative attributes integral to parental support which, in the best interests of the students, require refinement.

Educational Implications

Communication by educators with parents regarding the basic principles of self-efficacy, and guidelines for assisting their children , could facilitate the development of achievement motivation within the school setting.

Coleman (1987) speaks to the issue of the school and home, each having its own mission in relation to the education of the child. He says that both institutions have interacting roles, the former being the producer of attitudes, effort and conception of self, the latter being the resource for opportunities, demands and rewards. Parents have taken the lead in the French Immersion milieu in setting long-term goals (such as career choice) with respect to language training. The educational community may be encouraged to participate in establishing realistic, short-term goals with, and for, students that would augment their motivation for language learning in keeping with the principles of self-efficacy.

Suggestions for Future Research

1. A multidimensional approach to motivation requires investigating and implementing that would include the elements of gender, ability, self-competency, subject domain, skill development, locus of control and parental support.
2. The Gardner Battery should be administered comprehensively (beyond the factors used in this research) and a factorial analysis conducted to examine the association of the integrative goal orientation with proficiency.
3. This present study could be duplicated using a larger sample size. The items for each factor on the Gardner Battery should be balanced in number.
4. The nonverbal aptitude variable (or social intelligence measure) warrants examination in association with field dependency/independency, the integrative variable, and FI learning.

ENDNOTES

- 1 Gardner (1988, p.105) has clarified that an integrative or instrumental motive does not exist. Rather it is merely a construct that refers to a "complex of attitudinal and motivational characteristics that appear to be implicated in second-language learning".
- 2 While it is recognized that an individual will show a varying mix of intrinsic and extrinsic motivational traits depending on the situation (and other unspecified factors) it is assumed in this document that a student has a propensity for being either an intrinsic or extrinsic learner. Hence there is consistent reference to students performing as either intrinsic or extrinsic learners.
- 3 The Piers-Harris was chosen for its longevity in the field of research. An item analysis with respect to the statements that measure academic self-concept should be done to shed light on their validity for use in conjunction with the self-efficacy construct.
- 4 The performance of LI student on the FIAT measures can be seen in relation to the norms established for EI students (Table C). The superior performance of EI students in relation to their LI age-cohorts would indicate that the former group would be at advantage in the eighth grade where the two levels of immersion merge.

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APPENDIX A

LETTER OF CONSENT



Province of
British Columbia

Ministry of
Education
STUDENT ASSESSMENT BRANCH

Parliament Buildings
Victoria
British Columbia
V8V 2M4

February 23, 1990

Ms. G. Higginson
Chalmers Elementary School
1135-75th Avenue
Delta, B.C.
V4C 1H4

Dear Ms. Higginson:

Mr. Hodgkinson has forwarded your letter to me for response.

You are welcome to use the attitude section of the 1988 Provincial Assessment of Attitude and Motivation in Second Language Learning. Your request to photocopy the material is approved.

If you need any information on scoring please let me know.

Sincerely,

Dr. Jim Gaskill
Manager, Provincial Learning Assessment Program
356-7551

c.c. Mr. Douglas Hodgkinson, Director, Student Assessment Branch
Dr. Nicholas Ardanaz, Principal, Chalmers Elementary School

JG/dl

APPENDIX B

B.C. COMPREHENSION ASSESSMENT MEASURES STUDENT AND PARENTAL QUESTIONNAIRES

STUDENT QUESTIONNAIRE

Contained in this questionnaire are some statements with which some people agree and others disagree. There are no right or wrong answers since many people have different opinions. We would like you to indicate your opinion about each statement by checking the alternative which best indicates the extent to which you agree or disagree.

Sample:

Wayne Gretzky is the best player to have ever played in the National Hockey League.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
[]	[]	[]	[]	[]

If you are undecided in your response to the above statement you would check #3; however if you agree with the statement you would check #4 or #5.

Question	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. My parents really encourage me to study French					
2. Studying French can be important because I think it would someday be useful in getting a good job.					
3. Studying French can be important because I think it would make me a more knowledgeable person					
4. My parents show considerable interest in anything to do with my French courses.					
5. My parents to help me with my French.					
6. Studying French can be important because it would allow me to meet and converse with more varied people.					

Question	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
7. Studying French can be important because other people would respect me more if I had a knowledge of a foreign language.					
8. My parents feel that I should devote more time to my French studies.					
9. My parents have stressed the importance French will have for me when I leave school.					
10. Studying French is important for me because I will be able to participate more freely in the activities of other cultural groups.					
11. My parents urge me to seek help from the teacher if I am having problems with French.					

PARENT QUESTIONNAIRE

Contained in this questionnaire are some statements with which some people agree and others disagree. There are no right or wrong answers since many people have different opinions. We would like you to indicate your opinion about each statement by checking the alternative which best indicates the extent to which you agree or disagree.

Sample:

Wayne Gretzky is the best player to have ever played in the National Hockey League.

Strongly Disagree

Disagree

Undecided

Agree

Strongly
Agree

☐

☐

☐

☐

☐

If you are undecided in your response to the above statement you would check #3; however if you agree with the statement you would check #4 or #5.

Question	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. I really encourage my child to study French.					
2. Studying French can be important because I think it would someday be useful for my child in getting a good job.					
3. Studying French can be important because I think it would make my child a more knowledgeable person.					
4. I show considerable interest in anything to do with my child's French courses.					
5. I try to help my child with his/her French.					
6. Studying French can be important because it would allow my child to meet and converse with more varied people.					

Question	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
7. Studying French can be important because other people would respect my child more if he/she has a knowledge of a foreign language.					
8. I feel that my child should devote more time to his/her French studies.					
9. Studying French is important primarily because my child will need it for a future career.					
10. Studying French is important because my child will be able to participate more freely in the activities of other cultural groups.					
11. I urge my child to seek help from the teacher if he/she is having problems with French.					

Directives: Complète les phrases en utilisant les verbes au temps indiqué.

Exemple:

1. boire - présent

Le soir, les enfants _____ du lait chaud.

Tu écris:

Le soir, les enfants boivent du lait chaud.

Correction: Fais attention - à la conjugaison.
- aux accords.

Complète les phrases en utilisant les verbes au temps indiqué.

1. être - futur simple

Aux prochaines vacances, nous _____ à la montagne.

2. faire - passé composé

La semaine dernière, Paul _____ un projet sur les robots.

3. être - futur simple

Samedi prochain, je _____ chez mon professeur de piano.

4. dire - futur simple

Que _____ - tu en arrivant chez le médecin?

5. s'amuser - imparfait

Les petits chiens _____ avec leur balle.

6. pouvoir - présent

Souvent, les petits enfants ne _____ pas atteindre les poignées de portes.

7. finir - présent

En général, le vendredi, nous _____ plus tôt que d'habitude.

8. mettre - passé composé

Comme il pleuvait, nous _____ nos bottes.

9. vouloir - imparfait

Quand nous étions enfants, nous _____ tous aller au cirque.

L'emploi des verbes 2

Directives: Construis des phrases complètes.
 (Environ 8 à 10 mots par phrase).
 Commence tes phrases par l'expression donnée.
 Utilise le verbe au temps approprié et à la personne indiquée.

Exemple:

1. (voir/tu)

Mercredi dernier, _____

Tu écris:

Mercredi dernier, tu as vu un
écureuil dans le jardin.

ou

Mercredi dernier, tu as vu ton
grand-père au parc.

Correction: Fais attention . à la conjugaison de verbes.
 . aux accords.
 . à la construction de tes phrases.
 . au choix de mots.

Construis des phrases complètes.

(Environ 8 à 10 mots par phrase).

Commence tes phrases par l'expression donnée.

Utilise le verbe au temps approprié et à la personne indiquée.

1. (devoir/nous)

Aujourd'hui, _____

2. (lire/ils)

Tous les jours, _____

3. (recevoir/je)

L'année dernière, _____

4. (partir/vous)

Dans trois semaines, _____

5. (nager/elles)

Hier, _____

6. (écrire/je)

Demain, _____

7. (étudier/nous)

L'hiver prochain, _____

8. (aimer/je)

Quand j'étais très jeune, _____

9. (venir/tu)

Ce matin, _____

Le Ski

Ecoute attentivement.

Ajoute les mots qui manquent.

1. Si vous _____ du ski de fond, vous n' _____
(1) (2) (3)
froid.
2. Savez-vous _____ se trouve le _____ endroit pour faire du
(4) (5)
ski?
3. Les _____ skieurs _____ soin
(6) (7) (8)
de _____ équipement.
(9)
4. _____ , on prend _____ la moto-neige
(10) (11)
_____ l'hélicoptère pour se rendre au sommet de la montagne.
(12)
5. Après une bonne chute de neige, _____ le _____ de
(13) (14)
profiter d'un _____ jour de ski.
(15)
6. La première fois que nous sommes _____ , nous
(16) (17)
avons descendu la pente sur les fesses.

L'Alimentation

7. Pour être en bonne santé, il faut _____ de la nourriture saine.
(18)

8. En été, nous _____ beaucoup de _____ et
(19) (20)
de légumes frais.

9. Les _____ leurs
(21) (22) (23)
repas par un _____ sucré.
(24)

10. Si vous voulez avoir de _____ dents, _____ du
(25) (26)
lait _____ les jours.
(27)

11. Allez-vous _____ au supermarché avec Maman?
(28)

12. Pourquoi _____ brosse-t-on les dents _____ chaque repas?
(29) (30)

13. _____ personnes _____ des vitamines
(31) (32)
_____ 'elles aident _____ avoir une belle _____
(33) (34) (35)

14. _____ se passe lorsqu'on mange trop _____
(36) (37)
faire de gymnastique?

LISEZ LA LETTRE SUIVANTE ET RÉPONDEZ AUX QUESTIONS 1 À 6.

Chère Lise,

S O S. C'est urgent. Personne, même mes parents, ne m'aime. Il est tard et je serais censée être couchée depuis longtemps, mais demain je n'ai pas d'école et j'ai absolument besoin de parler.

J'ai deux problèmes et voici le plus important. J'ai 12 ans et je suis en septième année. Je fréquente donc une nouvelle école (où, lorsque je suis arrivée, je ne connaissais personne) et, en six mois, je n'ai pas réussi à me faire d'ami(e)s. Depuis que je suis jeune, je rêve d'avoir de "vrais amis", une "vraie gang" qui m'apprécierait, mais dès que je fais une tentative d'approche, cela vire en gaffe et je ne réussis qu'à m'éloigner d'eux. Je me demande aussi si ce n'est pas à cause de mon physique que les autres ne m'aiment pas. Je ne suis pas grosse, mais pas maigre non plus et j'ai plein de boutons. J'ai entendu dire qu'il fallait, dans ce cas, se laver la figure trois ou quatre fois par jour. J'essaie, mais ma mère me gueule après (c'est son habitude) et dit : "Ça ne sert à rien de te laver si souvent, c'est normal d'avoir des boutons à ton âge." J'essaie de maigrir mais je manque de volonté. Je ne réussis dans rien alors!

Tout ça fait que je deviens agressive et insupportable... De plus, l'hiver me déprime. Je ne fais pas de sport, pas d'argent, pas d'équipement, pas de transport. HEUREUSEMENT, j'ai quatre vraies amies, mais trois restent loin et l'autre est souvent occupée. De plus mes parents sont toujours du côté de ma sœur.

Dans quelques jours je retourne dans cet enfer d'école. Souvent il m'arrive de rêver d'être un oiseau pour pouvoir m'envoler loin de tous et de chacun. Je t'envie, Lise, tu as tellement l'air de vivre en paix. Tes conseils me seront d'un grand secours.

Anonyme

Reproduit sous l'autorisation de Vidéo Presse, Montréal, Québec

1. Après avoir lu la lettre, on sent que l'auteur est

- 1. optimiste
- 2. anxieuse
- 3. tranquille
- 4. curieuse

2. Selon la lettre, quel rôle joue la mère dans la vie de cette jeune fille?

- 1. Elle la critique dans ses efforts
- 2. Elle lui donne des conseils pratiques
- 3. Elle l'aide à faire sa toilette
- 4. Elle l'encourage à maigrir

3. À ton avis, pourquoi cette jeune fille rêve-t-elle d'être un oiseau?

- 1. pour survoler des coins secrets
- 2. pour échapper à ses devoirs
- 3. pour s'éloigner de la réalité
- 4. pour taquiner ses parents

4. Pourquoi a-t-elle écrit la lettre?

- 1. pour apprendre à communiquer
- 2. pour passer le temps
- 3. pour trouver une amie
- 4. pour chercher des conseils

5. Que signifie l'expression cela vire en gaffe dans la phrase suivante : "Dès que je fais une tentative d'approche, cela vire en gaffe et je ne réussis qu'à m'éloigner d'eux"?

- 1. ça me fait rire
 - 2. ça me rend sage
 - 3. ça porte bonheur
 - 4. ça tourne mal
- no response

6. Quel serait le meilleur titre pour cette lettre?

- 1. Seule et malheureuse
- 2. Seule et à l'aise
- 3. Seule et méhante
- 4. Seule et lasse

LISEZ LE POÈME SUIVANT ET RÉPONDEZ AUX QUESTIONS 7 À 11.

LE KAYAK

Écoutez mes paroles, mes enfants!
Le kayak est très petit et dangereux,
Les vagues et les vents sont de grandes forces
Mais vous pourrez voyager parmi eux

5 lorsque vous les connaîtrez par la pensée

Alors seulement vous deviendrez de grands
chasseurs de phoque.

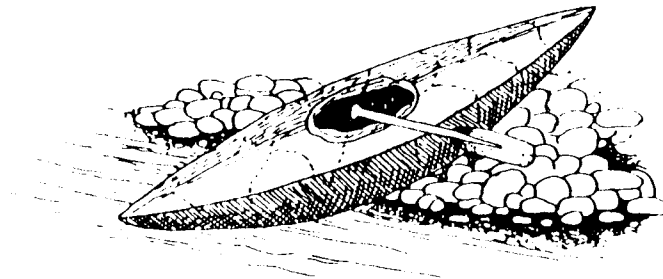
A l'affût dans le kayak, vous lancerez
vos harpons,

10 Et même en hiver, quand le froid est intense,
vous réussirez avec fierté

Écoutez les vieux,
les sages,

Il faut obéir à leurs ordres,

15 Alors, même en hiver,
Vous réussirez avec fierté



produit sous l'autorisation de
Cheney & Whiteside Ltd.
Oshawa, Ontario

7 Pourquoi l'auteur a-t-il écrit ce poème?

1. pour conseiller les jeunes
2. pour parler du nord
3. pour décrire la chasse
4. pour connaître les grandes forces

no response

8 Pourquoi l'auteur dit-il que le kayak est dangereux?

1. parce que le phoque est gros
2. parce que le froid est intense
3. parce qu'on fait de la chasse
4. parce qu'il s'oppose aux éléments

no response

9 Dans la phrase "Il faut obéir à leurs ordres", il s'agit des ordres de qui?

1. des chasseurs
2. des vieux
3. des phoques
4. des enfants

no response

10 Quel outil utilise-t-on pour faire la chasse aux phoques?

1. le kayak
2. l'arc
3. la force
4. le harpon

no response

11 À la treizième ligne, qui sont les sages?

1. ceux qui sont tranquilles
2. ceux qui ont de la fierté
3. ceux qui sont dangereux
4. ceux qui ont de l'expérience

no response

LISEZ LE TEXTE SUIVANT ET RÉPONDEZ AUX QUESTIONS 12 À 18.

LE CANNIBALISME

Le mot "cannibalisme" vient du mot "caribe", nom d'une tribu originaire des Caraïbes. On suppose qu'à l'origine le mot était "caribalisme".

Cette tribu des îles Caraïbes n'a cependant pas été le seul peuple cannibale du monde. Dans plusieurs autres pays, des anthropologues ont trouvé des traces de cannibalisme. Il y a très longtemps, tous les peuples ont probablement été cannibales à un moment ou l'autre. Cela t'étonne? Tu croyais sans doute que seuls quelques primitifs avaient pu agir ainsi? Les récits de cannibales t'apparaissent peut-être légendaires. Mais ce ne sont pas des mythes. Il s'agit d'une chose qui a existé et qui existe même encore à certains endroits.

Il y a plusieurs causes, plusieurs raisons à cette façon d'agir. Une des premières explications est le manque de nourriture. Selon certains historiens, les populations qui pratiquaient l'agriculture et l'élevage avaient très rarement recours au cannibalisme. Ayant de grandes ressources alimentaires, elles n'étaient pas tentées par le cannibalisme. Par contre, les peuples qui assuraient leur subsistance par la chasse ou la cueillette de fruits n'avaient pas toujours suffisamment de nourriture. Il leur fallait donc en trouver ailleurs. C'est ce qu'ils faisaient en tuant et en mangeant leurs ennemis.

La plupart des peuples ne pratiquaient le cannibalisme qu'envers des ennemis ou des étrangers. Il y a cependant quelques exceptions à cette règle. Par exemple, les "Bagesu" d'Afrique pratiquaient le cannibalisme envers des membres de leur tribu.

En remontant dans le temps et en étudiant l'évolution de l'agriculture, on remarque aussi autre chose. L'agriculture dépend de plusieurs facteurs. Le climat, l'irrigation, la politique ou les guerres retardent ou accélèrent le développement de l'agriculture. Certains peuples ont tout à tour abandonné et repris la coutume du cannibalisme selon le rendement de l'agriculture.

Le manque de nourriture n'est pourtant pas la seule cause du cannibalisme. Certaines peuplades mangeaient de la chair humaine lors de cérémonies magiques ou religieuses. Quelquefois des tribus honoraient leurs morts en les mangeant. D'autres prouvaient leur force et leur courage en mordant et en avalant de la chair humaine. D'autres encore croyaient voler la force de leurs ennemis en les dévorant. Certaines tentaient aussi de faire disparaître l'esprit du mort. Pour toutes ces tribus, le cannibalisme avait un caractère sacré et rituel. La chair n'était donc pas pour ces gens l'aliment principal et ils n'en consommaient pas dans le but de se nourrir.

Il existe encore une autre forme de cannibalisme, celle qui consiste à manger la chair d'une personne qui est déjà morte pour éviter de mourir soi-même. On rencontre cette forme de cannibalisme lors d'accidents. Par exemple, en 1972, un avion s'est écrasé dans les Andes. Une quarantaine de personnes se trouvaient à bord. Plusieurs moururent sur le coup, d'autres étaient blessées et moururent les jours suivants. D'autres furent tuées par une avalanche déclenchée tout près de l'avion. Finalement, il ne resta plus qu'un petit groupe de survivants. Les jours passèrent, les réserves de nourriture également. Dans ce désert glacé, il était impossible de trouver quoi que ce soit pour se nourrir. Peu à peu, les survivants comprirent qu'il ne restait plus qu'une solution.

Cette histoire n'est pas unique. Il y a eu d'autres cas semblables. Peu de temps après l'expédition dans les Andes, un avion canadien s'est écrasé dans les Territoires du Nord-Ouest. Pour survivre, le pilote dut se résigner lui aussi au cannibalisme. En 1979, un Cessna s'est écrasé. Deux des quatre personnes à bord furent tuées. Les deux autres personnes réussirent à survivre en mangeant de la chair humaine. C'est une décision très difficile à prendre. Seul l'instinct de survie peut faire agir ainsi.

En général, on ne condamne pas les personnes obligées à poser ces actes. On comprend qu'elles agissent ainsi parce qu'elles tiennent à vivre.

12. Le cannibalisme est pratiqué par ceux qui manquent de nourriture et aussi par

1. ceux qui veulent varier leur régime quotidien.
2. ceux qui appartiennent aux tribus primitives seulement.
3. ceux qui participent aux cérémonies magiques et religieuses.
4. ceux qui ne réussissent pas bien à la chasse.

13. Qu'est-ce qui pousse les gens de nos jours à pratiquer le cannibalisme?

1. le retour à la nature
2. l'instinct de survie
3. la croyance religieuse
4. une forme de magie noire

14. En lisant le texte, on a l'impression que l'auteur nous parle du cannibalisme comme

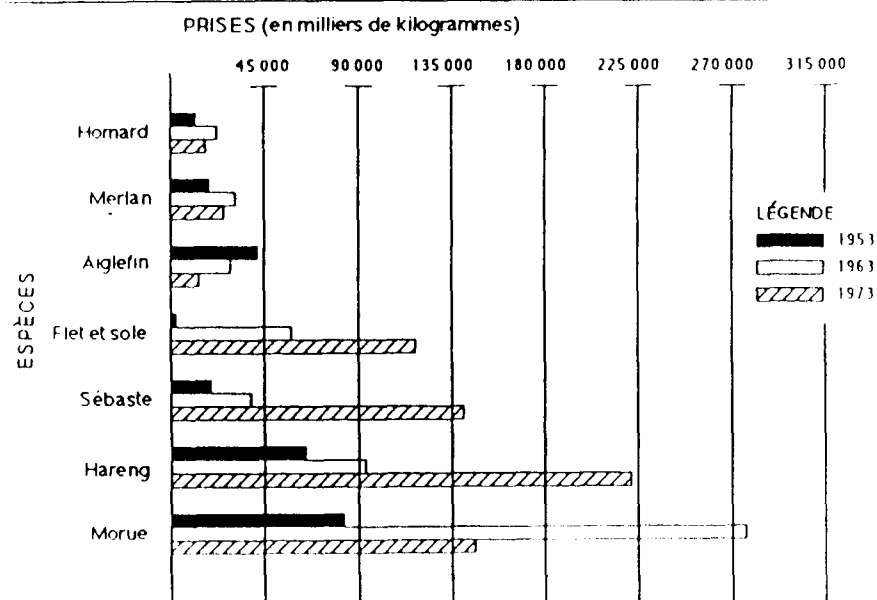
1. d'une coutume inacceptable dans les pays lointains
2. d'une pratique qui a eu lieu dans le passé seulement
3. d'un fait historique qui se répète dans le présent
4. d'un côté animal de l'être humain

15. Laquelle de ces quatre phrases exprime une opinion?
1. Les "Bagesu" d'Ainque pratiquaient le cannibalisme envers des membres de leur tribu.
 2. Il y a très longtemps, tous les peuples ont probablement été cannibales à un moment ou l'autre.
 3. Cette tribu des îles Caraïbes n'a pas été le seul peuple cannibale du monde.
 4. Le climat, l'irrigation, la politique ou les guerres retardent ou accélèrent le développement de l'agriculture.
- no response*
16. Dans le cas de l'avion qui s'est écrasé dans les Andes en 1972, un groupe de passagers a survécu:
1. en tuant des membres de leur propre groupe.
 2. en mangeant les membres d'une tribu des Andes.
 3. en mangeant ceux qui ont été tués dans l'accident.
 4. en mangeant des animaux de la région.
- no response*
17. Que veut dire le mot élevage dans la phrase suivante: "Selon certains historiens, les populations qui pratiquaient l'agriculture et l'élevage avaient très rarement recours au cannibalisme"?
1. culture du lin
 2. cueillette de fruits
 3. chasse aux animaux
 4. soins des animaux
- no response*
18. Que veut dire le mot chair dans la phrase suivante: "La chair n'était donc pas pour ces gens l'aliment principal et ils n'en consommaient pas dans le but de se nourrir"?
1. substance des muscles de l'homme
 2. meuble trouvé dans une pièce
 3. substance hallucinante
 4. valeur de certaines choses
- no response*

RÉPONDEZ AUX QUESTIONS 19 À 21 EN UTILISANT LE GRAPHIQUE SUIVANT.

LA PÊCHE

IMPORTANCE DES PRISES SUR LA CÔTE ATLANTIQUE, 1953-73, PAR ESPÈCE



Reproduit sous l'autorisation de Les Éditions Gage Inc., Agincourt, Ontario

19. Combien d'espèces de poissons ont dépassé en prises 135 000 milliers de kilogrammes?

1. 1
2. 2
3. 3
4. 4

no response

20. Combien d'espèces ont subi une réduction dans les prises entre 1963 et 1973?

1. 2
2. 3
3. 4
4. 5

no response

21. Quelle espèce a connu une diminution constante dans les prises entre 1953 et 1973?

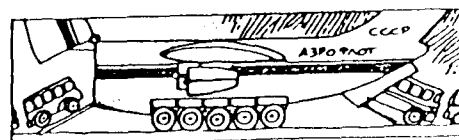
1. l'aiglefin
 2. la morue
 3. le merlan
 4. le homard
- no response

LE PLUS GROS AVION DU MONDE

Qu'est-ce qui est soviétique et qui peut emporter quarante éléphants à plus de 7 000 mètres d'altitude de l'Afrique au Québec?

Ce mastodonte volant, c'est l'Antonov 124, le plus gros avion du monde. Les Soviétiques lui ont donné le nom de "Rouslan", un preux chevalier de légende russe, tandis que les Américains l'appellent le Condor. L'Antonov 124 est aussi haut qu'une maison de quatre étages et presque aussi long qu'un terrain de football. Il possède une soute de 36 mètres de longueur. Il peut contenir 60 petites voitures avec leurs passagers et leurs bagages.

Depuis 1968, c'était le Galaxy C-5 américain qui détenait le record mondial. Cet avion de l'Armée de l'air sert au transport de troupes et de matériel de combat.



L'Antonov dispose de deux entrées pour engouffrer son chargement.

Les Russes destinent l'Antonov à des fins civiles et militaires. Ils veulent entre autres s'en servir comme "train volant" pour le développement des régions éloignées de Sibérie.

Les Américains ne s'avouent pas vaincus dans cette course au gigantisme! La compagnie McDonnell Douglas prépare le C-17, un monstre encore plus gros que l'Antonov 124.

On peut s'attendre à ce que les Russes répliquent, puis que les Américains ripostent à leur tour, etc., etc.!

Fiches techniques comparées

	C-5 Galaxy	Antonov 124
Mise en service	1968	1985
Nombre (prévus ou construits)	130	100
Propulsion (Turbo Réacteurs)	4 x 18,6 T	4 x 23,4 T
Envergure	68 m	73 m
Longueur	75 m	70 m
Hauteur	20 m	22 m
Charge maximale	100 tonnes	150 tonnes
Vitesse maximale	920 km/h	850 km/h
Altitude correspondante	7 600 m	12 000 m
Roulement à l'atterrissage	2 135 m	1 200 m
Roulement au décollage	680 m	850 m
Distance avec charge maximale	6 000 km	4 500 km
Distance à vide	13 000 km	16 000 km

Tré de Jeune Paul Drouin, No. 46, 16v. 1986. Reproduit sous l'autorisation du Club des petits débrouillards, Conseil de développement du loisir scientifique, Montréal, Québec.

22. À quoi sert l'Antonov 124?

1. à transporter des passagers sur de longues distances
2. à transporter de l'équipement, du matériel et des machines
3. à emporter des éléphants de l'Afrique au Québec
4. à faciliter l'exploration des régions minières et forestières

23. Que veut dire le mot mastodonte dans la phrase suivante: "Ce mastodonte volant, c'est l'Antonov 124"?

1. machine gigantesque
2. machine puissante
3. machine rapide
4. machine formidable

24. Comment les Américains ont-ils baptisé l'Antonov 124?

1. le "Train volant"
2. le "Rouslan"
3. le "Monstre"
4. le "Condor"

25. À quoi sert le Galaxy C-5 américain?

1. à transporter des voitures américaines
2. à battre un record mondial
3. à transporter des soldats et des armes
4. à faciliter le développement de la Sibérie

26. Quelle est l'envergure de l'Antonov 124?

1. 22 m
2. 70 m
3. 73 m
4. 75 m

27. Quelle est la différence de hauteur entre l'avion américain et l'avion russe?

1. 2 m
2. 3 m
3. 4 m
4. 5 m

**LISEZ LA CITATION ET LE PROVERBE SUIVANTS ET RÉPONDEZ
AUX QUESTIONS 28 ET 29.**

CITATION

"Écrire, c'est une façon de parler
sans être interrompu"
J. Renard

PROVERBE

Des goûts et des couleurs
il ne faut pas disputer

28 Laquelle des quatre expressions suivantes s'associe le mieux à la citation ?

- 1 Un point fait à temps, en épargne cent
- 2 La parole est d'argent, le silence est d'or
- 3 Loin des yeux, loin du cœur
- 4 Mieux vaut tard que jamais

29 Laquelle des phrases suivantes s'associe le mieux avec le proverbe ?

- 1 Tout le monde a droit à ses opinions
- 2 Il faut accepter l'avis de la majorité.
- 3 L'autorité a toujours raison.
- 4 L'habit ne fait pas le moine

no response

LISEZ LE TEXTE SUIVANT ET RÉPONDEZ AUX QUESTIONS 30 À 33.

JEU: TOUR DE TABLE

Matériel nécessaire:

Une cinquantaine de photographies ou d'illustrations d'objets.

Nombre de joueurs

De 2 à 5 joueurs

Règles du jeu:

- 1 On divise également les illustrations entre les joueurs.
- 2 On détermine au hasard la personne qui commencera la partie et on continue ensuite dans le sens des aiguilles d'une montre.
- 3 Le premier joueur montre une de ses illustrations aux autres joueurs et la dépose de façon à cacher l'objet illustré.
- 4 Le joueur suivant nomme de mémoire le premier objet caché et montre à son tour une de ses illustrations.
- 5 Les joueurs suivants doivent toujours nommer en ordre tous les objets montrés par les joueurs précédents et ajouter chaque fois un objet nouveau.
- 6 Une erreur entraîne l'expulsion du joueur. Le jeu se poursuit jusqu'à ce qu'il ne reste qu'un joueur.

Variante:

Il est permis de changer les règles du jeu si tous les participants y consentent. Ainsi, par exemple, on peut accorder une chance à un joueur qui aurait un trou de mémoire. De plus, quand les joueurs sont devenus habiles en jouant avec des illustrations, ils peuvent les remplacer par des mots.



De l'extrait "Tour de table", titre du volume "Nouvelles", tome 1, manuel de l'élève, 1986 par Claire Aline Levesque et Bernard Tousignant. Reproduit sous l'autorisation des Éditions Beauchemin Ltée.
Reproduit à Québec.

30. Qui commence le jeu?

1. la personne qui distribue les illustrations
2. la personne qui est choisie au hasard
3. la personne qui est chef de groupe
4. la personne qui a la meilleure mémoire

31. Que doit faire le quatrième joueur?

1. Il doit nommer la première illustration et la sienne.
2. Il doit nommer une illustration au hasard.
3. Il doit nommer l'illustration du troisième joueur.
4. Il doit nommer les illustrations précédentes et la sienne.

32. Selon le texte, quand est-il possible de vaner les règles du jeu?

1. quand les groupes changent
2. quand les joueurs sont d'accord
3. quand le professeur l'indique
4. quand il y a trop de joueurs

33. Que veut dire le mot accorder dans la phrase suivante: "On peut accorder une chance à un joueur"?

1. manquer
2. enlever
3. donner
4. soustraire

FIN DE L'EXAMEN

APPENDIX C

EXPLICATION OF QUESTIONNAIRE ITEMS

A Student questionnaire

- (1) student's perception of parental encouragement - assesses the degree to which the student thinks that his/her parents give active encouragement to learn French
- (2) student's instrumental orientation - assesses the degree to which the student thinks that learning French is important for pragmatic reasons (i.e. future career)
- (3) student's integrative orientation - assesses the degree to which the student thinks that learning French will enable him/her to better communicate with and become more knowledgeable about the L2 community (Colletta, 1983 p.31-33.)

B Parent questionnaire

- (1) parent's perception of parental encouragement - assesses the degree to which the parent thinks that he/she gives active encouragement to the student to learn French
- (2) parent's instrumental orientation - assesses the degree to which the student thinks that learning French has importance for the student in a pragmatic sense (i.e. future career)
- (3) parent's integrative orientation - assesses the degree to which the parent thinks that learning French will enable his/her child to better communicate with and become more knowledgeable about the L2 community

(Colletta 1983 p. 36-37)

APPENDIX D: TEST REVIEWS

Canadian Cognitive Abilities Test (C.C.A.T.) - multilevel edition, 1988, form 7: verbal and nonverbal The C.C.A.T. is based on the original Lorge-Thorndike Intelligence Test (1954). It has evolved from its predecessors, the Cognitive Abilities Test (standardized in the United States), and the Canadian Cognitive Tests forms 1-3. In the Fall of 1987, the C.C.A.T. was jointly standardized throughout Canada with the Canadian Test of Basic Skills (C.T.B.S.).

The multilevel edition, grades three to twelve, provides three classifications of ability with the assessment of corresponding skills as follows:

- 1) verbal battery: verbal classification, sentence completion and verbal analogies. The verbal battery is said to provide an indication of the ability to deal with abstractions presented in verbal form. It is considered by the test developers to be a good estimate of scholastic aptitude.
- 2) quantitative battery: quantitative relations, number series, equation building. The quantitative battery taps the ability to work with quantitative concepts which also provide a reliable index of school achievement.
- 3) nonverbal battery: figural classification, figure analogies, and figural analysis. The nonverbal battery gives opportunity to students who for

some reasons (i.e. learning problems or language background) may not perform well on verbal or quantitative tests. This battery appraises abstract reasoning ability which is not influenced by disability in reading.

The recommended time allotment is 30 minutes for each individual battery. As this is a power test and not one of speed, the test developers allow for flexibility in time administration.

Item Difficulty

Most items were tested in two sequential grade groups and those showing satisfactory discrimination (by biserial correlation) were included in the subtests. There is, however, no information regarding the actual development of the items. The mean percentages for student achievement at the seventh grade level is approximately 58 percent for the verbal, 55 percent for the quantitative and 55 percent for the nonverbal batteries. These percentages make it relatively simple to identify students at the lower and higher extremes of the achievement levels. This is a change from the former C.C.A.T. form 3 which contained items of relatively lower difficulty and hence higher percentage mean scores.

Standardization and Norming

Students who were learning English as a second language were excluded from the testing. French Immersion students were included where they were present in selected schools. A large stratified random sample was drawn from 100 schools throughout the whole of Canada. Percentages of students within each stratification category were determined then the percentages were weighted to approximate the total school population in each category. The authors stated that they lacked the access to statistical data which would enable them to make an estimate of community size and socioeconomic level.

The normative system involves the conversion of raw scores to Universal Scale Scores and then to Standardized Age Scores. Percentiles and stanine scores may then be calculated.

Reliability:

Kuder-Richardson 20 reliability estimates average .91 for the verbal battery, .90 for the quantitative battery and .91 for the nonverbal battery. Apparently, no test/retest studies were done.

Correlations among batteries:

verbal vs. quantitative .63

verbal vs. nonverbal .58

nonverbal vs. quantitative .69

The low correlation between verbal and nonverbal batteries may be accounted for by the fact that the former purports to predict academic achievement, the latter does not claim to do so.

Validity

The authors discuss content, criterion and construct validity in general terms. They report an intercorrelation between the C.C.A.T. verbal and Hennon-Nelson Ability Cognitive Test to be .84 at the grade seven level. Detailed correlational data is also reported for the subtests of the C.T.B.S. These figures relate to concurrent validity; predictive validity is not expressed. There is a need for the inclusion of a theoretical framework for the cognitive abilities selected for this composite battery.

Canadian French Immersion Achievement Test (FIAT): There is presently a paucity of normed test instruments for FI students in Canada (Wormeli & Ardanaz 1987). The FIAT was designed to provide a quick individual measure of achievement for early immersion students in relation to curriculum demands of FI programs and in relation to the progress of peers. The FIAT evaluates a student's individual academic performance in the following areas: spelling (orthographe) arithmetic (mathématiques) word identification (lecture de mots) passage comprehension (comprehension de textes).

All subtests may be administered to students in grades two to seven. They are intended for use with non-Francophone students who have been enrolled in Early French Immersion. Thus the use of this test with Late French Immersion students may reduce the validity of the instrument. In November 1986 the F.I.A.T. was normed throughout Canada and the Northwest Territories on approximately 100 students per grade using a two-stratified sample of public and private school students. Winter and spring scores have been interpolated from fall norms, so caution should be used in interpreting a student's score.

Internal Consistency Reliabilities:

Grade seven spelling -.89 / Grade seven arithmetic -.81 Grade seven word identification -.94 / Grade seven passage comprehension - .87

[In this study only the spelling and cloze subtests were administered. As this is an individualized test, administration time for forty students would be excessive.]

Validity:

The technical manual restricts its discussion of validity to the following:

- 1) population validity - "so far as is known" (Wormeli et al., p. 26, 1987). Francophone students were not included in the sample; there was no significant difference in scores between provinces.
- 2) content validity - there were seven stages of development as follows:
 - a) item pool
 - for spelling, ten items from grades one to seven were randomly selected from L'Orthographe (Goodall 1981) - additional words were selected from social studies texts to provide difficult ceiling items - for passage comprehension, items were taken from elementary grade curricula, a cloze format was used: items varied, some containing the answer in the stimulus text, some requiring modification from the text, and others requiring use of contextual cues only.

- b) first tryout - a local sample of twenty students was randomly selected and stratified by gender across the grades to assess the psychometric characteristics of the spelling and reading items.
 - c) revision of item pool - item analysis included deletion of unsatisfactory items and reordering of each subtest from easy to difficult.
 - d) second tryout - twenty pupils in B.C. and Quebec were randomly selected from participating schools and stratified by gender - item characteristics were checked and information on group performances by grade was obtained.
 - e) review and a minimal revision of item pool f) norming of item pool across Canada -
1. All students enrolled in FI public and private school programs across Canada, grades one to seven - students whose first language was French, or individuals already identified as mentally or emotionally impaired were excluded.
 2. A random sample of 1400 (stratified by grade and gender) was selected. A non-participation rate of 25% was anticipated, yielding a potential sample size of 150 at each grade level and a total sample size of approximately 1,000.

3. In the first stage, a random probability sample of schools, grades one to seven, was made with classifications according to province, rural-urban distribution and total school enrollment. The sampling was proportional: one student per grade, per school. Design difficulties were encountered due to the limited number of grade seven FI classes in the nation. Varying grade spans within schools were also problematic. The design was changed to allow two grade seven pupils per grade, per school. The problem of limited grade groupings was addressed by permitting additional schools in the same district to be included.
4. In the second stage of sampling, participating schools were asked to identify the "nth" student as designated by the researchers at each grade level. Schools were selected as follows:
 - each school in the province was assigned to a stratum in the sample frame according to FI enrollment and community size.
 - pupil enrollments in each stratum were summed and the probability of each school being selected was calculated in relation to the

enrollment of each school and the number of schools to be chosen from each stratum.

- a random number including alternates was selected within the range of enrollment by grade and gender for each school.

g) construct validity - studies at the grades two and five levels were conducted to determine if the FIAT could identify remedial students who were already enrolled in support programs - generally the FIAT erred on the side of overidentifying students for remediation.

Concurrent validity is missing from the discussion in the technical manual. There is no correlational data relating the FIAT to any other French achievement measure. The problems encountered by the researchers in creating norms for the grade seven population intensifies the weak validity of this test for use with late grade seven FI students.