

THE UNIVERSITY OF MANITOBA

A METHOD OF OBSERVING TEACHER VERBAL PROCEDURES
AND STUDENT ACTIVITIES IN THE TEACHING OF
FRENCH IN THE SENIOR HIGH SCHOOL

by

PATRICK GERALD MATHEWS

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

FACULTY OF EDUCATION

WINNIPEG, MANITOBA

OCTOBER, 1971



ACKNOWLEDGEMENTS

The writer is deeply grateful to the following persons, without whose generous assistance this study would not have been possible: Dr. L. J. Maurice, Prof. M.A. Bonneau, Prof. C. C. Wood, Mr. John Grenon, Mr. Albin J. Polz, Mr. Léo Carrière, Mrs. Melonee Collins, Mrs. Louise Adams, and Mrs. Andrée Doiron.

ABSTRACT

It was the purpose of the present study to develop an observation system to investigate the kinds of strategies, teacher verbal procedures, and student activities present in second language teaching in the senior high school.

In this study, the second language was French taught to grade ten English speaking students. The method was the audio-lingual method as applied in the program Le Français at the second level Parler et Lire. For convenience, this program was divided into eleven major strategies, i.e., sets of procedures and activities involving certain elements of the content (e.g., L'Aperçu, Narration Orale).

By studying recent direct observation systems and methods of research, by reviewing the materials and suggested procedures of Parler et Lire, by teaching and observing others teach this course, the writer developed the Procedure-Activity Observation System consisting of fifteen categories--six for teacher verbal procedures, eight for student activities, and one for time-out.

Three basic questions were asked about this system: can it be used to score entire second language class periods, quantify the procedures and activities, and indicate the sequence of these procedures and activities?

In order to answer these questions, five class periods of each of five volunteer teachers were tape recorded. All of these taped classes were scored with the Procedure-Activity Observation System and the tallies for the five periods for each of the teachers and their class groups were

plotted on the Matrix. The total tallies in each of the categories in each of the strategies were also calculated for each of the teachers.

Inter-scorer reliability and scorer consistency in scoring live and taped classes were calculated using the Scott coefficient of reliability.

Since each tally represents a three-second interval of time the total tallies in each category, group of categories, each cell and group of cells could be calculated as a percentage of class time.

The observation of the twenty-five class periods indicated that the Procedure-Activity Observation System can be used to score entire second language class periods by observers trained in second language teaching methods. The scores can be expressed as a proportion of class time in the different procedures, activities and strategies. The Procedure-Activity Observation Matrix can indicate the sequence of procedures and activities.

Some of the major observations concerning the five teachers and their classes were: they spent 61.3% of class time in teacher verbal procedures, 30.0% in student activities and 8.7% in time-out; they spent 71.5% of class time in procedures and activities in French and 19.9% in English; and they spent 46.6% of class time in developing student listening skills (teacher talk and oral reading) in French, 9.3% in student speaking in French, 5.2% in student oral reading in French, and 10.4% in student silent reading and writing in French.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Significance of the Study	2
Statement of the Problem	2
Limitations of the Study	3
Definition of Terms	5
Organization of the Study	7
II. REVIEW OF RELATED LITERATURE	8
Methods in Second Language Teaching	8
Research Needs in Second Language Teaching	10
Research in Second Language Teaching Using Broad	
Comparisons of Methods	11
Research Using Direct Observation	15
Research in Second Language Teaching Using Direct	
Observation	17
III. METHODOLOGY	21
Rationale of the Study	21
The First Level of the Program: <u>Le Français:</u>	
<u>Ecouter et Parler</u>	23
The Second Level of the Program: <u>Le Français:</u>	
<u>Parler et Lire</u>	25
Theory	25
Materials and Their Use	26
Strategies	29

CHAPTER

PAGE

Background of the Procedure-Activity Observation	
System	32
Theory and Outline of the Procedure-Activity	
System	37
Definition of Categories	42
Procedures for Categorizing and Interpreting Data	49
The Score Sheet	49
Aids for Categorizing	49
The Matrix	50
Use of the Matrix to Determine the Proportion of	
Time Spent in the Different Procedures, Activities	
and Strategies	55
Use of the Matrix to Examine Build-Ups and Sequence	
of Procedures and Activities	57
Areas within the Matrix	58
Method of Investigation	63
IV. RESULTS AND INTERPRETATION OF DATA	67
Reliability of the Procedure-Activity Observation	
System	67
Inter-Scorer Reliability	68
Observer Consistency in Scoring Taped Classes	68
Observer Consistency in Scoring Live and Taped	
Classes	69
General Interpretation of the Data	70

CHAPTER

PAGE

General Aspects of Teacher Verbal Procedures, Student Activities and Time-Out	71
General Aspects of Procedures, and Activities in French and in English	72
General Aspects of Communication and Drill	73
General Aspects of the Four Skills of Language Learning	74
General Aspects of the Strategies	75
Specific Aspects of Procedures, Activities and Strategies in Developing Student Listening Comprehension in French	78
Proportion of Class Time	78
Sequence of Procedures and Activities	81
Strategies	86
Specific Aspects of Procedures, Activities and Strategies in Developing Student Speaking in French	89
Proportion of Class Time	89
Sequence of Procedures and Activities	91
Strategies	95
Specific Aspects of Procedures, Activities and Strategies in Developing Student Oral Reading in French	97
Proportion of Class Time	97
Sequence of Procedures and Activities	97
Strategies	98

CHAPTER

Page

Specific Aspects of Procedures, Activities and Strategies in Developing Student Silent Reading and Writing in French	101
Proportion of Class Time	101
Sequence of Procedures and Activities	102
Strategies	104
Specific Aspects of Time-Out	106
Proportion and Sequence of Procedures, Activities and Time-Out	106
Time-Out in the Different Strategies	106
V. SUMMARY OF PROCEDURES, CONCLUSIONS AND IMPLICATIONS	110
Summary of Procedures	110
Summary of Conclusions and Observations	111
Implications	117
BIBLIOGRAPHY	121
APPENDIX A	125
APPENDIX B	127
APPENDIX C	129
APPENDIX D	135
APPENDIX E	141
APPENDIX F	147
APPENDIX G	153

LIST OF TABLES

TABLE	Page
I. Procedure-Activity Observation Score Sheet	53
II. Procedure-Activity Observation Matrix	54
III. Student Listening Comprehension in French	59
IV. Student Speaking in French	59
V. Student Oral Reading in French	61
VI. Student Silent Reading and Writing in French	61
VII. Time-Out	62
VIII. Steady-State Cells	62
IX. Summary of the Subjects and Method of Investigation	65
X. Proportion of Class Time Spent in Teacher Verbal Procedures and Student Activities	71
XI. Proportion of Class Time Spent in Procedures and Activities in French and in English	72
XII. Proportion of Class Time Spent in Communication and Drill in French	73
XIII. Proportion of Class Time Spent in Developing the Four Skills in French	75
XIV. Proportion of Class Time Spent by the Five Classes in the Different Strategies	77
XV. Proportion of Class Time Spent in Student Listening to French	79
XVI. Proportion of Class Time Spent in Teacher Communication in French	81

TABLE	PAGE
XVII. Proportion of Class Time Spent in Extended Student Listening to French	82
XVIII. Proportion of Class Time Spent in Extended Teacher Talk in French	83
XIX. Proportion of Class Time Spent in Teacher Procedures Following Teacher Questions in French	85
XX. Proportion of Class Time Spent in Extended Teacher Oral Reading in French	86
XXI. Proportion of Class Time Spent in Student Listening to French in the Different Strategies	87
XXII. Proportion of Class Time Spent in Student Speaking in French	90
XXIII. Proportion of Class Time Spent in Extended Student Talk in French	92
XXIV. Proportion of Class Time Spent in Student Talk in French Following Teacher Procedures	93
XXV. Proportion of Class Time Spent in Student Communication in French Following Teacher Procedures	94
XXVI. Proportion of Class Time Spent in Student Talk in French in the Different Strategies	96
XXVII. Proportion of Class Time Spent in Student Oral Reading in French	98
XXVIII. Proportion of Class Time Spent in Procedures and Activities Preceding and Following Student Oral Reading in French .	99

TABLE

PAGE

XXIX.	Proportion of Class Time Spent in Student Oral Reading in French in the Different Strategies	100
XXX.	Proportion of Class Time Spent in Student Silent Reading and Writing in French	102
XXXI.	Proportion of Class Time Spent in Procedures and Activities Preceding Student Silent Reading and Writing in French.	103
XXXII.	Proportion of Class Time Spent in Student Silent Reading and Writing in French in the Different Strategies	105
XXXIII.	Proportion of Class Time Spent in Procedures and Activities Preceding Time-Out	107
XXXIV.	Proportion of Class Time Spent in Time-Out in the Different Strategies	109

LIST OF FIGURES

FIGURE	PAGE
1. Summary of Flanders' Interaction Analysis System.....	32
2. Summary of Jarvis' Observation System.....	36
3. Summary of the Procedure-Activity Observation System.....	41

CHAPTER I

INTRODUCTION

In the last two decades many changes have been taking place in the second language classroom. New concepts of the nature of language, of language learning and of language teaching, the audio-lingual approach with its methodology and technology, new education techniques and changing teacher training programs have made the second language classroom one of the most revolutionized fields in education today.

However, many second language teachers are still clinging to traditional methods or misusing the new methods. Workshops for in-service teachers, new courses for student teachers and research studies have not yet produced enough second language teachers fully informed and confident of their methodology.

Numerous attempts have been made to compare the relative effectiveness of the audio-lingual method with the traditional grammar-translation method and with the cognitive-code learning method which is the new, up-to-date version of the grammar-translation method. The ultimate results of these studies have tended to cancel out one another. In the final analysis these studies, using broad comparisons of the different methods have proved little except that new and better research methods have to be devised to investigate successfully the processes of learning a second language and the subsequent patterns of teacher-student interaction.

One recent research method is interaction process analysis. Direct observation of this kind is proving effective in the search for optimal patterns of classroom behavior. It may eventually close the gap between methodological theory and practice in the classroom.

In the past five years several studies using the research methods of interaction process analysis have been carried out in the second language classroom. Most of these studies have been conducted in the introductory second language classroom which has fewer variables than more advanced levels.

I SIGNIFICANCE OF THE STUDY

The writer sees a need for direct observation in the second language classroom in the senior high school. By developing an instrument to identify and quantify teacher verbal procedures and student activities in their classroom, teachers of French may be provided with a means to examine their performance in the classroom, i.e., what procedures they are using and the extent to which they are using these procedures; what influence their procedures have on the activities of the students; and what influence the "strategies" of the program have on the classroom procedures and activities.

II STATEMENT OF THE PROBLEM

It was the purpose of this study to develop an observational system to investigate the kinds of strategies, the kinds of teacher

verbal procedures and the kinds of student activities which are present in second language teaching in the senior high school. In this study the second language is French and the method is the audio-lingual method as applied in the Program Le Français at the second-level Parler et Lire. This second-level of the program is used in Manitoba schools generally in grades ten and eleven and sometimes in grade twelve.

Having developed an observation system it was then necessary to test its viability and validity by using it to score actual classes. In this study three key questions were asked about the Procedure-Activity Observation System:

1. Can it be used to score the different teacher procedures and student activities relevant to second language skill acquisition in entire second language class periods?
2. Can the scores obtained by the system be expressed in terms that lend to analysis and comparisons?
3. Can the system give pertinent information about the sequence of procedures and activities?

III LIMITATIONS OF THE STUDY

1. This study dealt with identifying and quantifying procedures and activities of teacher-student interaction in the process of developing psychomotor and cognitive skills in second language students in the senior high school. No attempt was made to determine classroom climate (i.e., the affective aspects of teacher-student interaction).

2. No attempt in this study was made to determine the effectiveness of teachers' procedures in terms of achievement. It was the purpose of this study only to develop an effective and meaningful instrument to identify and quantify teacher procedures and student activities.

3. This study did not deal with non-verbal interaction.

4. Procedures and activities in English were not dealt with in as much detail as procedures and activities in French; e.g., in the instrument there are twelve categories for procedures and activities in French and only two for procedures and activities in English.

5. Most of the data was gathered from tapes. Due to limitations of time and recording equipment the writer could not visit all classes to make live scorings nor could he make audio-visual recordings. The advantage of recorded material over live scoring is that corrections can be made by replaying the tape. However, sound tapes do not include the visual aspects of the class. Also, the scoring of the classes on tape were not always perfectly accurate because students who spoke very quietly could be heard only with great difficulty and in a few instances an educated guess had to be made.

6. No attempt was made at random sampling or elimination of variables. In this study five class periods of five volunteer teachers teaching Parler et Lire were recorded on tape and scored according to the Procedure-Activity Observation Analysis System. The data was analyzed through comparisons and descriptions.

7. All teachers recorded in this study were volunteers and, as such, may be more confident of their methodology than second language teachers in general.

IV DEFINITION OF TERMS

1. Senior High School--refers to grades ten, eleven, and twelve in Manitoba schools.
2. Second Language--means any language other than the student's mother tongue. In this study the second language is French being taught to English speaking students.
3. Second-Level--In this study second-level refers to the post-introductory level of the audio-lingual program Le Français.

The first-level, entitled Ecouter et Parler, consists mainly of "drill" in which students practice and memorize Basic Dialogue Sentence, Question and Answer Practice, Pattern Practice, and "use" this material in conversations.

The second-level, entitled Parler et Lire, shifts its emphasis from "drill" to "use" in Aperçu, Conversation, Récapitulation, Narration Orale, Narration Ecrite, Scènes Séquences, Compte Rendu and other strategies suggested for the teacher in Livre du Maître which accompanies Parler et Lire. According to Twaddell "Second-level learning is a crucial stage in the planned transition from 'drill' to 'use'...." ¹

4. Procedure-Activity--In this study a procedure refers to any verbal behavior on the part of the teacher to bring about desired student activities. Activity refers to student behavior intended for developing

1. Freeman Twaddell, "Foreign Language Instruction at the Second Level," Alice Langellier, Sylvia Narins Levy and Patricia O'Connor, Le Français: Parler et Lire, Livre du Maître (Toronto and Montreal: Holt, Rinehart and Winston of Canada, Ltd., 1969), p. ix.

student listening comprehension, speaking, reading and writing skills in the second language.

5. Method-- "A method is an overall plan for the orderly presentation of language material." ²

6. Audio-lingual method--This method "is based on the assumptions that the spoken form of the language must be taught before reading and writing, that it must be based upon a contrastive study of the native language which the student is learning, and that language must be over-learned by means of a special type of drill known as the 'pattern practice'." ³

7. Strategy--In this study a strategy refers to a set of procedures and activities involving certain elements of the content (e.g., some of the strategies of Parler et Lire are L'Aperçu, La Récapitulation, La Narration Orale.)

8. Communication--refers to normal or near-normal use of a language to exchange ideas orally. In this study communication has the same meaning as "use" as used by Twaddell. ⁴ It also has the same meaning as "real language" as used by Jarvis. ⁵ Communication requires the skill of oral fluency described by Twaddell as the "ability to talk readily about a variety of topics, creating new sentences to talk about or

2. Jean Louis Maurice, "A Method of Procedure Analysis in the Teaching of French as a Second Language" (unpublished Master's thesis, University of Manitoba, 1968), p. 4.

3. Ibid.

4. Twaddell, op. cit., p. ix

5. Gilbert A. Jarvis, "A Behavioral Observation System for Classroom Foreign Language Skill Acquisition Activities," The Modern Language Journal, Vol. 52, No. 6, p. 336.

ask about new situations. " 6

9. Drill--refers to classroom procedures and activities of modeling and repetition of language for students to learn and overlearn the basic skills of the language. In this study drill refers to those procedures and activities designed to bring about oral accuracy described by Twaddell as "an acceptable pronunciation of the phonetic elements ... in phrases and sentences as well as in individual words or syllables and the unhesitating use of the correct grammatical structures. " 7

V ORGANIZATION OF THE STUDY

The remaining chapters were planned in the following manner: Chapter II reviews the literature most closely related to the present study, Chapter III attempts to explain the methodology of the study, Chapter IV presents the results and interpretation of the data of this study, and Chapter V summarizes the procedures and findings of the study and concludes with some implications concerning the present and future research using direct observation in the second language classroom.

6. Twaddell, op. cit., p. ix

7. Ibid.

CHAPTER II

REVIEW OF RELATED LITERATURE

Since the present study proposed to develop a system for research in second language teaching using direct observation, this chapter reviews some of the literature about methods in second language teaching, research needs in second language teaching, research in second language teaching using broad comparisons of methods, and research in teaching and in second language teaching using direct observation.

I METHODS IN SECOND LANGUAGE TEACHING

Stevens lists six major changes in classroom methods that have gained ground in recent years. They are: (1) The decline of the Grammar--Translation Method, (2) The spread of the Oral Approach, (3) Contextualization: teaching in situations, (4) More intensive teaching, (5) Starting younger and (6) Integration of Subjects.¹

Lado outlines three main types of methods of second language teaching: (1) Grammar--translation methods, (2) Direct methods and (3) Linguistic Approach.²

Most writers on second language teaching consider the grammar-translation methods to be more or less defunct.

1. P.D. Stevens, Papers in Language and Language Teaching (London: Oxford University Press, 1965), pp. 15-21.

2. Robert Lado, Language Teaching: A Scientific Approach (New York: McGraw-Hill, Inc, 1964), pp. 3-6.

The reasons for this decline are complex. It is not true that nobody has learned languages through this method, relying largely upon learning grammatical rules and exercising the pupil through translation into and out of the foreign language. In any case there can be no 'right' and 'wrong' ways of language teaching. But modern thought believes that other methods are generally more effective, more rapid and more relevant to the changed aims of the profession. ³

The direct-methods came about as a reaction to the grammar-translation method.

The direct method overcame the two major faults of the grammar-translation methods by substituting language contact for grammar recitation, and language use for translation however, the direct method assumed that learning a foreign language is the same as learning the mother tongue, that is, that exposing the student directly to the foreign language impresses it perfectly upon his mind. This is true only up to a point, since the psychology of learning a second language differs from that of learning the first. ⁴

The method widely used for the last two decades, is referred to as the linguistic, the audio-lingual, the oral-aural or the oral approach. According to Carroll there are four prominent characteristics of the contemporary methods: (1) items are normally presented and learned in their spoken form before they are presented in their written form, (2) results of scientific analysis of the contrasts between the learner's language and the target language is used to an increasing degree, (3) the need for overlearning of language patterns by a special type of drill known as "pattern-practice" is

3. Strevens, op. cit., p. 15.

4. Lado, op. cit., pp. 4-6.

10.
stressed, and (4) the use of the students mother tongue is minimized. 5

Many writers today speak of a second contemporary method in contrast to the audio-lingual method. This method is based on the Cognitive-Code learning theory. Carroll writes:

The cognitive-code learning theory ... may be thought of as a modified, up-to-date grammar-translation theory. According to this theory, learning a language is a process of acquiring conscious control of the phonological, grammatical, and logical patterns of a second language, largely through study and analysis of these patterns as a body of knowledge. The theory attaches more importance to the learner's understanding of the structure of the foreign language than to his facility in using that structure 6

II RESEARCH NEEDS IN SECOND LANGUAGE TEACHING

Strevens summarizes research needs in second language teaching in three broad fields: (1) the scientific basis of language teaching, (2) the technology of language teaching, and (3) organization. 7

As subdivision of (2) the technology of language teaching he lists psychology, methodology, applied linguistics, and equipment. 8

This study deals with research in methodology.

Two types of methods research in second language teaching are (1) research using broad comparisons and (2) research using direct observation.

5. John B. Carroll, "Research on Teaching Foreign Languages," Handbook of Research on Teaching, N.L. Gage, editor (Chicago: Rand McNally & Company, 1963), pp.1062-1064.

6. John B. Carroll, "Psychology, Research, and Language Teaching," Trends in Language Teaching, Albert Valdman, editor (New York: McGraw-Hill Book Company, 1966), pp. 101-102.

7. Strevens, op. cit., p. 4.

8. Ibid.

III RESEARCH IN SECOND LANGUAGE TEACHING USING BROAD COMPARISONS OF METHODS

Much research in second language teaching has been done using broad comparisons of methods. Carroll writes:

Ever since the advent of "modern" language teaching methods ..., foreign language teachers have felt impelled to contrast these methods with more traditional ones with respect to student attainment of the various objectives of these courses. ⁹

Carroll cites the study of Agard and Dunkel (1948) as a case in point. However, he says of this study and of other such studies:

Rigorous experimental design has been largely absent ...; instead, simple group comparisons have been made at various stages of training, with hardly any use of control measurements. The results of these studies have been largely inconclusive. ¹⁰

Another major study using broad comparisons of second language teaching methods was the Pennsylvania Project (1965-69). In that project the researchers attempted to eliminate some of the weaknesses of previous such research. For example, field consultants made periodic unannounced classroom observations in order to rate the teachers' adherence or non-adherence to assigned methods. ¹¹

⁹. Carroll, "Research on Teaching Foreign Languages" op. cit., p. 1066.

¹⁰. Carroll, loc. cit.

¹¹. Philip D. Smith, Jr., and Emanuel Berger, "An Assessment of Three Foreign Language Teaching Strategies Utilizing Three Language Laboratory Systems" (Philadelphia: The Center for Curriculum Development, Inc., 1968), pp. 40, 41, and 45.

However, in the second report on the project they write:

The research, in examining student attitude, superficial classroom methodology, and teacher proficiency may have failed to examine the real causes of variation in achievement. These may be in the unexplored area of process--student motivation for second language learning and student-teacher interaction. ¹²

Concerning the Pennsylvania Project Frank M. Grittner writes:

The validity of the research design used by Smith and Berger is being increasingly questioned by educational psychologists and curriculum specialists. For example, Stephens in the Process of Schooling (Holt, Rhinehart and Winston) documents 780 such studies involving control and experimental groups. Of these, 580 showed "No significant differences" or "NSD". The remaining 200 students (studies) were rather evenly divided between positive and negative results. In short, a half century of such "research" has told us almost nothing about the relative superiority of one educational strategy or system over another! ¹³

Frank Otto concludes:

Perhaps the most significant conclusion that can be drawn from studying the Pennsylvania Project is that we must have better research regarding the process of learning a foreign language and the subsequent patterns of teacher-student interaction. ¹⁴

¹². Philip D. Smith, Jr., Halmunt A. Baranyi, "A Comparison of the Effectiveness of the Traditional and Audiolingual Approaches to Foreign Language Instruction Utilizing Laboratory Equipment" (Philadelphia, The Center for Curriculum Development, Inc., 1968), pp. 112-113.

¹³. Frank M. Grittner, "Letter to the Editor", Newsletter of the National Association of Language Laboratory Directors, NALLD, Vol. III, No. 2 (December, 1968), p. 7 quoted by Frank Otto, "The Teacher in the Pennsylvania Project," The Modern Language Journal, Vol. 53, No. 6 (1969), p. 420.

¹⁴. Frank Otto, "The Teacher in the Pennsylvania Project," The Modern Language Journal, Vol. 53, No. 6, (1969), p. 420.

However, since then, the Pennsylvania project has continued with a comparison of the cognitive and audiolingual approaches to second language teaching.¹⁵

One of the most recent research studies in second language teaching using broad comparisons of methods has been Chastain and Woerdehoff's methodological comparison of the method based on the audio-lingual habit theory and the method based on the cognitive code-learning theory.¹⁶ The researchers outlined the three basic characteristics of the audio-lingual habit theory as: (1) the study and manipulation of the structural patterns of the language, (2) the inductive presentation of new material, and (3) the maintenance of the natural order of language learning, i.e. listening comprehension, speaking, reading and writing.¹⁷ In contrast they enunciated the characteristics of the cognitive code-learning approach as: (1) the use of exercises designed to teach grammatical understanding of the concepts being introduced, (2) the deductive explanation of all grammar prior to any practice with the structure, and (3) the practice of all the language skills from the beginning of the course.¹⁸

After defining the theory of the two methods they selected

15. Philip D. Smith, A Comparison of the Cognitive and Audio-lingual Approaches to Foreign Language Instruction (Philadelphia: The Center for Curriculum Development, Inc., 1970).

16. Kenneth D. Chastain and Frank J. Woerdehoff, "A Methodological Study Comparing the Audio-Lingual Habit Theory and the Cognitive Code-Learning Theory," The Modern Language Journal, Vol. 52, No. 5, (1968), pp. 268-279.

17. Ibid., p. 269.

18. Ibid.

representative Spanish programs based on each of the two methods and compared the results of one sample group of students taught with the program based on the audio-lingual method with the results of a second sample group of students taught with the program based on the cognitive code-learning theory.

However, the researchers did not go into the classroom to observe whether, in fact, the two different methods were being used. Thus, their results, which slightly favored the cognitive code-learning theory, were not only inconclusive, as they themselves admit; but the whole study was not really valid because the teachers who were supposed to be using different methods, may, in practice have been using the same method or a combination of methods.

According to Politzer and Weiss there are two main weaknesses of research using broad comparisons of methods. First it attempts to transform the teacher variable to a constant.

One must ... ask if it is really the method that makes the difference in student achievement rather than the way in which the individual teacher implements that method with respect to his own competence, knowledge and characteristics as they interact with those of his students.¹⁹

Secondly, "the comparison of methods is also made difficult by the problem of criterion measures, which must necessarily reflect the goals of teaching."²⁰ When the goals are different the question arises as to how to construct criterion measures which are valid for the different methods.

19. Robert L. Politzer and Louis Weiss, The Successful Foreign Language Teacher. (Philadelphia, Pennsylvania: The Center for Curriculum Development, Inc., 1970), p. 3.

20. Ibid.

IV RESEARCH USING DIRECT OBSERVATION

Jarvis writes:

Although the inauspicious history of research on teaching effectiveness can appear intimidating to the prospective researcher, the recent widespread recognition of the need for systematic observation of what actually does happen within the classroom does seem to provide an alternative to the futilitarian approach.²¹

Medley and Mitzel are in accord with Jarvis, and state:

Direct Observation should play a crucial part in the most fundamental kind of research on teaching--the search for effective patterns of classroom behavior--the type of research most worthy of the name "methods research."²²

Maurice adds:

Direct observation has also an important function to play in teacher education. One of the objectives of teacher education is to get teachers to behave in certain ways while they teach. It is impossible to find out whether a program has been successful without observing the effect of that program on teachers in the act of teaching. This also applies to teachers who are being retrained through in-service education.²³

21. Gilbert A. Jarvis, "A Behavioral Observation System for Classroom Foreign Language Skill Acquisition Activities," The Modern Language Journal, Vol. 52, No. 6, (1968), p. 335.

22. Donald M. Medley and Harold E. Mitzel, "Measuring Classroom Behavior by Systematic Observation," Handbook of Research on Teaching, N.L. Gage, Editor (Chicago: Rand McNally and Company, 1963), p. 249.

23. Louis Jean Maurice, "A Method of Procedure Analysis in the Teaching of French as a Second Language" (unpublished M. Ed. thesis, The University of Manitoba, 1968), pp. 12-13.

The best known observation for studying classroom behavior was developed by Flanders and is referred to as the Flanders system of Interaction Analysis.²⁴

Flanders, Amidon, Hough, Hunter,²⁵ and others have been instrumental in developing interaction analysis as a research procedure to analyse classroom climate and its effects on students. Thus, their main interest has been the affective aspects of teaching.

In the past seven or eight years, Smith, Bellack, and Taba²⁶ have studied the cognitive aspects of the teaching-learning situation in schools. They have analyzed the logical, cognitive, intellectual aspects of classroom discourse.

Searles²⁷ combined the charting of affective and cognitive aspects of classroom behavior.

24. Edmond J. Amidon and John B. Hough, editors, Interaction Analysis: Theory, Research and Application, (Reading, Massachusetts: Addison-Wesley Publishing Company, 1967), Preface, p. vi.

25. Edmund Amidon and Ned Flanders, "Interaction Analysis as A Feedback System", Interaction Analysis: Theory, Research and Application, E.J. Amidon and H.B. Hough, editors (Reading, Massachusetts: Addison-Wesley Publishing Company, 1967), pp. 121-140; Edmund Amidon and Elizabeth Hunter, "Verbal Interaction in the Classroom: The Verbal Interaction Category System", op.cit., pp. 141-149; "An Observational System for the Analysis of Classroom Instruction", op. cit., pp. 150-157.

26. B. Othanel Smith and Milton O. Meux, A Study of the Logic of Teaching (Urbana, Chicago, London, published for the College of Education by the University of Illinois Press, 1970); Arno A. Bellack, Herbert M. Klierbard, Ronald T. Hyman, and Frank L. Smith Jr., The Language of the Classroom (New York: Teachers College Press, 1966); and Hilda Taba and Freeman F. Elzey, "Teaching Strategies and Thought Processes" Teachers College Record, Vol. 65, No. 6, (1964), pp. 524-534.

27. John E. Searles, A System for Instruction (Scranton: International Textbook Company, 1967).

Lastly, Maurice ²⁸ has developed a procedure analysis system to study the psychomotor aspects of teacher procedures.

V RESEARCH IN SECOND LANGUAGE TEACHING USING DIRECT OBSERVATION

It has only been in the last five years that research using direct observation has been conducted in the second language classroom. Second languages were among the subject areas excluded from the early extensive work of Flanders because the interaction analysis data "were too variable for efficient analysis". ²⁹

Moskowitz first used Flanders system in the second language classroom to examine the effects of training second language teachers in interaction analysis. ³⁰

Since then other studies, using specially prepared observation systems, have been carried out in the second language classroom. Three such studies were conducted in the United States, one in England, and one in Canada. Gilbert A. Jarvis, at Purdue University, developed the "Behavioral Observation System for Classroom Foreign Language Skill Acquisition Activities" ³¹ with twenty-four different categories.

28. Maurice, op. cit.

29. Ned A. Flanders, "Analyzing Teacher Behavior," Educational Leadership, Vol. XIX, No. 3 (December, 1961), p. 173, quoted by Jarvis op. cit., p. 335.

30. Gertrude Moskowitz, "The Effects of Training Foreign Language Teachers in Interaction Analyses," Foreign Language Annals III, (March, 1968), pp. 218-235.

31. Jarvis, op. cit., p. 335-341.

Orin Nearhoof developed a ten category instrument for measuring "Teacher-Pupil Interaction in the Foreign Classroom ..." ³² and S.H. Rothfarb, in the Dade County Public Schools, Florida, developed a thirteen category system to study "Teacher-Pupil Interaction in a FLES Class." ³³

E.C. Wragg, at the University of Exter, adapted the Flanders' system of interaction analysis to the second language classroom by doubling the number of categories to have the first ten representing interaction in English and the last ten representing interaction in French. ³⁴

Louis Jean Maurice, at the University of Manitoba, developed an eleven category procedure analysis instrument, ³⁵ for analyzing procedures in a French class using Le Français: Ecouter et Parler which is the first level of that program.

These category systems, according to Moskowitz, "have been developed, not to evaluate teaching but to describe it, the assumption

³². Orin Nearhoof, "Teacher-Pupil Interaction in the Foreign Language Classroom: A Technique of Self-Evaluation," from an unpublished research paper reported by Frank M. Grittner, Teaching Foreign Languages (New York, Harper and Row, Publishers, 1969), pp. 327-341.

³³. S.H. Rothfarb, "Teacher-Pupil Interaction in the FLES Class," Hispania, Vol. 53, (May, 1970), pp. 256-260.

³⁴. E.C. Wragg, "Interaction Analysis in the Foreign Language Classroom," The Modern Language Journal, Vol 54, No. 2, (1970) pp. 116-120.

³⁵. Maurice, op. cit.

being that before you can evaluate the teaching act, you ought to know what the act consists of." ³⁶

Politzer and Weiss ³⁷ are among the few researchers to date who have observed classroom behaviors of teachers "to identify those who were successful in terms of pupil achievement, and to compare the behaviors and characteristics of these teachers with those of the teachers who were identified as less successful." ³⁸

It was the intention of the writer to find or develop an observation system to examine teacher procedures and student activities in the teaching of French in the senior high school. The current program used in Manitoba high schools is the second level: Parler et Lire of the program Le Français.

None of the above-mentioned systems could be used as such. But, all of them, some more than others, aided the writer in arriving at the Procedure-Activity Observation System which was developed for this study. The reasons why none of the systems could be used as such, and how they did help in formulating a system to study behavior in a second language classroom using Parler et Lire are discussed in some detail in the following chapter on the Methodology of the study.

This review of the literature demonstrates the need for new and better research methods in the second language classroom so that teachers can choose the best methods and use the best procedures to attain

36. Moskowitz, op. cit., pp. 218-219.

37. Politzer and Weiss, op. cit.

38. Ibid., Abstract, p. xi.

the best results in teaching a second language. Research using broad comparisons of methods without observing whether the teachers are using the method they are supposed to be using has proved futile. Research using direct observation may be the answer to the need for new and better research methods.

This study attempted to further direct observation research in the second language classroom. Most studies in the second language classroom have been conducted in introductory classes where variables are fewer than in more advanced classes. In Manitoba schools grade ten students have studied French previously for three or more years. Thus, the procedures and activities at their level are more complex than at a more elementary level. This study attempted to categorize and analyze these more complex procedures and activities.

CHAPTER III

METHODOLOGY

The purpose of this chapter is to describe the methodology of the present study. It outlines the rationale of the study. It describes the two levels of the program Le Français--the first level: Ecouter et Parler and the second level: Parler et Lire. It outlines the background to the development of the Procedure-Activity Observation System. It explains the theory of this system; defines its categories; and outlines its procedures for categorizing and interpreting data. Lastly, Chapter III summarizes the method of investigation employed in this study.

I RATIONALE OF THE STUDY

The Comprehensive Dictionary of Psychological and Psycho-analytical Terms (English and English, 1958) defines teaching as "the art of assisting another to learn." Thus, research in teaching must consider both the teacher and the learner. Research in teaching using systematic observation must consider the procedures of the teacher, the activities of the learner, and the nature of the discipline.

Macdonald says:

Some researchers prefer to deal only with a teaching-learning system. Thus, it is agreed that neither teaching nor learning is a sensible concept apart from the other The teaching-learning system, it is argued here, is more aptly called the instructional system Thus teaching is defined as the behavior of the teacher, learning as the change in learner behavior, instruction as the pupil-teacher interaction

situation Another way of putting this might be: learning is the desired response, teaching is the art of systematically presenting stimuli, and/or cues; instruction is the total stimulus setting within which systematic stimuli and desired responses occur.¹

Therefore, direct observation using a system of discrete categories as a means of identifying and quantifying classroom behavior must include categories for teacher behavior and categories for student behavior, and these categories must reflect the content of the behavior, i.e., the content of the program under study. For example, a valid system of behavior analysis in the second language classroom must differentiate between types of behaviors which are monolithic in other classrooms. When a student says, "It's a beautiful day today", he may say it in his first language or in the second language which he is studying. If it is his second language he may say it because in fact it is a beautiful day and the teacher has asked him how the weather is, or he may be saying this sentence because it is an item in a pattern drill on idiomatic expressions about the weather, or it may be the only answer that he knows to respond to a question about the weather, whether it is cloudy, raining, snowing or the sun is shining.

Thus, a good system of categories for direct observation of instruction must identify behaviors in terms of their consequences, i.e., in this study, in terms of the language skills which those behaviors intend to produce in the student.

1. James B. Macdonald, Theories of Instruction (Washington: Association Supervision and Curriculum Development, 1965), pp 4-6, quoted by Louis Jean Maurice, "A Method of Procedure Analysis in the Teaching of French as a Second Language," (unpublished M. Ed. thesis, The University of Manitoba, 1968), p. 17.

II THE FIRST LEVEL OF THE PROGRAM:

LE FRANÇAIS: ECOUTER ET PARLER

Before beginning to develop the Procedure-Activity Observation System careful consideration was given to Maurice's Procedure Analysis System.³ The Procedure Analysis System was developed for studying the first level of the program Le Français: Ecouter et Parler.

However, according to Twaddell: "The second-level course differs from preceding work in its immediate objectives and hence in its materials and procedures."⁴

In the first-level every item of the second language--every word, construction or idiom had to be practiced through the five stages: Recognition, Imitation, Repetition, Variation and Selection.⁵

Twaddell states:

Imitation, Repetition, Minimal Variation--the intermediary stages of learning--occupied most of the classroom time of the introductory phase Recognition and Selection were

2. Dominique G. Côté, Sylvia Narins Levy, and Patricia O'Connor, Le Français: Ecouter et Parler, (New York: Holt, Rinehart and Winston, 1962).

3. Louis Jean Maurice, "A Method of Procedure Analysis in the Teaching of French as a Second Language", (unpublished M.Ed. thesis, The University of Manitoba, 1968).

4. Freeman Twaddell, "Foreign Language Instruction at the Second Level", Alice Langellier, Sylvia Narins Levy and Patricia O'Connor, Le Français: Parler et Lire, Livre du Maître, Canadian Edition prepared by Robert R. Roy. (Toronto and Montreal: Holt, Rinehart and Winston of Canada, Ltd., 1969), p. iv.

5. Côté, op. cit., Teacher's Edition, p. xiii.

de-emphasized Careful multiple presentation by the teacher and guidance by the text, plus the rigorously consistent recurrence of words and structures, kept Recognition from being a problem; and the practice of Selection was protectively limited and guided. ⁶

In developing the Procedure Analysis System, Maurice took into consideration these facts (using Côté ⁷ as his source). Five of the eleven categories are Category 2--Recognition, Category 3--Imitation, Category 4--Repetition, Category 6--Variation, and Category 7--Selection. The other six categories are Category 1--Directions, Category 5--Information, Category 8--Individual Student Responses, Category 9--Group Student Responses, Category 10--Student Questions, and Category 11--Silence, Confusion or Irrelevance. ⁸ Category 8--Individual Student Responses and Category 9--Group Student Responses are heavily weighted with student Imitation, Repetition and Minimal Variation.

A brief study of the comparison of the means of the four teachers obtained on the eleven different categories shows that Category 9--Group Student Responses had the highest number of events scored (33.78%), Category 3--Imitation had the second highest (22.69%) and Category 8--Individual Student Responses had the third highest (15.61%). Over seventy per cent (72.08%) of the events scored occurred in these three categories. On the average, nearly eighty percent (78.22%) of the class events scored occurred in the five categories of

6. Twaddell, op. cit., p.v.

7. Côté, op. cit.

8. Maurice, op. cit., pp. 32-33

of Imitation, Repetition, Variation, and Individual and Group Student
Responses.⁹

Thus, in theory and in fact the emphasis in the first-level program is on Imitation, Repetition and Variation.

III THE SECOND LEVEL OF THE PROGRAM:

LE FRANÇAIS: PARLER ET LIRE

Theory

A main feature of the second-level "is the playing down of the middle steps (Imitation, Repetition, Minimal Variation) of the language learning process through DRILL on the FL Foreign Language , and a compensatory building-up of the first and last stages (Recognition, Selection) which are the USE of the FL, to more nearly approach real language behavior." ¹¹

The main objectives of the second-level is to develop oral accuracy and fluency, ¹² and to develop reading skills. ¹³ Its secondary objectives are to begin the formal study of Grammar, ¹⁴

9. Maurice, op. cit., p.50.

10. Alice Langellier, Sylvia Narins Levy, and Patricia O'Connor, Le Français: Parler et Lire (Toronto and Montreal: Holt, Rinehart and Winston of Canada, Ltd., 1969).

11. Twaddell, op. cit., p.v.

12. Langellier, op. cit., Livre du Maître, p. ix.

13. Ibid., p. xv.

14. Ibid., p. xxiv.

to increase writing skills in preparation for the third-level where "the systematic beginning of real writing skill for practical communication"¹⁵ will take place, and to "look in through the window" (built in the first-level) at the second language culture.¹⁶

Materials and their Use

For the reader to better understand this study a brief outline is given here of the materials of the course Parler et Lire and their use.

The main materials are the student's textbook entitled Parler et Lire with accompanying audio tapes, the student's exercise book, Livre d'Exercices, and the teacher's manual, Livre du Maître. Optional supplementary materials include display photos, film strips entitled Une Année en France with accompanying tapes in French and in English, review records of Ecouter et Parler, and a set of major tests.

In the student's textbook there are three types of text: Conversation de la Vie Journalière, Scènes Séquences, and Rapports. The Conversations are dramatic texts of daily life conversations in a French locale; the Scènes Séquences are made up of a series of dramatic episodes of every day life experiences that are sequential in thought and development; the Rapports are narrative in style and take the form of letter or essays on French life, literature, science and history.

15. Ibid., p. xxvi.

16. Ibid., p. xxvii.

The Conversation is followed by two exercises: Narration Orale and Narration Ecrite. The Scènes Séquences and Rapports are followed by the exercise Compte Rendu. The Narration Orale is a series of questions in French about the Conversation and are to be answered in short-answer question and answer practice and/or in complete-sentence oral narrative. The Narration Ecrite is a series of questions about the Conversation to be answered in writing. The Compte Rendu is a series of questions on the Scènes Séquences or Rapport which are to be answered in writing so that the answers form a composition.

At the beginning of each chapter (except chapters Eight and Fourteen) there are from two to four illustrated, all-French dictionary pages entitled Petit Dictionnaire.

In the middle of the student's textbook there is an atlas which consists of five maps in French: one of the world, three of France, and one of Paris.

Near the back of the student's textbook is a grammar section of "forty topics ... grouped together ... in the form of an elementary reference grammar so that they may be easily referred to by the teacher and the student not only at the time certain grammatical topics are being intensively studied, but at any time a grammatical question is raised. " 17

To assist the student in Recognition of meaning throughout chapters three to thirteen there is glossing of low-frequency or non-recurring, and otherwise difficult words and expressions in the

17. Ibid., p. xxxii.

form of alphabetically arranged footnotes; and, to be consulted only as an emergency measure of last resort, there is an end-of-book vocabulary of French words and phrases with approximate equivalents in English.

The Livre d'Exercices¹⁸ contains Exercices Oraux which include Les Exercices de Prononciation, Les Extensions Idiomatiques and Les Structures Grammaticales; and Exercices Ecrits which include exercises on grammar and vocabulary.

The Livre du Maître¹⁹ gives suggested procedures for using the student's books in the classroom. It provides a wealth of suggested questions in French about the photographs under the title L'Aperçu, about the Conversations under the title La Récapitulation, about the Scènes Séquences and the Rapports under the titles La Récapitulation, Les Détails, L'Interprétation, and Le Questionnaire and about the maps under the title L'Atlas.

18. Robert R. Roy, Le Français: Parler et Lire, Livre d'Exercices adapted from Exercise Manual for le Français: Parler et Lire, by Margaret D. Barton and Laura B. Gilmore to accompany Le Français: Parler et Lire by Langellier, Levy and O'Connor (Holt, Rinehart and Winston of Canada, Ltd., Toronto and Montreal, 1969).

19. Alice Langellier, Sylvia Narins Levy, and Patricia O'Connor, Le Français: Parler et Lire, Livre du Maître, Canadian Edition prepared by Robert R. Roy (Toronto and Montreal: Holt, Rinehart, and Winston of Canada, Limited, 1969).

Strategies

As defined in Chapter One, a strategy refers to a set of procedures and activities involving certain elements of the content. For the purpose of this study eleven strategies were defined.

1. Le Petit Dictionnaire--consists of "French definitions and paraphrases of words and expressions used in the chapter that is being studied. The objective in using them is to develop habits of comprehending and formulating meaning in French, and to prepare the student for later use of a complete all-French dictionary." ²⁰
The vocabulary items are to be mim-memed and copied by the students into their notebooks.
2. L'Aperçu--"is a key element in the course, essential to the development of comprehension in listening and fluency in expression." ²¹
This strategy consists of a series of oral questions to be answered orally about the photographs as a "preview" of a conversation, scene, or report. "The photographs are as much a part of the conversations and scenes and reports as the words that follow them, for the conversations, scenes, and reports step directly out of them." ²²

In this study oral questions about the Atlas or display photos are also classified in the strategy Aperçu.

20. Langellier, op. cit., Livre du Maître, p. xxxi.

21. Ibid., p. xxxv.

22. Ibid., p. xxxix.

3. La Lecture--is the strategy in which the teacher, students or someone on tape reads a Conversation, Scène, or Rapport.
4. La Récapitulation--consists of a series of oral questions which "review" the Conversation, Scène or Rapport and their accompanying photographs.

In this study, included in the strategy La Récapitulation are the questions in the Livre du Maître under the titles Les Détails, L'Interprétation and Le Questionnaire. They are all oral questions to be answered orally by the students to review and discuss the reading of the texts and accompanying photographs.

5. La Narration Orale--is designed to provide intensive oral practice in conversation and narration. The prescribed procedures for this exercise is first of all for the student to give short, natural answers to the questions in rapid-fire conversation, and, secondly, for the student to use the questions as clues in oral reports.

La Substitution is closely connected to La Narration Orale in content and provides the student the opportunity to play the role of one of the characters in the Conversation.

In this study, included in the strategy Narration Orale are all the Narration Orale and Substitution exercises in the student's textbook, and the Narration Ecrite and Compte Rendu exercises when practiced orally.

6. Narration Ecrite--Compte Rendu-- In this study, this strategy includes the exercises in the student's textbook entitled Narration

Ecrire and Compte Rendu only when they are done as written assignments. This may take the form of class time designated to writing these narratives or compositions, or class time for correcting them at the board or with an opaque projector.

7. La Grammaire--The second-level of the program Le Francais introduces the student to the formal study of grammar as a short cut to learning the language. This involves analysis of the differences between the student's first-language and the second-language under study.

In this study, the strategy La Grammaire includes all formal presentation and explanation of grammar, whether it is presented inductively or deductively and whether it is presented in the student's first language or the second language. This strategy also includes all class time spent on the exercises in the student's textbook found in the section entitled Grammaire and the exercises in the Livre d'Exercices in the section entitled Exercices Ecrits except the one or two exercises in each chapter on Le Petit Dictionnaire.

8. Drill--This strategy includes all the exercises in Livre d'Exercices entitled Exercices Oraux. These drills include Imitation and Repetition in L'Exercice de Prononciation and Minimal Variation in the pattern practices in Les Extensions Idiomatiques and Structures Grammaticales.

9. Spontaneous Conversation--includes all personalized discussion, presentation, or questions and answers where the teacher and students depart from the textbook material per se and adapt the language content under study to themselves and their world.

10. Class Management--This strategy includes extended periods of class time for the teacher to call the roll, read announcements, announce assignments or tests, or discuss school procedures or events.

11. Tests--This strategy includes all tests--full period or partial period--of listening comprehension, speaking, reading or writing or any combination of these skills.

IV BACKGROUND OF THE PROCEDURE-ACTIVITY OBSERVATION SYSTEM

A study was made of Flanders Interaction Analysis System. This system consists of ten categories. (See Figure 1.)

Teacher Talk	Indirect Influence	1. Accepts feeling 2. Praises or encourages 3. Accepts or uses ideas of student 4. Asks questions
	Direct Influence	5. Lectures 6. Gives directions 7. Criticizes or justifies authority
Student Talk		8. Student talk-response 9. Student talk-initiation
		10. Silence or confusion

FIGURE 1

SUMMARY OF FLANDERS' INTERACTION ANALYSIS SYSTEM 23

23. Edmund Amidon and Ned Flanders, "Interaction Analysis as a Feedback System", Edmund J. Amidon and John B. Hough, editors Interaction Analysis: Theory, Research and Application (Reading, Massachusetts: Addison-Wesley Publishing Co., 1967), p. 125.

This system is particularly appropriate for the second language classroom of today because it is concerned primarily with verbal behavior. However, it does not provide for the bilingual aspect of the second language classroom.

E.C. Wragg,²⁴ at the University of Exter in England, adapted the Flanders' system to a bilingual classroom by doubling the number of categories. Categories 1 to 10 represent interaction in English, and categories 11 to 20 represent interaction in the second language. It is not difficult to score with this system because it is still a ten category system; the scorer is indicating whether the interaction occurs in the first or second language; e.g., in category 1 the teacher accepts feeling in English and in category 11 the teacher accepts feeling in the second language; in category 2 the teacher praises or encourages in English and in category 12 the teacher praises or encourages in the second language, and so on.

Thus, with Wragg's instrument an observer can record the affective aspects of classroom discourse as well as comparing the proportion of class time spent in verbal behavior in English and in the second language. However, when a researcher plots these categories on a 20 x 20 matrix he finds himself confronted by 400 different cells or variables. Moreover, these 400 cells do not answer many pertinent questions about the procedures and activities used in the Parler et Lire program, e.g., What proportion of class time does the teacher spend

²⁴. E.C. Wragg, "Interaction Analysis in the Foreign Language Classroom," The Modern Language Journal - Vol. 54, No. 2, p. 116.

in communication in French and in drill in French? What proportion of class time does the student spend in communication and in drill in French?

Orin Nearhoof,²⁵ through the systematic observation of dozens of different second language teachers devised a ten-category interaction system for classifying verbal activities commonly occurring in the second language classroom. This system is more nearly in line with the objectives of this study, i.e., to study the procedures and activities designed to develop cognitive and psychomotor skills in a second language.

The ten categories of Nearhoof's system are summarized as follows:

1. Teacher use of the foreign language for communication;
2. Teacher use of the foreign language for reinforcement;
3. Teacher uses English to clarify meaning or provide a cue;
4. Teacher uses English as the functional classroom language;
5. Student uses foreign language for rote response;
6. Student uses foreign language to recombine prelearned material;
7. Student uses the foreign language to ask a question which he himself has originated;
8. Student (or students) uses the foreign language spontaneously;
9. Students use English for classroom communication;
10. Noninteraction activities.²⁶

25. Orin Nearhoof, "Teacher-Pupil Interaction in the Foreign Language Classroom: A Technique of Self Evaluation," an unpublished research paper reported by Frank M. Grittner, Teaching Foreign Languages (New York, Harper and Row, Publishers, 1969), p. 328.

26. Ibid., pp 329-330

At the beginning of this study, the writer tape recorded one of his classes using Parler et Lire and attempted to score it according to Nearhoof's system. There were two main difficulties: distinguishing between Category 3--teacher uses English to clarify meaning or provide a cue and Category 4--teacher uses English as the functional classroom language; and scoring oral reading in French. The writer resolved the first difficulty by using one category for teacher verbal behavior in English and depending on the matrix totals to give some indication of whether English is being used as the functional classroom language or merely to clarify meaning. The second difficulty was resolved by adding a category for teacher oral reading in French and a category for student oral reading in French.

Thus, nine out of the ten categories of Nearhoof can be found in some form in the Procedure-Activity Observation System.

Another observation system which greatly influenced the system used in this study was the twenty-four category system of Gilbert A. Jarvis.²⁷ An outline of his system is given in Figure 2.

²⁷. Gilbert A. Jarvis, "A Behavioral Observation System for Classroom Foreign Language Skill Acquisition Activities," The Modern Language Journal--Vol. 52, No. 6, p. 335-341.

	TEACHER	STUDENT
	TARGET LANGUAGE	
REAL	A. Evoking Student Response	1. Evoking response
	B. Evoked by student	2. Responding
	C. Classroom Management	
	D. Facilitating performance or reinforcing	
	E. Information Explanation	
DRILL	G. Evoking stimulus	3. Individual Response
	H. Repetition Reinforcement	4. Choral Response
	J. Prompting	
	P. Modeling or correcting	
	W. Presenting written language	5. Writing 6. Reading Silently 7. Reading Aloud
	ENGLISH	
	K. About target structure or sound system	8. Question about target
	M. About meaning	9. Answer about target
	N. Management	
	+ Silence or English not in the above categories but which seems to facilitate learning. - Silence or English not in the above categories but which seems to impede learning.	

FIGURE 2

SUMMARY OF JARVIS' OBSERVATION SYSTEM 28

28.

Ibid., p. 337.

The major obstacle to using this instrument is the number of categories. Twenty-four different categories make it too difficult to score at three-second intervals required by the rapid-fire interaction which takes place in many classrooms where Parler et Lire is taught. (Jarvis recommends scoring every fifteen seconds with his system.) Another criticism of the system is the use of the signs + and - which require too much observer inference.

One of the ideas which the writer borrowed from Jarvis was the idea of using capital letters for teacher verbal procedures, and arabic numerals for student activities. Also, the division of use of French into Communication and Drill is comparable to Jarvis' division of the use of the Target Language into Real and Drill.

Thus, by studying the methods and the systems of Flanders, Nearhoof, and Jarvis, by reviewing the materials and suggested procedures of the course Le Français: Parler et Lire, through first-hand experience in teaching the course and observing others teach it, the writer arrived at the Procedure-Activity Observation System. It has fifteen categories which are defined in general terms, and with specific reference to the program Parler et Lire.

V THEORY AND OUTLINE OF THE PROCEDURE- ACTIVITY OBSERVATION SYSTEM

"Inherent in any system of behavior classification is the a priori postulating of a teaching model. The defined categories premotorily (peremptorily) represent judgments about which aspects

of behavior to observe and which to ignore." ²⁹ The system proposed attempts to include the major teacher procedures and student activities in developing the four major skills of language: listening comprehension, speaking, reading, and writing. The implied model assumes that in language skill acquisition the student must proceed through the Stages of Recognition, Imitation, Repetition, Variation and Selection. (Recognition takes place to a great degree in the teacher presentation; Imitation, Repetition and Variation take place in drill work in the second language; and Selection takes place in student communication in the second language.) Lastly, the model assumes that teaching effectiveness is in part attributable to the teacher's choice of behaviors and their frequency of use.

Before arriving at the final form of the Procedure-Activity Observation System some experimentation was done with different dichotomies and different categories.

At first, the dichotomy Verbal-Interaction vs. Non-Interaction was used, but this made it necessary to classify Silent Reading and Writing in Non-Interaction. This seemed to be an unfavorable position for two very important activities in the program Parler et Lire.

Although the four language skills are usually listed as Listening, Speaking, Reading and Writing, it was decided, since an observer could not readily distinguish between student silent reading and student writing, that the dichotomy would be between Oral Reading

29. Jarvis, op. cit., p. 335.

vs. Silent Reading and Writing.

It was difficult to classify French phrases used by the teacher in an English context. At first they were scored in Category A-- Information Explanation, but, after much deliberation, it was decided to classify such behavior, since it does not include communication in French, in Category D--Modeling for Rote Response Reinforcement. This difficulty emphasized the need for the dichotomy Communication vs. Drill. In turn this dichotomy forced a decision on whether Category 3-- Combining is Communication or Drill. By definition, Category 3 includes only complete sentence answers which are not required in natural conversation. It is, therefore, Drill using Variation.

Some experimentation was done with two categories of teacher talk in English and two for student talk in English. However, to keep the number of categories limited and since the matrix could tell much about the kind of English being used, it was decided to have only one category each for teacher talk and student talk in English.

Lastly, some experimentation was done with having a category for Time for the students to think before answering a teacher's question, but in practice this was difficult to score, i.e., to distinguish between Time vs. Silence and Confusion. Moreover, in practice most teachers repeat their questions several times so that there are few occasions when this category would be used. Besides, cell 0-1 indicates silence followed by a student's answer in French. (Obviously, in this case, the student was thinking of his answer during the three seconds of silence.)

Thus, the major dichotomies of the system decided upon are

as follows: Procedure-Activity vs. Time-Out, Teacher Procedure vs. Student Activity, Procedure-Activity in French vs. Procedure-Activity in English, Oral French vs. Written French, Listening-Speaking in French vs. Oral Reading in French, and Communication in French vs. Drill in French.

There are six categories for scoring different teacher verbal procedures--five for procedures in French and one for procedures in English. The five categories for scoring teacher verbal procedures in French are: (A) Information Explanation, (B) Questions, (C) Class Management, (D) Modeling for Rote Response Reinforcement, (R) Oral Reading. The category for scoring teacher verbal procedures in English is (E) All Use of English.

There are eight categories for scoring student activities--seven for activities in French and one for activities in English. The seven categories for scoring student activities in French are: (1) Response Discussion, (2) Questions, (3) Combining, (4) Individual Rote Response, (5) Group Rote Response, (6) Oral Reading, and (7) Silent Reading and Writing. The category for scoring student activities in English is (8) All Use of English.

There is one category for scoring Time-Out. It is (0) Silence, Confusion, Change of Strategies.

The dichotomies and categories of the Procedure-Activity Observation System are outlined in Figure 3 and a detailed description of each category follows.

			Teacher	Student
French	Listening and Speaking	Communication	A. Information Explanation B. Questions C. Class Management	1. ResponseDiscussion 2. Questions
		Drill	D. Modeling for Rote Response Reinforcing	3. Combining 4. Individual Rote Response 5. Group Rote Response
	Oral Reading		R. Oral Reading	6. Oral Reading
	Silent Reading and Writing		-----	7. Silent Reading and Writing
English		Communication	E. All Use of English	8. All Use of English
Time-Out			0. Silence, Confusion, Change of Strategies	

FIGURE 3
SUMMARY OF THE PROCEDURE-ACTIVITY OBSERVATION SYSTEM

VI DEFINITION OF CATEGORIES

Categories for Teacher Verbal Procedures

Teacher Communication in French

Category A--Teacher use of French to explain and give information; including:

French used by the teacher to give information about the pictures and diagrams in the student textbook;

French used by the teacher to discuss ideas relating to cultural contrasts, history, literature, and geography (with the aid of display photos, film strips, maps, etc.);

French used by the teacher to explain problems of structure, of sound systems, of written systems, or other pertinent concepts;

French used by the teacher to talk about current news events, sports events, weather, etc.;

French used by the teacher to summarize a Conversation or a Scene or to give any pertinent information about them;

French used by the teacher to explain and give examples for new vocabulary items, e.g., in Le Petit Dictionnaire;

French used by the teacher to answer student questions.

Category B--Teacher use of French to ask a question with the intent that a student answer.

These questions may relate to materials under study or may be generalized or personalized questions to be answered by a student. They include the questions in Narration Orale, Substitution, and, when prepared orally, the questions in Narration Ecrite and Compte Rendu.

They also include the questions in the Livre du Maître under L'Aperçu, La Récapitulation, L'Atlas, Les Détails, L'Interprétation, Le Questionnaire, and any questions which the teacher makes up about the materials or about the student and his world. (This category does not include rhetorical questions which are scored in category A.)

Category C--Teacher use of French for class management. This category includes:

French used by the teacher to direct the mechanics of running a classroom, e.g., "Ouvrez vos livres à la page 41", "Anne, veux-tu lire la première phrase, s'il te plaît", "Conjuguez 'aller' au présent de l'indicatif";

French used by the teacher to indicate to the student whether his response has been successful, e.g., "Oui, mais il y a une meilleure réponse", "Oui, c'est ça! Très bien!". (Repeating the answer verbatim or giving the correct word, phrase or sentence is scored in category D which is described below.)

Teacher Drill in French

Category D--Teacher use of French to model for drill exercises and dictation, to reinforce information, explanations, questions, answers or oral reading, and to correct student errors in pronunciation or grammatical structure. This category includes:

French used by the teacher to provide a model for the mimicry--memorization of the items in Le Petit Dictionnaire, L'Exercice de Prononciation, Les Extensions Idiomatiques and Les Structures Grammaticales, and the Narration Orales in Livre d'Exercices;

French used by the teacher to provide a model for dictations.

(If the teacher reads the whole dictation through so the students may know the content of the whole passage, this first reading is scored in category R which is described below);

French used by the teacher to repeat a question verbatim when a student does not have a ready answer;

French used by the teacher to repeat a student response verbatim to provide reinforcement;

French used by the teacher to correct student mistakes in pronunciation in their speaking and oral reading in French;

French used by the teacher to correct student errors in grammatical structure when they are speaking French;

French used by the teacher to shape new response or to reshape unsuccessful responses. (This category does not include such comments as "Non, ce n'est pas juste", or "Tu as oublié le verbe." These expressions are scored in category C which is described above).

Thus, this category includes all forms of modeling for rote response and repeating for reinforcement and correction. It also includes French used by the teacher in an English context; such use of French does not constitute communication in French; e.g., "When you are speaking to a little boy you shouldn't say 'Vous avez raison' mais 'Tu as raison'." In a sentence such as this an E (which is described below) is scored for the first half and a D is scored for the second half of the sentence.

Teacher Oral Reading in French

Category R--Teacher use of French to read orally.

This category includes only teacher oral reading in French for the purpose of conveying the content of a printed passage; e.g., a Conversation, a Scene, a letter, a report, a dictation. (This category does not include teacher reading of definitions and examples in Le Petit Dictionnaire which is scored in category A since the purpose of the procedure is to give information and explanation. Nor does this category include teacher reading of student answers from the board when he is correcting them. The purpose in this case is to provide reinforcement and correction. Therefore, this procedure is scored in category D.)

Teacher Communication in English

Category E--Teacher use of English for clarification and communication; including:

English used by the teacher to assist students in understanding or using French;

English used by the teacher for class management, e.g., directions, praise, reprimands;

English used by the teacher to give explanations, ask questions or answer questions.

Categories for Student Activities

Student Communication in French

Category 1--Student use of French to respond to questions in French, and to discuss ideas or give opinions. This category includes:

French used by a student to answer the questions described in category B;

French used by a student to answer questions in French asked by other students;

French used by a student to react freely to pictorial or other situational presentation, e.g., French used by a student to describe what he sees in a picture or series of pictures, or to summarize a Conversation, a Scène or Scènes Séquences;

French used by a student to communicate spontaneously, e.g., to discuss a topic of common interest (but not rote recitation).

Category 2--Student use of French to ask a question.

These questions include those which the student has learned to ask for help or to report on difficulties, and questions which he himself originates.

Student Drill in French

Category 3--Student use of French to combine and arrange structures and information into complete sentences when complete sentences are not usually used in natural conversation. This category includes:

Complete-sentence answers to Narration Orale (and Narration Ecrite and Compte Rendu when practiced orally) given by a student after having given short answers. (If a student gives a complete-sentence answer the first time the question is asked during the class period and the conversation appears natural, this activity is scored in category 1);

All complete-sentence answers to the questions in the Substitution, since the student is not taking part in natural conversation but is role playing;

Only complete-sentence answers which are clearly foreign to natural conversation, i.e., where shorter or elliptical answers are required for the conversation to be natural.

Category 4--Individual use of French for rote response; including:

French used by one student in mimicry-memorization drill and pattern-practice, e.g., L'Exercice de Prononciation, Les Extensions Idiomatiques, Les Structures Grammaticales, and Narration Orale in Livre d'Exercices where the answers to the questions are provided;

French used by one student for rote recitation of a sentence, a conversation, a conjugation, etc.;

French used by one student to repeat a word, phrase or sentence (in speaking or reading) when corrected by the teacher;

Rote French used by one student to elicit rote response from another student or students in extended practices.

Category 5--Group use of French for rote response.

This category includes the same activities as category 4 except that they are performed by a group of students rather than by an individual student. The groups may take the form of the whole class, half the class, a row, or two or three students.

Student Oral Reading in French

Category 6--Student use of French to read orally.

This category includes all oral reading in French by the student, including reading of student written responses.

Student Silent Reading and Writing in French

Category 7--Time used by the students for silent reading and writing in French. This category includes:

Class time used by the students to study or to do silent reading and writing exercises, such as Narration Ecrite, Compte Rendu in the student's textbook, and Exercices Ecrits in Livre d'Exercices;

Pauses in verbal procedures or activities when the teacher is writing on the board (student silent reading);

Pauses during a dictation for students to write;

Time during which a student or students are writing their assignments on the board.

Student Communication in English

Category 8--Student use of English for classroom communication.

Category for Time-Out

Category 0--Silence, confusion, or change of strategies. This category includes:

Time during which the teacher is waiting for an answer from a student or students;

Time for the teacher or student to find their place in the textbook or materials with which they are working;

Periods of confusion during which the observer cannot distinguish

the procedures or activities;

Pauses in procedures and activities for the teacher and students to change strategies.

VII PROCEDURES FOR CATEGORIZING AND INTERPRETING DATA

The Score Sheet

After thoroughly understanding and memorizing the fifteen different categories, defined above and summarized in Figure 3, the observer will write down a letter or number every three seconds, deciding which of the categories best represents the events of that three-second period. He records these letters or numbers in sequence on the Score Sheet for the Procedure-Activity Observation System such as the one found in Appendix A. There are twenty cells to each line; therefore, each line represents one minute. The writer found it very beneficial to follow the second hand on his watch as he scored and record five scores every fifteen seconds.

The Procedure-Activity Observation System has been constructed to score all the major procedures and activities of a class using Parler et Lire. Thus, the whole class period can be scored. Whenever there is a change of strategies the observer indicates this by drawing a line after the last score of the strategy just completed. He writes in the name of the strategy above the first scores of each change of strategy.

Aids for Categorizing

1. Always begin and end each observation by recording a zero. When

scoring each strategy separately, each strategy must begin and end with a 0.

2. If a teacher calls on a pupil for a desired response, and if this action plus an ensuing silence constitute a three-second interval, this should be recorded as 0.

3. If there is more than one procedure or activity in a three-second interval, the dominant procedure or activity is scored.

The Matrix

The series of letters and numbers recorded on the score sheet are plotted on the 15 x 15 matrix devised for the Procedure-Activity Observation System. A copy of this matrix is found in Appendix B. By plotting the scores, recorded on the Score Sheet, in pairs the generalized sequence of teacher-pupil interaction can be readily examined.

The following example shows how an observer would classify what happens in the classroom and how the observations are recorded in the matrix.

The observer takes a score sheet; fills in the pertinent information at the top of the form. Having placed himself in a strategic place in the classroom where he can observe the procedures and activities of the teacher and his students and where he will distract the class as little as possible, or having turned on the tape recorder or audio-visual recorder, he begins to score. His first score is 0 since no procedures or activities have taken place yet. The teacher begins: "Bonjour, mes amis! Comment allez-vous?" (The observer writes a B

on his Score Sheet since this is predominantly a question by the teacher in French.)

Peter answers: "Je vais très bien, merci." (The observer records a 1.)

The teacher says: "Ah, très bien, j'en suis content."
(Observer records an A.)

The teacher continues: "Et toi, Marie, comment vas-tu?"
(Observer records a B.)

Marie answers: "Moi, je vais très bien." (Observer records a 1.)

Marie then asks: "Why do you say Comment allez-vous sometimes and Comment vas-tu at others?" (Observer writes down an 8 and a 4 since the student is communicating in English and using French examples.)

The teacher replies: "Comment vas-tu is the 'familiar' form which you use when you are speaking to a classmate, to a child or to a close relative or friend. Comment allez-vous is the 'formal' form which you use when you are speaking to an adult who is not a relative or very close friend of the family. Comment allez-vous is also the plural form which you always use when speaking to more than one person."
(The observer scores a D and two E's, followed by a D and two E's, followed by another D and another E.)

Then the teacher changes strategies: "Bien, ça suffit avec cela." (Observer draws a line after E and writes above the scores at the beginning of the class "S.C."--Spontaneous Conversation. He then begins scoring the second strategy by writing down a C after the line he has drawn.) Meanwhile the teacher has said "Ouvrez vos livres à la

page cinquante-cinq. Commençons la lecture de la conversation que nous avons étudiée hier." (The scorer writes down two C's) It takes the students about fifteen seconds to find the page. (The observer scores five 0's and writes Lecture above the first scores of this strategy.) The teacher then says: "Eh bien! Jean, tu prendras le rôle de Clément; Marie, prends le rôle de Gabrielle. Lisez, s'il vous plaît." (The observer records three C's.) Jean and Marie begin to read but the teacher does not make any corrections even though they make a few mistakes. (The observer records a long series of 6's as he follows the second hand of his watch to make an accurate count of the scores.) After the two students finish reading, the teacher explains where they made their mistakes and he does this in French. (The observer scores a series of A's.)

Thus, the observer has scored the following sequence of letters and numbers on a Score Sheet. (See Table I.)

Tabulations are then made in the matrix to represent pairs of numbers. The first pair is (0-B), the second pair is (B-1), etc. The particular cell, (see Table II) in which the tabulation of the pair of letters or numbers is made, is determined by using the first letter or number in the pair to indicate the row and the second in the pair for the column. Thus, (0-B) would be shown by a tally in the cell formed by row 0 and column B. The second pair (B-1) would be shown in the cell formed by row B and column 1, and so forth.

Each pair of scores overlaps with the previous pair, and each score, except the first and the last, is used twice. It is for this reason that a 0 is entered as the first score and the last score in the record. Zero was chosen because it is convenient to assume that

53.

PROCEDURE-ACTIVITY OBSERVATION SCORE SHEET

Teacher _____

Observer _____

Other Notes _____

[illegible]

Lecture

[illegible]

TABLE II

54.

PROCEDURE-ACTIVITY OBSERVATION MATRIX

Strategy: S.C.

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A		I														1
B						II										2
C																
D													III			3
R																
1	I													I		2
2																
3																
4				I												1
5																
6																
7																
E				II									II		I	5
8								I								1
0		I														1
Tot.	1	2		3		2			1				5	1	1	16
GC	TCF			TDF	TORF	SCF		SDF		GORF	SRWF	TTE	STE	TO		
	3			3		2		1				5	1	1		16
GC	TTF				TORF	STF				GORF	SRWF	TTE	STE	TO		
	6					3						5	1	1		16
SSF	SLF					STF				GORF	SRWF	TTE	STE	TO		
	6					3						5	1	1		16

T.V.P. = (S.L.F.+ T.T.F.) 11P.A.F. = (S.L.F.+S.T.F.+
S.O.R.F.+ S.R.W.F.) 9S.A. = (S.T.F.+S.O.R.F.+
S.R.W.F.+ S.T.E.) 4C.F. = (T.C.F.+S.C.F.) 5
D.F. = (T.D.F.+S.C.F.) 4T.O. = 1P.A.E. = (T.T.E.+S.T.E.) 6

each record begins and ends with time-out. This manner of scoring also permits the total of each column to equal the total of the corresponding row.

The tabulations in the matrix can be checked for accuracy by noting that there should be one less tally in the matrix than there are scores on the score sheet. In the example, there are seventeen scores on the score sheet and sixteen tallies in the matrix. (See Tables I and II.)

Ordinarily a separate matrix is used for each strategy. In a forty minute class period, for example, there may be five minutes of Spontaneous Conversation, followed by seven minutes of Aperçu, then ten minutes of Lecture, followed by eight minutes of Narration Orale, concluded by ten minutes during which the students write their answers to Narration Ecrite. Since the change of strategies are indicated on the score sheet the researcher can make five matrices. These matrices can be combined for class period totals.

When several class periods are scored, the matrices of the totals of each class can be combined to give overall totals.

The various matrices of each strategy can be combined to study the patterns of the different strategies, and to compare the patterns in the different strategies to the patterns found in the overall class time scored.

Use of the Matrix to Determine the Proportion of Time Spent in the Different Procedures, Activities and Strategies

After the observer tabulates a matrix, he then has the task of

developing a description of classroom behavior and interaction. He can begin by reporting the different procedures, activities and strategies in terms of the proportion of class time spent in the different categories, groups of categories or strategies.

The percentage of class time spent on the strategies can be calculated by dividing the total number of tallies reported in each strategy by the total number of tallies scored for the total class period or periods.

The percentage of class time spent in each of the procedures or activities described by each category can be calculated by dividing the total tallies in each category by the total of all the tallies.

The percentage of time spent on the groups of categories (e.g., teacher talk in French) can be calculated by adding the percentages for each of the categories in that group. For example, to find the percentage of class time spent in teacher talk in French the percentages for categories A,B,C, and D are added.

Legend for Reading the Procedure-Activity Observation Matrix

- G.C. - groups of categories
- T.C.F. - teacher communication in French
- T.D.F. - teacher drill (modeling and reinforcing) in French
- S.C.F. - student communication in French
- S.D.F. - student drill in French
- S.O.R.F. - student oral reading in French
- S.R.W.F. - student silent reading and writing in French
- T.T.E. - teacher talk in English

- S.T.E. - student talk in English
- T.O. - time-out
- T.T.F. - teacher talk in French
- S.T.F. - student talk in French
- S.S.F. - student skills in French
- S.L.F. - student listening to French
- T.V.P. - teacher verbal procedures
- S.A. - student activities
- P.A.F. - procedures and activities in French
- C.F. - communication in French
- D.F. - drill in French
- P.A.E. - procedures and activities in English

Use of the Matrix to Examine Build-Ups and Sequence of Procedures and Activities

The matrix provides the observer with a convenient device for analysis of the summarized teacher-pupil interaction data. By studying the matrix the observer is able to identify those cells and those areas of cells in which there is heavy build-ups of tallies or no tallies at all. A build-up of tallies in any cell or area of cells can be expressed in terms of the percentage of class time spent in those behaviors in its position of occurrence with reference to what preceded it and what followed it.

Thus, the matrix indicates the proportion and the sequence of classroom behavior according to the categories and groups of categories of the Procedure-Activity Observation System. One can determine the

proportion of time spent in each procedure, activity, and group of procedures and activities. One can examine the sequence of procedures and activities. One can also determine recurring patterns in the classroom, and whether these are due to the strategies used.

To aid in examining the sequence of procedures and activities an understanding of the different areas of the matrix may be of assistance.

Areas Within the Matrix

Table III outlines the area on the matrix which includes all teacher procedures which provide an opportunity for developing student listening comprehension in French. Area I includes all extended (more than three seconds) student listening to French. The large lined area shows all extended teacher communication in French. Cell D-D represents extended teacher drill (modeling and reinforcing) in French. Cell R-R includes all extended teacher oral reading in French.

Teacher talk in English used judiciously can assist student comprehension in French. Row E and column E includes all teacher talk in French. Cell E-E indicates extended teacher talk in French.

Table IV outlines the area on the matrix of student speaking in French. Area II includes student talk in French after teacher talk in French. Area III shows student talk in French followed by teacher talk in French. (Areas II and III are more or less the reverse of each other. This study was more concerned with the effects

Second

First

STUDENT SPEAKING IN FRENCH

First

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0
A															
B															
C								II							
D															
R															
1															
2															
3															
4															
5															
6															
7															
E															
8															
0															

of teacher procedures on student activities. Therefore, Area II was studied in more detail than Area III.) Area IV represents extended student talk in French. The smaller lined area shows extended student communication in French, and the larger lined area indicates extended student drill in French.

All student use of English is included in row 8 and column 8. Cell 8-8 represents extended student talk in English.

Table V outlines the area on the matrix of student oral reading in French. All extended student oral reading in French is included in cell 6-6.

Table VI outlines the area of student silent reading and writing in French. Cell 7-7 represents extended student silent reading and writing in French.

Column 0, outlined in Table VII, shows particularly the kind of teacher verbal procedures or student activities followed by time-out.

Table VIII shows the cell that are referred to as the "steady-state" cells. They lie along the diagonal of the matrix. Only when the behavior remains in a single category for more than three seconds will there be tallies in these cells. These cells are the only cells in the entire matrix that identify continuous behavior in a single category; all other cells are transitional cells representing movement from one category to another.

Second

[illegible]

STUDENT SILENT READING AND WRITING IN FRENCH

Second

[illegible]

Second

[illegible]

STEADY-STATE CELLS

Second

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0
A															
B															
C															
D															
R															
1															
2															
3															
4															
5															
6															
7															
E															
8															
0															

In conclusion, the Procedure-Activity Observation Matrix (See Table II p. 54 or Appendix B) gives the general aspects of the procedures and activities at the bottom of the page; the last row of the matrix shows the proportion of class time spent in developing student skills in French; the two rows above the last row gives the proportion of class time spent in various groups of categories; the row and the column marked "total" indicates the proportion of class time spent in each of the categories; and the matrix grid shows the sequence of the procedures and activities.

VIII METHOD OF INVESTIGATION

Having constructed the Procedure-Activity Observation System, it was then necessary to investigate whether this system could be used effectively to score the strategies, procedures and activities of different second language teachers and their classes using the program Le Français: Parler et Lire.

Grade ten classes were selected. It was decided to record these classes in the second half of the school year, so that all classes would have had an opportunity to become acquainted with the strategies, procedures, and activities of the second level of the program.

Four teachers volunteered to have their classes tape recorded after the Easter holidays. The classes of three of the teachers were recorded between the middle of April and the middle of May. The fourth teacher became ill and could not have her classes taped.

The writer then recorded five periods with one of his own grade ten classes, and received permission from one other teacher to record her classes. Since it was near the end of the school year, the best that could be done was to record three of his class periods with one class and two periods with another class.

Thus, the tape recordings used in this study include five consecutive class periods with one class for each of the teachers one, two, three and four, and three consecutive class periods with one class and two consecutive periods with another class for teacher five. Additional information about the teachers, their classes, and methods of scoring are found in Table IX.

All tapes were scored by the writer, using the Procedure-Activity Observation System.

All scores were plotted on the Procedure-Activity Observation Matrix. Total tallies for each strategy, procedure, activity and various combinations thereof were calculated.

To test whether an observer other than the writer can use the System to score behavior in a classroom using Parler et Lire, a second observer was trained and a coefficient of observer reliability was calculated from the scorings of the two observers of three taped classes picked at random from the tapes used in the study.

To test the consistency of the writer's scoring, two taped recordings from the study were picked at random and rescored after a two week interval. A coefficient of observer consistency was then calculated.

TABLE IX

SUMMARY OF SUBJECTS AND METHOD OF INVESTIGATION

Teacher	Teacher Description		Experience in Teaching French	Chapter in Student's Text	Class Time Recorded	Scored from Tapes	Scored Live
	French 1st Lang.	French 2nd Lang.					
#1	X		17 yrs.	4	5 class periods (200 min.)	X	
#2	X		5 yrs.	4	5 class periods (210 min.)	X	
#3		X	3 yrs.	7	5 class periods (180 min.)	X	
#4		X	6 yrs.	3	5 class periods (190 min.)	X	
#5		X	2 yrs.	6	5 class periods (215 min.)	X	X

To test whether the system could be used to score live classes as well as taped classes the writer visited the classroom of teacher five and made live scorings as well as tape recordings of his classes. Two weeks later the writer rescored the taped classes and a comparison was made of the scorings of the live classes and the scorings of those same classes from tape.

The formula throughout this study for estimating consistency and reliability was Scott's coefficient of reliability.

Scott calls his coefficient "pi" and it is determined by the two formulae below.

$$\pi = \frac{P_o - P_e}{1 - P_e}$$

P_o is the proportion of agreement, and P_e is the proportion of agreement expected by chance which is found by squaring the proportion of tallies in each category and summing these over all categories.

$$P_e = \sum_{i=1}^k P_i^2$$

In formula two there are k categories and P_i is the proportion of tallies falling into each category. π , in formula one, can be expressed in words as the amount that two observers exceeded chance agreement divided by the amount that perfect agreement exceeds chance

A Scott coefficient of 0.85 or higher is a reasonable level of performance. 30

30. Ned A. Flanders, "The Problems of Observer Training and Reliability," Interaction Analysis, Edmund Amidon and John Hough, editors (Reading, Addison-Wesley Publishing Company, 1967), pp. 161-166.

CHAPTER IV

RESULTS AND INTERPRETATION OF DATA

Chapter III discussed the background and the preparation of the Procedure-Activity Observation system. Chapter IV attempts to answer three main questions about this system. These questions are:

1. Was the Procedure-Activity Observation system adequate for scoring the different procedures, activities and strategies of the five teachers and their classes?
2. Could it quantify the proportion of class time spent by the different teachers and their classes in the different procedures, activities and strategies and combinations thereof so that comparisons could be made?
3. Did the system give pertinent information about the sequence of procedures and activities?

I RELIABILITY OF THE PROCEDURE-ACTIVITY OBSERVATION SYSTEM

The writer worked intensively for three weeks to score the recorded classes and plot the scores on the Procedure-Activity Observation Matrix. Totals were calculated for each teacher of each category, group of categories, and strategy. The matrices for each teacher were combined to give the over-all procedure and activity totals for the five consecutive classes of each teacher. All totals were converted to percentages to indicate the proportion of class time spent in each strategy, procedure, activity and group of procedures and activities.

Before examining the scoring data, the reliability and consistency of the observations were tested.

Inter-Scorer Reliability

First of all, to test whether a scorer other than the writer could use the System to score classes, another observer was trained and a test of inter-scorer reliability was made.

The second observer was a teacher of French in the Winnipeg School Division. Since he was well acquainted with the program Parler et Lire and its audio-lingual principles, the training period was short. It consisted of explaining to him the purpose of this study and giving him a copy of the definition of categories. He then randomly selected one of the tapes of the study and scored it. A Scott coefficient of reliability of .83 was obtained on the first attempt. (See Appendix G, Table XXI, p.154 .) The main difficulty was one of timing (i.e., scoring regularly at three-second intervals). After discussing the difficulties with the writer, the second observer then scored two more tapes, randomly selected. A coefficient of reliability of .90 and .94 were obtained. (See Appendix G, Tables XXII and XXIII, pp.155 and 156 .)

Observer Consistency in Scoring Taped Classes

To determine observer consistency in using the Procedure-Activity Observation System in scoring taped classes, two of the tape recordings from the study were picked at random and scored by the writer after an interval of more than two weeks. The coefficient of consistency was calculated to be .92 on the first rescored tape and .95 on the second. (See Appendix G, Tables XXIV and XXV, pp.157 and 158 .)

Observer Consistency in Scoring Live and Taped Classes

During the last weeks of the month of June the writer had the occasion to visit the classes of teacher five to score his classes live.

A little over two weeks later the writer scored the tape recordings of these classes. Thus, a check could be made on observer consistency in scoring live and taped classes.

Some problems were encountered in scoring the live classes which were due mainly to inexperience in using the System. This was the first time that the writer had had the occasion to score another class other than his own. As a result in scoring the first three classes the writer had difficulty with timing, i.e., with scoring one tally for every three seconds of time. It was during the third class that the writer discovered that he could score and watch the second hand of his watch at the same time. By using a watch to pace his scoring so that he scored five tallies for every fifteen seconds the writer found that his timing was much better.

Another difficulty was encountered in scoring the third and fourth classes. The teacher was explaining French grammar in English with examples in French. At the time, the writer scored the examples in French in category A--teacher explanation and information in French. In reconsidering this after the class, it became clear that this activity should have been classified in category D--teacher non-communicative use of French. Also during the explanation of French grammar in English, the students answered teacher questions in English with examples in French. The writer scored this behavior in Category 1--student response

and information in French. This behavior should have been scored in Category 4--student non-communicative use of French. Thus, the totals for four categories were very different in the scoring of the live class from the scoring of the tapes of classes three and four.

A coefficient of consistency was calculated for classes one, two, and five. The results of these calculations can be seen in Appendix G, Tables XXVI, XXVII and XXVIII, pp.159 ,160 and 161 .) The Scott coefficient of reliability for class one was .85; class two was .87; and class five was .854.

Thus, a satisfactory correlation was obtained for three of the classes. With more experience, the writer feels certain that higher coefficients of reliability can be obtained.

In conclusion, satisfactory coefficients were obtained for inter-scorer reliability, and for consistency in scoring both taped and live classes.

II GENERAL INTERPRETATION OF THE DATA

In the interpretation of the data, it must be kept in mind that only the individual teacher can make the final decision about what behavior is "good" or "bad", "desirable" or "undesirable". The Procedure-Activity Observation System is designed to indicate what does in fact happen in the classroom; not what should happen.

In the discussion which follows it may be helpful to keep in mind that one percent represents, on the average, approximately two minutes of class time.

The Procedure-Activity Observation Matrices containing the tallies obtained from scoring the five class groups are found in Appendix C, Tables I through V, pp.130 through 134. The Procedure-Activity Observation Matrices containing the proportion and sequence of procedures and activities in the five classes are found in Appendix E, Tables XI through XV, pp.142 through 146 .

General Aspects of Teacher Verbal Procedures, Student Activities and Time-Out

An overall view of what happened in the five classrooms reveals that twice as much class time was spent in teacher verbal procedures (61.3%) than in student activities (30.0%). (See Table X.)

TABLE X
PROPORTION OF CLASS TIME SPENT IN TEACHER
VERBAL PROCEDURES AND STUDENT ACTIVITIES

Behavior	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
T.V.P.	71.4	59.8	55.1	55.5	64.9	61.3
S.A.	20.8	24.1	39.1	36.7	29.3	30.0
T.O.	7.8	16.1	5.8	7.8	5.8	8.7

Teacher one spent more class time than any of the other teachers in procedures (71.4%), and his class spent the least amount of time in activities (20.8%).

Teachers three and four spent the least time in procedures (55.1% and 55.5% respectively), and their classes spent the most time in activities (39.1% and 36.7% respectively).

Classes three and five spent the least time in time-out (5.8% each).

Class two spent more than twice as much time than any of the other classes in time-out (16.1%).

General Aspects of Procedures and Activities in French and in English

Table XI indicates that the classes spent three times as much class time in procedures and activities in French (71.5%) than in procedures and activities in English (19.9%).

TABLE XI

PROPORTION OF CLASS TIME SPENT IN PROCEDURES
AND ACTIVITIES IN FRENCH AND IN ENGLISH

Behavior	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
P.A.F.	89.6	50.6	78.3	66.4	72.4	71.5
P.A.E.	2.6	33.2	15.9	25.8	21.9	19.9

Class one whose teacher was completely bilingual (See Table IX p. 65.) spent more class time than any of the other classes in procedures and activities in French (89.6%) and the lowest proportion of class time in procedures and activities in English (2.6%).

Class two, whose teacher also was perfectly bilingual in French and English, spent the least time of all the classes in procedures and activities in French (50.6%), and the most time in procedures and activities in English (33.2%).

The other three classes, whose teachers spoke French as a second language were close to the mean in procedures and activities in French and in procedures and activities in English. (See Table XI.)

Thus, it would seem that whether the teacher speaks French as his first language or second language did not account for the difference in the amount of class time spent in procedures and activities in French.

General Aspects of Communication and Drill in French

The five classes spent more time in communication in French (34.2%) than in drill in French (19.0%). (See Table XII.)

TABLE XII
PROPORTION OF CLASS TIME SPENT IN COMMUNICATION
AND DRILL IN FRENCH

Behavior	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
C.F.	50.5	18.6	41.9	28.3	31.6	34.2
D.F.	24.2	14.3	11.1	21.9	23.5	19.0

Class one spent the highest proportion of class time in both communication in French (50.5%) and in drill in French (24.2%).

Class two spent the least time of all the classes in communication in French (18.6%) and the second lowest proportion of class time in drill in French (14.3%).

Class three, which spent the second highest percentage of class time in procedures and activities in French, spent most of that time in communication in French (41.9%), which was second highest. Their drill and repetition in French was the lowest percentage (11.1%) of all the classes.

Classes four and five were near the mean in their proportion of class time spent in communication in French (28.3% and 31.6% respectively) and in drill in French (21.9% and 23.5% respectively).

General Aspects of the Four Skills of Language Learning

The four skills of language learning are listening comprehension, speaking, reading and writing. All procedures and activities in the second language classroom must be geared to developing these skills in the student.

Table XIII shows that on the average the five classes spent 71.5% of class time practicing the second language in order to develop the four skills. On the average the students spent 46.6% of class time in listening to the teacher speak or read French, 9.3% of class time in speaking French, 5.2% of class time in oral reading in French, and 10.4% of class time in silent reading and writing in French.

Class one spent more class time than any of the other classes in listening to French (69.1%), and the least amount of time in silent reading and writing in French (3.9%).

TABLE XIII
PROPORTION OF CLASS TIME SPENT IN DEVELOPING
THE FOUR SKILLS IN FRENCH

Skill	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
S.L.F.	69.1	33.6	43.9	38.4	48.1	46.6
S.T.F.	11.1	3.5	10.4	11.7	9.6	9.3
S.O.R.F.	5.6	5.6	4.4	4.0	6.3	5.2
S.R.W.F.	<u>3.9</u>	<u>8.0</u>	<u>19.7</u>	<u>12.2</u>	<u>8.4</u>	<u>10.4</u>
TOTAL	89.6	50.6	78.3	66.4	72.4	71.5

Class two spent less time than the other four classes in listening to French (33.6%) and in speaking French (3.5%).

Class three spent the most time in silent reading and writing in French (19.7%).

All of the other percentages are near the mean in their respective skills.

General Aspects of the Strategies

The percentages of class time spent by each of the classes in the different strategies as well as the mean number of strategies

used by each of the teachers per class period are summarized in Table XIV.

On the average the five teachers used 4.1 strategies per class period (which lasted 39.6 minutes on the average).

Teacher three changed strategies in a class period more than any of the other teachers. On the average he used 6.8 different strategies per class period. He also used more strategies (10) than any of the other teachers. (See Table XIV.)

Teacher two changed strategies the least. On the average he used 2.6 strategies per class period and a total of six strategies in the five class periods. However, a word of explanation must be said about his strategy Lecture in which he and his class spent 41.1% of their class time. During Lecture teacher two read and explained the reading with reference to the pictures. He also asked his students questions about the reading and pictures. Then the students read the passage. Thus, the strategy is Lecture since reading and reading comprehension are being developed. But, teacher two was also making use of the procedures and activities of the strategies Aperçu and Récapitulation in the strategy Lecture.

Teacher one, likewise, did not change strategies very often (3.2 strategies per class) and he used the least number of strategies (5) in the five class periods.

Teachers four and five were near the mean in their mean number of times that they changed strategies per class period (4.0% each).

The only strategies used by all five teachers were Petit

TABLE XIV
PROPORTION OF CLASS TIME SPENT BY THE FIVE CLASSES
IN THE DIFFERENT STRATEGIES

Strategy	Teacher #1	Teacher #2	Teacher #3	Teacher #4	Teacher #5	Mean
1. <u>P.D.</u>	12.4	9.4	6.7	2.8	5.3	7.3
2. <u>Aperçu</u>	25.2	-	14.7	36.0	-	15.2
3. <u>Lecture</u>	16.9	41.1	7.0	5.1	17.3	17.5
4. <u>Récapitu- lation</u>	19.0	-	13.0	-	6.2	7.6
5. <u>N.O.</u>	-	-	1.9	19.9	30.6	10.5
6. <u>N.E.-C.R.</u>	-	-	17.7	-	-	3.5
7. <u>Grammaire</u>	26.6	20.8	21.2	26.8	35.1	26.1
8. <u>Drill</u>	-	5.4	-	9.4	2.7	3.5
9. <u>S. Conver- sation</u>	-	-	9.3	-	-	1.9
10. <u>Tests</u>	-	16.7	7.9	-	2.8	5.5
11. <u>C.M.</u>	-	6.7	.8	-	-	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of Strategies in five class periods	5	6	10	6	7	7
Number of Strategies per class period	3.2	2.6	6.8	4.0	4.0	4.1

Dictionnaire, Lecture, and Grammaire.

On the average the five teachers spent more class time in Grammaire (26.1%) than in any of the other strategies.

Teacher three was the only teacher to spend class time in Narration Ecrite-Compte Rendu (17.7%) and in Spontaneous Conversation (9.3%).

Teacher two was the only teacher to spend much time in Class Management (6.7%).

Specific information about the percentage of class time spent in the different categories in the different strategies by each of the five classes is found in Appendix F, Tables XVI through XX, pp.148 through 152 . (The original tallies are found in Appendix D Tables VI through X, pp.136 through 140 .)

III SPECIFIC ASPECTS OF PROCEDURES, ACTIVITIES AND STRATEGIES IN DEVELOPING STUDENT LISTENING COMPREHENSION IN FRENCH

Proportion of Class Time

The development of listening comprehension of the second language in the student is dependent to a great degree on the verbal procedures of the teacher in French (i.e., teacher talk and oral reading in French) and teacher verbal procedures in English (i.e., teacher talk in English). Teacher talk and oral reading in French provide the student with the opportunity to hear French. Teacher talk in English can help to clarify meaning and form generalizations about the sound system and grammar system of the second language.

Table XV reveals that the five teachers spent much more class time in oral French (46.6%) than in oral English (14.7%). They spent more time in talk in French (43.9%) than in oral reading in French (2.7%). They also spent more time in communication in French (28.8%) than in drill in French (15.1%)

TABLE XV
PROPORTION OF CLASS TIME SPENT IN STUDENT
LISTENING TO FRENCH

Procedure	Teacher #1	Teacher #2	Teacher #3	Teacher #4	Teacher #5	Mean
T.C.F.	42.5	17.9	32.2	25.0	26.6	28.8
T.D.F.	21.1	11.6	10.4	13.5	18.9	15.1
T.T.F.	63.6	29.5	42.6	38.4	45.4	43.9
T.O.R.F.	5.6	4.1	1.2	.0	2.7	2.7
S.L.F.	69.1	33.6	43.9	38.4	48.1	46.6
T.T.E.	2.3	26.1	11.2	17.1	16.8	14.7

Teacher one gave his class more opportunity than any of the other teachers to listen to French (69.1% of class time). He spent very little time in talk in English (2.3%). He relied on repeating (T.D.F.--21.1%) to develop listening comprehension in French. It was

also observed that he tended to speak French slowly and emphatically.

Teacher two spent the least time in speaking and oral reading in French (33.6%). He used a great deal of talk in English (26.1%) to clarify meaning and communicate with the students. He actually spent more time than any of the other teachers in talk in English.

Teachers three and five each provided their class with a similar percentage of class time to listen to French (43.9% and 48.1% respectively). They were second highest in talk in French (42.6% and 45.4% respectively) and second lowest in talk in English (11.2% and 16.8% respectively). However, teacher three spent more time in communication in French (32.2%) than teacher five (26.6%), less time in drill and repetition in French (10.4%) than teacher five (18.9%) and less time in talk in English (11.2%) than teacher five (16.8%).

Teacher four was the only teacher who did not do any oral reading in French. His class was doing review work in preparation for final examinations. Because the final exam was half oral he spent a good portion of class time in talk in French (38.4% which was third among the five teachers). He was fourth in teacher communication in French (25.0%) and third in drill and repetition in French (13.5%). But, he was second highest in teacher talk in English (17.1% which was slightly higher than teacher five's 16.8%).

Teacher Communication in French. On the average the five teachers spent almost the same proportion of class time in giving information and explanation in French (9.8%), asking questions in French (9.1%), and in class management (10.0%). (See Table XVI.)

Teacher one spent nearly twice as much time in Category A-- Information and Explanation in French (17.8%) than any of the other teachers.

Teacher two asked his students very few questions in French (B--2.4%).

TABLE XVI
PROPORTION OF CLASS TIME SPENT IN TEACHER
COMMUNICATION IN FRENCH

Procedure	Teacher #1	Teacher #2	Teacher #3	Teacher #4	Teacher #5	Mean
A	17.8	7.8	9.3	8.5	5.6	9.8
B	14.6	2.4	11.8	7.1	9.7	9.1
C	10.2	7.7	11.2	9.5	11.3	10.0
T.C.F.	42.5	17.9	32.2	25.0	26.6	28.8

Sequence of Procedures and Activities

Extended Student Listening to French. The students in the five classes recorded in this study had the opportunity to listen to French for extended (more than three seconds) periods of time during more than a quarter of class time on the average (28.0%), nearly half of which was extended teacher communication in French (13.6%). There was 2.3% of class time spent in extended teacher modeling and reinforcing in

French and 2.1% of class time spent in extended teacher oral reading in French, and 25.3% of class time spent in extended teacher talk in French.

TABLE XVII
PROPORTION OF CLASS TIME SPENT IN EXTENDED
STUDENT LISTENING TO FRENCH

Area	Teacher #1	Teacher #2	Teacher #3	Teacher #4	Teacher #5	Mean
Extended TCF	24.0	7.6	14.7	10.1	11.8	13.6
Extended TDF	4.4	1.7	1.8	1.3	2.5	2.3
Extended TTF	44.1	13.3	23.6	18.0	27.7	25.3
Extended TORF	5.3	2.1	1.1		2.1	2.1
Extended SLF	49.8	16.7	24.8	18.0	30.6	28.0
Extended TTE	1.7	14.9	4.0	6.6	8.6	7.2

Teacher one was highest in extended teacher procedures in French in every area and lowest in extended teacher talk in English. (See Table XVII.)

Teacher two was lowest in extended teacher communication in French (7.6%), extended teacher talk in French (13.3%) and extended student listening to French (16.7%), and highest in extended teacher talk in English (14.9%).

Teacher four was near the mean in extended teacher communication

in French (10.1%). He was lowest in extended teacher drill in French (1.3%) and extended teacher oral reading in French. (He did no oral reading at all in French).

Teachers three and four were near the mean in all areas of extended teacher procedures in French. Teacher three spent 4.0% and teacher five spent 8.6% of class time in extended teacher talk in English.

Extended Teacher Talk in French. Similar trends are found when studying the "steady-state" cells of teacher talk in French. Teacher one is highest on almost all counts and teacher two is lowest or near lowest. (See Table XVIII.)

TABLE XVIII
PROPORTION OF CLASS TIME SPENT IN EXTENDED
TEACHER TALK IN FRENCH

Cell	Teacher #1	Teacher #2	Teacher #3	Teacher #4	Teacher #5	Mean
A-A	9.5	3.2	3.4	3.8	3.0	4.6
B-B	4.3	.2	1.7	.9	2.0	1.8
C-C	2.6	2.6	2.7	1.4	2.6	2.4
D-D	4.4	1.7	1.4	1.3	3.2	2.4

Most extended teacher talk in French was extended teacher information and Explanation in French (4.6%) and the lowest scores were in extended teacher questions in French (1.8%). Both teacher two (.2%) and teacher four (.9%) were much lower than any of the other teachers in extended questions in French. This means that they asked their classes shorter questions in French than did the other teachers. Teacher one asked more lengthy questions than any of the other teachers.

Teacher Procedures following Teacher Questions in French.

A cell by cell study of the matrix reveals some interesting facts about what teachers did after they asked their students a question in French and when they did not get an immediate answer. For example, Table XVI (p. 81) showed that teacher one spent 14.6% of class time asking students oral questions in French. Table XVIII (p. 83) showed that many of these questions took more than three seconds to ask (4.3% of class time was spent in extended teacher questions in French). Now, Table XIX shows that after asking a question he very often repeated it, (B-D--4.1%). Sometimes he waited in silence for an answer (B-O--1.2%) or he gave the student the information in French (B-A--1.2%) but he hardly ever gave information in English (B-E--.1%) after asking a question in French.

Teacher five spent 9.7% of class time in asking questions in French (see Table XVI, p. 81) most of which were short questions. (Table XVIII, p. 83 showed that he spent only 2.0% of class time in

extended questions.) Most often he repeated his questions (see Table XIX, B-D--4.3%) but he hardly ever waited in silence for an answer (B-O--.4%).

TABLE XIX

PROPORTION OF CLASS TIME SPENT IN TEACHER PROCEDURES
FOLLOWING TEACHER QUESTIONS IN FRENCH

Cell	Teacher # 1	Teacher # 2	Teacher # 3	Teacher # 4	Teacher # 5	Mean
B-A	1.2	.2	.9	.2	.5	.6
B-C	.7	.1	.6	.7	.3	.5
B-D	4.1	.4	2.1	.8	4.3	2.3
B-R		.1				
B-E	.1	.4	.4	.3	.2	.3
B-O	1.2	.2	.8	1.2	.4	.8

These few observations are only a few examples of information that can be gained from a cell by cell study of the matrix.

Extended Teacher Oral Reading in French. A comparison of the "steady-state" cell for teacher oral reading in French with the total for teacher oral reading in French reveals that most teachers read French for extended periods of class time. (See Table XX.)

Only teacher two used more than one percent of oral reading in French followed by other procedures. Table XX shows that he spent

4.1% of class time in oral reading in French but only 2.1% in extended oral reading in French. A study of Table XII in Appendix E, p.143 shows that he used a variety of different procedures after oral reading in French. He gave information in French (.3%), asked questions (.2%), reinforced or repeated his reading (.3%), and gave information or asked questions in English (.6%). His students asked questions in English during .6% of class time, and .3% of class time was spent in time-out following teacher oral reading in French.

TABLE XX
PROPORTION OF CLASS TIME SPENT IN EXTENDED
TEACHER ORAL READING IN FRENCH

Procedure	Teacher #1	Teacher #2	Teacher #3	Teacher #4	Teacher #5	Mean
R-R	5.3	2.1	1.1	.0	2.1	2.1
R Total	5.6	4.1	1.2	.0	2.7	2.7

Teacher five had a similar pattern of procedures but the percentages were much lower. (See Table XV, Appendix E, p.146 .)

Teachers one and three used extended teacher oral reading in French almost exclusively when they read in French. (See Table XX.)

Teacher four did not do oral reading in French at all.

Strategies

Table XXI shows that all five teachers talked more in English

TABLE XXI

PROPORTION OF CLASS TIME SPENT IN STUDENT LISTENING TO FRENCH IN THE DIFFERENT STRATEGIES

Strategy	Teacher #1			Teacher #2			Teacher #3			Teacher #4			Teacher #5			Mean		
	TTF	TORF	TTE	TTF	TORF	TTE	TTF	TORF	TTE	TTF	TORF	TTE	TTF	TORF	TTE	TTF	TORF	TTE
<u>P.D.</u>	8.7		.1	4.0		2.0	3.5		.8	1.6		.5	2.4		.4	4.0		.8
<u>Aperçu</u>	18.7		.1				9.1	.1	1.0	16.7		4.0				8.9		1.0
<u>Lecture</u>	5.0	5.6		15.6	3.3	6.6	2.0	1.2	.5	1.6		.5	6.2	2.7	1.2	6.1	2.6	1.8
<u>Récapitu- lation</u>	13.8		.1				8.0		.6				4.3		.5	5.2		.2
<u>N.O.</u>							1.2		.1	8.1		4.7	20.6		2.1	6.0		1.4
<u>NE-CR</u>							8.1		2.4							1.6		.5
<u>Grammaire</u>	17.4		2.1	4.2		12.5	4.3		5.6	6.9		5.0	9.9		10.8	8.5		7.2
<u>Drill</u>				2.5		.6				3.6		2.5	1.4			1.5		.6
<u>S. Conver- sation</u>							5.9		.1							1.2		
<u>Tests</u>				2.1	.9	3.5	.4		.1			.8			1.8	.7	.2	1.1
<u>C.M.</u>				1.2		1.0	.3		.2							.3		.2
<u>Total</u>	63.6	5.6	2.3	29.5	4.1	26.1	42.6	1.2	11.2	38.4		17.1	45.4	2.7	16.8	43.9	2.7	14.7

in Grammaire (7.2%) than in any of the other strategies. They talked in French a great deal in Aperçu (8.9%), Grammaire (8.5%), Lecture (6.1%), Narration Orale (6.0%), Récapitulation (5.2%), and Petit Dictionnaire (4.0%). Most teacher oral reading in French took place in Lecture (2.6%).

The difference in teacher procedures in Grammaire accounted for much of the difference between the five teachers in overall procedures. Teacher one used much more teacher talk in French (17.4%) than he used talk in English (2.1%). Teachers three, four and five kept a balance between teacher talk in French and in English (See Table XXI.) Teacher two spoke in English (12.5%) much more than he did in French (4.2%) in Grammaire.

On the average, teachers talked more in French than in English in all the strategies except in Tests. The highest score in teacher talk in French by any one teacher in one strategy was teacher five in Narration Orale (20.6%). Other high scores in teacher talk in French was teacher one in Aperçu (18.7%), Grammaire (17.4%) and Récapitulation (13.8%); teacher two in Lecture (15.6%) and teacher four in Aperçu (16.7%). Teacher three used considerable teacher talk in French in all ten strategies he used. The highest scores in teacher talk in English were teacher two and five in Grammaire (12.5% and 10.8% respectively).

IV SPECIFIC ASPECTS OF PROCEDURES, ACTIVITIES AND STRATEGIES IN DEVELOPING STUDENT SPEAKING IN FRENCH

One of the main objectives of the course Parler et Lire is to develop, in the student, skills in speaking French. Table XIII (p. 75) showed that classes, on the average, spent less than ten per cent of class time in student talk in French (9.3%). It must be remembered that student listening to French (46.6% of class time, on the average) provides the example for student talk in French. However, teachers should keep in mind that one of the main objectives of the program Ecouter et Parler is to produce active speakers of French and not just passive listeners. .

Proportion of Class Time

A study of Table XXII reveals that students, on the average, spoke nearly twice as much French (9.3%) as they did English (5.2%).

More than half of student talk in French consisted of student communication in French (5.3%) most of which was student response and information in French (5.1%). In none of the classes did the students ask many questions in French (.2% mean).

Most student drill in French (3.9%) consisted of individual student rote response in French (2.5%). Only class four and five used student combining in French (3.0% and 1.1% respectively).

Class four spoke in French (11.7%) more than any of the other classes. However, most of it was student drill in French (8.4%).

Class one was second highest in their use of spoken French

TABLE XXII
PROPORTION OF CLASS TIME SPENT IN STUDENT
SPEAKING IN FRENCH

Activity	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
1	7.8	.6	9.3	3.0	5.0	5.1
2	.2	.1	.3	.4	.0	.2
S.C.F.	8.0	.7	9.6	3.3	5.0	5.3
3	.0	.0	.0	3.0	1.1	.8
4	3.0	1.4	.5	4.2	3.3	2.5
5	.1	1.3	.3	1.2	.2	.6
S.D.F.	3.1	2.8	.8	8.4	4.6	3.9
S.T.F.	11.1	3.5	10.4	11.7	9.6	9.3
S.T.E.	.3	7.1	4.6	8.7	5.1	5.2

(11.1% most of which was student communication in French (8.0%).

Class three was the highest in student communication in French (9.6%).

Class five was the second lowest in student talk in French (9.6%), with a balance between communication (5.0%) and drill (4.6%).

Class two spoke very little French (3.5%) and when they did it was mainly rote response (2.8%).

Class two and four spent the most time in student talk in English (7.1% and 8.7% respectively). Class one, following the example of their teacher, hardly spoke any English at all (.3%).

Sequence of Procedures and Activities

Extended Student Talk in French. Students did not talk very much in French for extended (more than three second) periods of time (1.2%), and they communicated in French for extended periods of time even less (.5%). (See Table XXIII.)

Class four spent more class time than any of the others in extended student talk in French (1.8%), but most of it was extended student drill in French (1.6%).

Class three spent the most time of all five classes in extended student communication in French (1.2%).

Class two spent the least amount of class time in extended student talk in French (.3%) and the most amount of time in extended student talk in English (1.2%).

Student Talk in French following Teacher Procedures. Table XXII

TABLE XXIII
PROPORTION OF CLASS TIME SPENT IN EXTENDED
STUDENT TALK IN FRENCH

Area or Cell	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
1-1	.4		1.1	.2	.5	.4
2-2			.1			
Extended SCF	.5		1.2	.2	.5	.5
3-3				.5	.4	.2
4-4	.6	.1	.1	.7	.5	.4
5-5		.2		.1	.1	.1
Extended SDF	.6	.3	.1	1.6	.9	.7
Extended STF	1.0	.3	1.2	1.8	1.5	1.2
Extended STE		1.2	.2	.7	.2	.5

(p. 90) showed that students talked in French 9.3% of class time.

Table XXIII (p. 92) showed that a small percentage of student talk in French was extended student talk in French (1.2% of class time).

Table XXIV now shows that most student talk in French occurred after teacher procedures (7.6%) and mainly after teacher talk in French (7.2%).

There was no student talk in French after teacher oral reading in French and hardly any after teacher talk in English

TABLE XXIV

PROPORTION OF CLASS TIME SPENT IN STUDENT TALK
IN FRENCH FOLLOWING TEACHER PROCEDURES

Area	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
A-STF	.2		.4	.3	.2	.2
B-STF	3.0	.3	4.5	1.0	.7	1.9
C-STF	1.6	.6	1.0	1.9	1.9	1.4
D-STF	4.5	2.2	2.2	5.2	4.0	3.6
R-STF						
E-STF		.1	.3	.9	.9	.4
Total	9.3	3.2	8.4	9.3	7.7	7.6

Teacher information and explanation in French also resulted in very little student talk in French (.2%).

Teacher modeling and reinforcing produced more student talk

in French (3.6%) than any of the other procedures.

Class three responded directly to teacher questions in French (4.5%) more than any of the other classes.

Class four talked in French after teacher modeling and reinforcing (5.2%) more than any of the other classes.

Student Communication in French following Teacher Procedures.

Table XXV shows that students communicated in French after teacher procedures 4.3% of class time, most of which took place after teacher talk in French (4.2%). (Student questions in French are not included in Table XXV because they were practically nonexistent.)

TABLE XXV

PROPORTION OF CLASS TIME SPENT IN STUDENT COMMUNICATION
IN FRENCH FOLLOWING TEACHER PROCEDURES

Cell	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
A-1	.2		.3	.1	.1	.1
B-1	2.9	.2	4.3	.6	.5	1.7
C-1	1.1		.9	.4	1.1	.7
D-1	2.5	.3	1.8	1.0	2.5	1.6
R-1						
E-1			.2	.3	.1	.1
Total	6.7	.5	7.5	2.4	4.3	4.3

Class three spent the most time in communication after teacher procedures (7.5%), and the students answered teacher questions in French (4.3%) during more class time than any of the other classes.

Strategies

On the average most student talk in French took place in Aperçu (2.1%). (See Table XXVI.) Other strategies with more than one percent, on the average, of student talk in French were Narration Orale (1.7%), Grammaire (1.7%) and Récapitulation (1.4%). Most student talk in English occurred in Grammaire (1.4%).

The students in class one spoke most of their French in Aperçu (3.9%), Récapitulation (2.7%), Grammaire (2.5%) and Lecture (1.7%).

The students in class two spoke very little French, but most of what French they did speak was spoken in Lecture (1.2%) and Drill (1.2%).

The students of class three spoke most of their French in Récapitulation (3.1%), Aperçu (2.9%), and Spontaneous Conversation (2.4%).

Students in class four spoke most of their French in Aperçu (3.6%), Narration Orale (3.5%), Grammaire (2.3%), Drill (1.4%), and Lecture (1.0%).

The students with teacher five spoke most of their French in Narration Orale (4.8%), Grammaire (2.6%), Récapitulation (1.0%), and Drill (1.0%).

Thus, it would seem that Aperçu, Lecture, Récapitulation,

TABLE XXVI
PROPORTION OF CLASS TIME SPENT IN STUDENT TALK IN
FRENCH IN THE DIFFERENT STRATEGIES

Strategy	Class #1		Class #2		Class #3		Class #4		Class #5		Mean	
	STF	STE	STF	STE	STF	STE	STF	STE	STF	STE	STF	STE
<u>P.D.</u>	.3	.1	.1	.6	.3	.6	.1	.4		.4	.2	.4
<u>Aperçu</u>	3.9	.1			2.9	.5	3.6	2.9			2.1	.7
<u>Lecture</u>	1.7		1.2	3.5	.4	.1	1.0	.2	.3	.8	.9	.9
<u>Récapitulation</u>	2.7				3.1	.4			1.0	.3	1.4	.1
<u>N.O.</u>					.3	.1	3.5	1.6	4.8	1.3	1.7	.6
<u>NE-CR</u>					.6	.9					.1	.2
<u>Grammaire</u>	2.5	.1	.5	.6	.4	1.9	2.3	2.3	2.6	2.3	1.7	1.4
<u>Drill</u>			1.2	.2			1.4	1.3	1.0		.7	.3
<u>S. Conversation</u>					2.4	.2					.5	
<u>Tests</u>				.9						.1	.2	
<u>C.Management</u>			.4	1.3							.1	.3
<u>Total</u>	11.1	.3	3.5	7.1	10.4	4.6	11.7	8.7	9.6	5.1	9.3	5.2

Narration Orale, Grammaire, Drill and Spontaneous Conversation are good strategies for developing student talk in French.

Class one hardly spoke in English at all (.3%). Classes three, four and five spoke most of their English in Grammaire (1.9%, 2.3% and 2.3% respectively). Class two spoke a considerable amount of English in Lecture (3.5%) and Class Management (1.3%).

V SPECIFIC ASPECTS OF PROCEDURES, ACTIVITIES AND STRATEGIES IN DEVELOPING STUDENT ORAL READING IN FRENCH

Oral reading is a combination of learning to recognize and to produce the phonetic sounds of a language from the graphic symbols used to represent those sounds.

This study gives the proportion of class time spent in oral reading. However, the time spent by the students in listening (especially listening to teacher oral reading) and speaking in French does much to develop student oral reading skills in their second language.

Proportion of Class Time

Table XXVII reveals that students in the five classes read French orally for 5.2% of class time on the average, and all of the classes were close to the mean (between 4.0% in class four and 6.3% in class five).

Sequence of Procedures and Activities

Table XXVIII (p. 99) indicates that most student oral reading in French was extended oral reading (3.2% on the average). The students of

classes two and five read French orally for extended periods of time (4.4% and 4.9% respectively) more than the other classes.

TABLE XXVII
PROPORTION OF CLASS TIME SPENT IN STUDENT
ORAL READING IN FRENCH

Activity	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
S.O.R.F.	5.6	5.6	4.4	4.0	6.3	5.2

Teachers one and four tended to correct or reinforce student oral reading in French immediately (cell 6-D--2.2% and 1.9% respectively). The other three teachers allowed their students to read without interruption (cell 6-D--.7%, .6%, and .6% respectively in classes two, three and five); they corrected student mistakes after the reading of the passage was completed.

Strategies

Most student oral reading in French took place in Lecture (3.7%). (See Table XXIX, p. 100.)

Class two was the only class which did all its oral reading in French in Lecture. For that reason it had the least percentage of tallies in cell C-6--teacher directions in French before student oral reading in French (.3%). (See Table XXVIII.) All of the other four classes had one percent or slightly more behavior in this

TABLE XXVIII

PROPORTION OF CLASS TIME SPENT IN PROCEDURES AND ACTIVITIES
PRECEDING AND FOLLOWING STUDENT ORAL READING IN FRENCH

Cell	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
A-6	.1	.1				
B-6	.1		.1	.1		.1
C-6	1.0	.3	1.1	1.1	1.1	.9
D-6	.3	.1	.1	.4	.2	.2
4-6	1.1	.3		.9		.5
6-6	2.7	4.4	2.6	1.2	4.9	3.2
E-6		.1	.2	.1	.1	.1
0-6	.3	.3	.1	.2	.1	.2
Total	5.6	5.6	4.4	4.0	6.3	5.2
6-B	.1			.2	.1	.1
6-C	.5	.1	.9	.4	.5	.5
6-D	2.2	.7	.6	1.9	.6	1.2
6-6	2.7	4.4	2.6	1.2	4.9	3.2
6-E		.1	.2	.2	.1	.1
6-0	.1	.3	.1	.1	.2	.2
Total	5.6	5.6	4.4	4.0	6.3	5.2

cell because a goodly portion of student oral reading in French took place in Grammaire and/or N.E.-C.R. (Compare Tables XXVIII, and XXIX.) In both of these strategies there was student oral reading of their written answers in French. The written answers were short; thus reducing the amount of continuous student oral reading in French.

TABLE XXIX

PROPORTION OF CLASS TIME SPENT IN STUDENT ORAL READING
IN FRENCH IN THE DIFFERENT STRATEGIES

Strategy	Class #1 S.O.R.F.	Class #2 S.O.R.F.	Class #3 S.O.R.F.	Class #4 S.O.R.F.	Class #5 S.O.R.F.	Mean S.O.R.F.
<u>P.D.</u>					.1	
<u>Lecture</u>	4.1	5.6	2.3	1.7	4.7	3.7
<u>NE-CR</u>			1.7			.3
<u>Grammaire</u>	1.4		.3	2.3	1.4	1.1
<u>Drill</u>					.1	
Total	5.6	5.6	4.4	4.0	6.3	5.2

Thus, the five classes did not vary much in the proportion of class time spent in oral reading in French, but they varied greatly in their extended oral reading in French. This was due mainly to a different use of strategies and a difference of methodology on the part of the teacher as to how and when student oral reading mistakes should be corrected.

It may be concluded that to increase prolonged student oral reading in French, the strategy Lecture should be used for student oral reading and the teacher should correct student oral reading errors after the whole passage has been read by the students.

VI SPECIFIC ASPECTS OF PROCEDURES, ACTIVITIES AND STRATEGIES IN DEVELOPING STUDENT SILENT READING AND WRITING IN FRENCH

For observation purposes (especially of taped classes) it is too difficult to distinguish between time during which the students are doing silent reading and time when they are writing. Most often in a Parler et Lire class students are doing both silent reading and writing in French rather than silent reading in French separately from writing in French. Therefore, in this study they were considered as one student activity.

In scoring the classes it was noted by the writer that all homework assignments were silent reading and writing assignments. The Procedure-Activity Observation System only scores classroom procedures and activities. Therefore, in the following discussion, it must be kept in mind that only classroom silent reading and writing in French by the students is being considered.

Proportion of Class Time

Table XXX reveals that students, on the average, spent 10.4% of total class time in silent reading and writing in French.

Class three spent much more time in silent reading and writing

in French (19.7%) than any of the other classes. This is the same class which spent 9.6% of class time in student communication in French (See Table XXII, p. 90 .) Thus, teacher three seemed to be challenging his class to use the language on their own.

TABLE XXX
PROPORTION OF CLASS TIME SPENT IN STUDENT SILENT
READING AND WRITING IN FRENCH

Activity	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
S.R.W.F.	3.9	8.0	19.7	12.2	8.4	10.4

Class one spent most of its time in oral activities, and the students only spent 3.9% of class time in silent reading and writing in French.

Sequence of Procedures and Activities

There was no student silent reading and writing in French (Category 7) after student talk in French (Categories 1, 2, 3, 4, and 5) or teacher oral reading in French (Category R).

Table XXXI indicates that most student silent reading and writing in French occurred as an extended activity (in the 7-7 cell). All classes had build-ups of tallies in the 7-7 cell (8.4%, on the average). Everyone also had some tallies in the A-7 cell (student silent reading and writing in French after teacher information in French).

TABLE XXXI
 PROPORTION OF CLASS TIME SPENT IN PROCEDURES AND ACTIVITIES
 PRECEDING STUDENT SILENT READING AND WRITING IN FRENCH

Cell	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
A-7	2.0	.9	.5	1.4	.2	1.0
B-7		.1		.1		
C-7	.3	.1	.4	.2		.2
D-7	.4	.6	.6	.3	.2	.4
6-7				.1		
7-7	1.2	5.6	17.5	9.7	7.8	8.4
E-7		.6	.4	.2	.2	.3
8-7			.1	.1		
0-7			.2	.1		.1
Total	3.9	8.0	19.7	12.2	8.4	10.4

Class three spent the most time in extended student silent reading and writing in French (17.5%).

Class one spent more time in silent reading and writing in French after teacher information and explanation (2.0%) than they did in extended silent reading and writing (1.2%).

Strategies

In examining student silent reading and writing in the different strategies, it becomes evident that by definition and in practice there can be no student silent reading and writing in French in Récapitulation, Narration Orale, Drill (oral drill), Spontaneous Conversation, and Class Management.

Grammaire was the only strategy in which all classes did some silent reading and writing in French, and, on the average, it was in Grammaire where most of the build-ups of tallies in student silent reading and writing in French occurred (4.6%). (See Table XXXII.) Classes three, four and five spent more time in silent reading and writing in French in Grammaire than in any of the other strategies (7.9%, 6.3% and 6.4% respectively).

Four out of the five classes did silent reading and writing in French in Petit Dictionnaire. Classes two and three did a considerable amount of silent reading and writing in Tests (5.5% and 6.9% respectively). Class three was the only class that did any Narration Ecrite-Compte Rendu (3.3%) which is strictly a silent reading and writing exercise in French.

Class four spent the second highest percent age of class time on silent reading and writing in French (12.2%) but nearly half of that time was used to take notes in Aperçu (6.0%). The students were having so much difficulty in learning to answer even simple questions about the pictures, that teacher four resorted to writing notes on the board about the pictures so the students would have the added assistance of seeing in writing what was being said.

TABLE XXXII

PROPORTION OF CLASS TIME SPENT IN STUDENT SILENT READING AND WRITING IN FRENCH IN THE DIFFERENT STRATEGIES

Strategy	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
<u>P.D.</u>	2.5	1.0	1.2		1.7	1.3
<u>Aperçu</u>	.1		.4	6.0		1.3
<u>Lecture</u>		.3			.3	.1
<u>NE + CR</u>			3.3			.7
<u>Grammaire</u>	1.4	1.2	7.9	6.3	6.4	4.6
Tests		5.5	6.9			2.5
Total	3.9	8.0	19.7	12.2	8.4	10.4

Class one spent so much of its time on developing listening, speaking and oral reading skills that there was scarcely any time spent on silent reading and writing in any of the strategies, except Petit Dictionnaire (2.5%) and Grammaire (1.4%).

VII SPECIFIC ASPECTS OF TIME-OUT

Proportion and Sequence of Procedures, Activities and Time-Out

Table XXXIII shows that classes, on the average, spent 8.7% of class time in time-out. Most time-out occurred as extended time-out (3.0%) or after teacher procedures, especially class management in French (1.3%), reinforcing in French (1.3%), talk in English (1.1%) and questions in French (.8%). There was very little time-out after student activities.

All of the classes had some time-out after Category C--teacher directions in French and in cell 0-0 extended time-out. This indicates time-out for change of strategies.

Class two spent more than twice as much class time in time-out (16.1%) than any of the other classes, and it had more than four times as much extended time-out (8.1%). Besides extended time-out there were build-ups of tallies in class two after teacher talk in English (2.6%), teacher class management in French (1.9%) and teacher reinforcement in French (1.1%).

As has been mentioned above, teacher one and four, after asking a question in French, waited in silence for an answer from a student (cell B-C--1.2% each). Teachers one and five also waited in silence after reinforcing information, questions or directions in French (2.8% and 1.4%). Class four and five spent 1.2% and 1.0% respectively of class time in time-out after teacher talk in English.

Time-Out in the Different Strategies

There was some time-out in every strategy, but, on the average,

TABLE XXXIII

PROPORTION OF CLASS TIME SPENT IN PROCEDURES
AND ACTIVITIES PRECEDING TIME-OUT

	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
A-0	.4	.6	.4	.3	.1	.4
B-0	1.2	.2	.8	1.2	.4	.8
C-0	1.1	1.9	1.0	1.5	.8	1.3
D-0	2.8	1.1	.6	.7	1.4	1.3
R-0		.3	.1		.1	.1
1-0	.1		.5	.1	.1	.2
2-0	.1					
3-0				.3		.1
4-0	.1	.1			.2	.1
5-0		.1				
6-0	.1	.3	.1	.1	.2	.2
7-0	.1		.1	.2	.1	.1
E-0	.1	2.6	.6	1.2	1.0	1.1
8-0		.9	.1	.3		.3
0-0	1.9	8.1	1.6	1.7	1.5	3.0
T.O.	7.8	16.1	5.8	7.8	5.8	8.7

most time-out took place in Grammaire (1.6%), Lecture (1.5%) and Aperçu (1.2%). (See Table XXXIV.)

Most of class one's time-out occurred in Aperçu (2.4%), Récapitulation (2.3%), and Grammaire (1.8%).

Class two had heavy build-ups of tallies in every strategy used. (See Table XXXIV.)

Class three spent less than one per cent of class time in time-out in each and every strategy he used.

Class four had most of its time-out in Aperçu (3.0%), Narration Orale (2.1%) and Grammaire (1.8%).

Class five had more than one per cent of class time spent in time-out in Narration Orale (1.8%), Grammaire (1.9%) and Lecture (1.1%).

TABLE XXXIV
 PROPORTION OF CLASS TIME SPENT IN TIME-OUT
 IN THE DIFFERENT STRATEGIES

Strategy	Class #1	Class #2	Class #3	Class #4	Class #5	Mean
<u>P.D.</u>	.8	1.7	.4	.2	.2	.7
<u>Aperçu</u>	2.4		.6	3.0		1.2
<u>Lecture</u>	.6	5.0	.5	.2	1.1	1.5
<u>Récapitulation</u>	2.3		.9		.4	.7
<u>N.O.</u>			.1	2.1	1.8	.8
<u>NE-CR</u>			.7			.1
<u>Grammaire</u>	1.8	1.8	.9	1.8	1.9	1.6
Drill		.9		.6	.2	.3
S. Conversation			.7			.1
Tests		3.9	.6		.2	.9
C.M.		2.8	.3			.6
Total	7.8	16.1	5.8	7.8	5.8	8.7

CHAPTER V

SUMMARY OF PROCEDURES, CONCLUSIONS AND IMPLICATIONS

I SUMMARY OF PROCEDURES

By studying the direct observation systems and methods of research of Flanders, Nearhoof, and Jarvis; by reviewing the materials of the program Le Français: Parler et Lire and its audio-lingual principles; by teaching and observing others teaching this program the writer constructed the Procedure-Activity Observation System.

The next step was to validate this system. With this objective in mind, tape recordings of five classes were made for each of five teachers teaching French as a second language in the senior high school at the grade ten level using the program Le Français: Parler et Lire.

These tape recordings were scored with the Procedure-Activity Observation System and the scores were plotted on the Procedure-Activity Observation Matrix.

Observer reliability and consistency were tested using Scott's coefficient of reliability.

Since each tally represents approximately a three-second interval of time, the total tallies in each category and group of categories, each cell and group of cells, and each strategy were calculated as a percentage of overall class time for each class group in order to have a common denominator for quantitative comparisons.

The procedures, activities and strategies used by the five

different class groups were studied and compared by means of these percentages.

Three basic questions were asked about the Procedure-Activity Observation System:

1. Can it be used to score procedures and activities relevant to second language skill acquisition in entire second language class periods?
2. Can the scores obtained by the system be expressed in terms that lend to analysis and comparisons?
3. Can the system give pertinent information about the sequence of procedures and activities?

II SUMMARY OF CONCLUSIONS AND OBSERVATIONS

Because the sample of this study was so small most of the conclusions are tentative, pending further study and research. However, the following conclusions can be enumerated about the Procedure-Activity Observation System.

1. The Procedure-Activity Observation System proved adequate although time consuming, in scoring the procedures, activities and strategies of twenty-five complete class periods of grade ten classes using the program Le Français: Parler et Lire. Only observers trained in the teaching methodology of this program were used.
2. The Procedure-Activity Observation System quantified the proportion of class time spent in the different procedures, activities and strategies so that quantitative descriptions and comparisons of

different teachers and their classes could be made.

3. The Procedure-Activity Observation Matrix can give an indication of the effect of the different procedures and strategies on the activities of the students. The matrix indicates what student activities happen after, and perhaps as a result of, the different procedures of the teacher and the different strategies of the program.

Besides these three fundamental conclusions about the Procedure Activity Observation System, various general conclusions and observations were noted concerning the five class groups observed.

1. On the average teachers used twice as much class time in verbal procedures (61.3%) than students used in activities (30.0%). (The remaining 8.7% was taken up in time-out.)
2. Although the classes varied considerably in the proportion of class time spent in the different procedures, activities and strategies, all classes spent more time in using and manipulating the second language, French, than they used their native language, English. The mean for the five classes was 71.5% of class time spent in procedures and activities in French and 19.9% in English.
3. They spent more time in communication (34.2%) than in drill (19.0%) in French.
4. Whether French was the first or second language of the teacher did not seem to have any bearing on the proportion of class time spent in French. Teacher one was a native-speaker and his class spent nearly ninety percent (89.6%) of class time in French. On the other hand teacher two, who was also a native speaker, had his class functioning

in the second language during half the class time (50.6%). Teachers three, four and five, who were non-native speakers, had their classes functioning in French between these two extremes.

5. The mean class time spent in developing each language skill in French in the five classes was 46.6% for student listening comprehension, 9.3% for student speaking, 5.2% for student oral reading, and 10.4% for student silent reading and writing.

6. The teachers differed greatly in the use of variety in their class. Only one teacher (teacher three) used almost all the strategies (10 out of 11) and he changed strategies frequently during a class period (6.8 strategies per class period). Only one teacher (the same teacher three) made use of the tape recordings for the program. In contrast teacher one used five different strategies during the five class periods, and teacher two used 2.6 strategies, on the average, per class period.

7. Repeating and doing drill exercises served to increase the proportion of class time spent in the second language. For example, class one spent the highest proportion of class time in procedures and activities in French because the teacher, who was a native-speaker, but who spoke French slowly, constantly reinforced (i.e. repeated) what he was saying and what his students were saying (21.1%). For another example, the students of class four spent a great deal of time in student talk in French (11.7%) because they spent more time in drill activities and strategies (9.4%) than any of the other classes.

8. All five teachers seemed to believe that, at the stage that their students were in second language learning, it was more important

for their students to understand the grammar (26.9%) of the language and to use the language through listening (46.6%), communicating (5.3%), oral reading (5.2%) and silent reading and writing (10.4%) than to do drill work (3.9%) especially group rote drill (3.1%).

Various specific conclusions about the five class groups were found concerning the development of the four language skills--listening comprehension, speaking, oral reading, and silent reading and writing in French.

1. Listening Comprehension:

The students in all five classes had the occasion to develop listening skills in French during a higher percentage of class time than any of the other three skills (46.6%). Teachers varied greatly in the proportion of class time spent in teacher talk in English (from 2.3% to 26.1% of class time).

The highest proportion of class time spent in extended activities occurred in extended teacher talk and oral reading in French (28.0%, on the average).

Lecture was one of the best strategies for developing student listening skills in French because it is the main strategy where both teacher talk in French and teacher oral reading in French are used. Petit Dictionnaire, Aperçu, Récapitulation, Narration Orale and Spontaneous Conversation were also excellent strategies for developing listening comprehension. For four out of the five teachers, Grammaire was not used for developing listening skills in French through listening to French. This was the strategy of highest scores in teacher talk in

English and student silent reading and writing in French.

2. Speaking:

Students did not speak French (9.2%) nearly as much as they listened to it. (Three to six time as much class time was spent in student listening to French than in student speaking French.) Only one class spent a relatively high proportion of class time in communication in French (9.6% compared to the mean of 5.3%) perhaps because of the use of variety and because of the choice of strategies which are conducive to communication in French, e.g., Aperçu, Récapitulation, and Spontaneous Conversation.

Most student talk in French occurred in response to a teacher question, repeated question or model for drill. The converse is that students asked very few questions and volunteered little discussion in French. Students were not active speakers, rather they were passive listeners, during and immediately after Category A--teacher information and explanation in French. Some teachers asked a question in French and waited for a student answer or repeated the question once and waited for an answer, other teachers continued to repeat a question until a student gave an answer. Sometimes one of the teachers repeated a question several times before even giving a student a chance to answer. Some teachers gave information to unanswered questions in French and English, others gave the information in French only.

Aperçu, Récapitulation, Narration Orale and Spontaneous Conversation were good strategies for developing student communication skills in French. Petit Dictionnaire, and Drill were also used in

developing student speaking skills in French.

3. Oral Reading:

All classes spent a similar proportion of class time in student oral reading in French (5.2%); about half as much class time as spent in student speaking in French.

Some teachers corrected mistakes in oral reading immediately; others allowed their students to read without interruption and corrected mistakes after the reading passage was completed.

Lecture was the best strategy for student oral reading; especially for extended student oral reading in French.

4. Silent Reading and Writing:

Classes varied considerably in the proportion of class time spent in student silent reading and writing in French (between 3.9% and 19.7%). On the average they spent nearly as much class time in silent reading and writing in French (10.4%) as they did in speaking French.

Most student silent reading and writing occurred as an extended activity, i.e., it was not an activity of much interaction between the teacher and his students.

Grammaire, Narration Ecrite, Compte Rendu and Petit Dictionnaire were good strategies for developing student silent reading and writing in French. Aperçu can also be used as a silent reading and writing exercise, as one of the teachers demonstrated.

Lastly, it was observed that classes varied greatly in the proportion of class time spent in time-out (between 5.8% and 16.1%), and they differed even more in extended time-out (between 1.5% and 8.1%).

III IMPLICATIONS

1. Although the Procedure-Activity Observation System proved adequate for identifying and quantifying the proportion and sequence of the main teacher procedures and student activities, it dealt with procedures and activities in French in much more detail than with procedures and activities in English. Also, the category time-out included at least three distinct classroom activities--silence, confusion, and change of strategies. These limitations were imposed to prevent the system from becoming too extensive and, therefore, unwieldy.

In the writer's experience, one of the biggest problems in second language teaching is the question of the use of the students' first language as a means of learning the second. The most prevalent excuses of students who fail in second languages are, "Our French teacher spoke English all the time and we didn't learn any French." or "Our teacher spoke French all the time and we couldn't understand a word he was saying." Thus, it seems to be a question of using a certain amount of the students' first language to make contact, at least with the slower students. The question of how much English the teacher uses and what happens before and after the teacher uses English can be answered by the Procedure-Activity Observation System. But, the question may be more complex than a question of proportion and sequence. Further experimentation and research may result in the answer.

2. The categories of the Procedure-Activity Observation System

are defined in general terms and with specific reference to the program Le Français: Parler et Lire. The writer feels certain that this system, or variations of it, can prove useful in observing any senior high school second language class.

3. Only observers trained in the methodology of the program

Le Français: Parler et Lire were used in this study. However, the writer feels that the only requirement, but a requirement sine qua non, is that the observer readily understand both of the languages used in the classroom.

4. In this study the procedures, activities and strategies were scored according to time (one score for every three seconds). They could also be scored according to incidents. However, the writer is convinced that scoring a Parler et Lire class according to time is more meaningful. Certain procedures and activities, e.g., rapid fire questions and answers or drill in French would tend to have more incidents during the same period of class time than some other procedures and activities, e.g., oral and silent reading and writing. Some teachers also proceed more quickly and have their classes functioning more rapidly than others. Lastly, some strategies tend to promote rapid change of incidents, whereas, others promote extended procedures and activities which have to be scored according to time anyway. Thus, the writer feels that, for a quantitative basis of comparison, classes should be scored as accurately as possible according to time.

5. After recording the five class periods of each teacher the writer asked the teacher for his estimation of the ability of his class--

whether it was below average, average or above average. In the opinion of the teacher, as well as the writer, classes two and four were below average, class one was an average class, and classes three and five were above average.

Looking back at the observation results, it may be noted that below average classes (classes two and four) used more procedures and activities in English (33.2% and 25.8% respectively) than did average and above average classes (class one--2.6%, class three--15.9% and class five--21.9%). Below average classes spent less time in student communication in French (class two--.7% and class four--3.3% compared to class one--8.0%, class three--9.6% and class five--5.0%). Teachers with average or above average classes asked their students more extended questions (class one--4.3%, class three--1.7% and class five--2.0%) than did teachers with below average classes (class two--.2% and class four--.9%). Lastly, the fact that class two was a below average class and the students were poorly motivated to learning French (they frequently tried to initiate off-topic conversation in English which usually ended in confusion) undoubtedly accounted for their high scores in time-out (16.1%) and extended time-out (8.1%).

6. The Procedure-Activity Observation System may be used as the missing tool in research using broad comparisons of methods (i.e., to serve as a check to see if teachers are using their assigned method, so that the results of students taught only by the experimental method can be compared with the results of students taught only by the control method.

Since most teachers are eclectic in their methodology, this

system may be better employed as a research means of establishing performance criteria, i.e., to find the procedures and activities, combinations thereof, and sequences thereof which produce the best results in developing second language skills in the student.

This system may be used effectively in training teachers to teach second languages in the senior high school. According to Flanders one of the aims of direct observation (interaction analysis in particular) is to discern "what are the fewest concepts and understandings that a person needs in his beginning year of teaching that would normally take two or three years to find out?"¹

This system may be used by second language teachers to analyze and improve their own teaching. By recording their classes and scoring the procedures, activities and strategies used, the teacher can see what has, in fact, taken place in his class. Often what a teacher thinks has taken place and what has actually taken place are quite different. By means of the Procedure-Activity Observation System teachers may be able to work to match intentions with practice. Teaching will remain an art, but it will be approached scientifically.

¹. Ned A. Flanders, Lecture on Interaction Analysis at Stanford University, (California, 1967), quoted by Sylvia H. Rothfarb, "Teacher Pupil Interaction Analysis in the FLES Classroom," Hispania, Vol. 53, (1970), pp. 257-258.

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APPENDIX A

APPENDIX 3

PROCEDURE-ACTIVITY OBSERVATION MATRIX

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Tota
A																
B																
C																
D																
R																
1																
2																
3																
4																
5																
6																
7																
E																
8																
0																
Tot.																
GC	TCF			TDF	TORF	SCF		SDF			SORF	SRWF	TTE	STE	TO	
GC	TTF				TORF	STF					SORF	SRWF	TTE	STE	TO	
SSF	SLF					STF					SORF	SRWF	TTE	STE	TO	

T.V.P. = (S.L.F.+ T.T.F.) _____

P.A.F. = (S.L.F.+S.T.F.+
S.O.R.F.+ S.R.W.F.) _____S.A. = (S.T.F.+S.O.R.F.+
S.R.W.F.+ S.T.E.) _____

C.F. = (T.C.F.+S.C.F.) _____

D.F. = (T.D.F.+S.C.F.) _____

T.O. = _____

P.A.E. = (T.T.E.+S.T.E.) _____

APPENDIX C

TALLIES AND SEQUENCE OF PROCEDURES AND ACTIVITIES

IN THE FIVE CLASSES

TABLE I

TALLIES AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS ONE

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A	378	117	41	62		6	1				5	78	6		17	711
B	46	170	27	164		116			2		2	1	3	4	49	584
C	48	30	104	58	5	43	1		14	3	40	11	5	1	43	406
D	120	139	86	175	2	100			78	1	12	15		4	110	842
R	1		5	1	213						1				1	222
1	7	74	25	184		17						1			4	312
2	2	1					1								2	6
3																
4	2	1	13	33	2	1			22		43	1			2	120
5			4													4
6	2	3	18	86					1		108				4	222
7	68	9	13	13			1					48			4	156
E	11	1	6	3									68		2	91
8	1	2	2										5	1		11
0	25	37	62	63		29	2		3		11	1	4	1	75	313
Tot.	711	584	406	842	222	312	6		120	4	222	156	91	11	313	4000
GC	TCF 1701			TDF 842	TORF 222	SCF 318		SDF 124			BORF 222	SRWF 156	TTE 91	STE 11	TO 313	4000
GC	TTF 2543				TORF 222	STF 442				BORF 222	SRWF 156	TTE 91	STE 11	TO 313	4000	
SSF	SLF 2765					STF 442				BORF 222	SRWF 156	TTE 91	STE 11	TO 313	4000	

T.V.P. = (S.L.F.+ T.T.F.) 2856P.A.F. = (S.L.F.+S.T.F.+
S.O.R.F.+ S.R.W.F.) 3585S.A. = (S.T.F.+S.O.R.F.+
S.R.W.F.+ S.T.E.) 831C.F. = (T.C.F.+S.C.F.) 2019D.F. = (T.D.F.+S.C.F.) 966T.O. = 313P.A.E. = (T.T.E.+S.T.E.) 102

TABLE II

TALLIES AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS TWO

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A	132	16	9	38	7						2	40	44	20	25	333
B	9	9	2	18	2	9			2			4	16	20	10	101
C	27	8	109	37	2	1	3		16	2	12	5	13	11	82	328
D	48	16	14	74	10	11			35	45	2	26	110	55	46	492
R	13	9	1	11	87								14	26	14	175
1		4		16		1							3		1	25
2	1			2			1								1	5
3																
4		1	15	10			1		2		13		13	1	4	60
5	1	2	8	30						9	2		3		2	57
6	1		5	28							188		4		12	238
7	21	5	14	22								236	33	7		338
E	37	11	33	134	34	1			5	1	4	25	633	83	110	1111
8	18	4	15	34	20						1	1	123	50	35	301
0	25	16	103	38	13	2					14	1	102	28	344	686
Tot.	333	101	328	492	175	25	5		60	57	238	338	1111	301	686	4250
GC	TCF 762			TDF 492	TORF 175	SCF 30		SDF 117			SORF 238	SRWF 338	TTE 1111	STE 301	TO 686	4250
GC	TTF 1254				TORF 175	STF 147					SORF 238	SRWF 338	TTE 1111	STE 301	TO 686	4250
SSF	SLF 1429					STF 147					SORF 238	SRWF 338	TTE 1111	STE 301	TO 686	4250

T.V.P. = (S.L.F.+ T.T.F.) 2540P.A.F. = (S.L.F.+S.T.F.+
S.O.R.F.+ S.R.W.F.) 2152S.A. = (S.T.F.+S.O.R.F.+
S.R.W.F.+ S.T.E.) 1024C.F. = (T.C.F.+S.C.F.) 792D.F. = (T.D.F.+S.C.F.) 609T.O. = 686P.A.E. = (T.T.E.+S.T.E.) 1412

TABLE III

TALLIES AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS THREE

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total	
A	124	72	29	25		10	1		2		1	19	20	17	15	335	
B	33	61	22	75		156	1		1	6	5		15	22	29	426	
C	40	55	97	38	1	33	1		2		41	13	31	19	36	407	
D	30	61	44	50		64	3		7	2	5	21	53	13	22	375	
R		1			40						1				3	45	
1	28	108	71	64		40							8	1	18	338	
2	7		1				2									10	
3																	
4	1		3	5		1			2		1	1	2	2		18	
5	1	5		1									2			9	
6		1	34	20							95		7		2	159	
7	14	9	15	8		2						634	21	6	3	712	
E	16	23	29	64	1	8			3	1	7	16	143	73	23	407	
8	34	5	14	13					1			2	89	8	2	168	
0	7	25	48	12	3	24	2				3	6	16	7	58	211	
Tot.	335	426	407	375	45	338	10		18	9	159	712	407	168	211	3620	
GC	TCF 1168			TDF 375	TORF 45	SCF 348		SDF 27			SORF 159	SRWF 712	TTE 407	STE 168	TO 211		
GC	TTF 1543				TORF 45	STF 375					SORF 159	SRWF 712	TTE 407	STE 168	TO 211		
SSF	SLF 1588					STF 375					SORF 159	SRWF 712	TTE 407	STE 168	TO 211		

T.V.P. = (S.L.F. + T.T.F.) 1995P.A.F. = (S.L.F. + S.T.F. +
S.O.R.F. + S.R.W.F.) 2834S.A. = (S.T.F. + S.O.R.F. +
S.R.W.F. + S.T.E.) 1414C.F. = (T.C.F. + S.C.F.) 1516D.F. = (T.D.F. + S.C.F.) 402T.O. = 211P.A.E. = (T.T.E. + S.T.E.) 575

TABLE IV

TALLIES AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS FOUR

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A	144	41	19	10		2		2	2			52	19	20	11	322
B	7	33	27	29		22	5	11			5	3	11	68	47	268
C	20	42	52	35		15	2	27	22	2	42	7	15	20	58	359
D	25	41	49	50		36	2	18	99	38	14	13	66	35	26	512
R																
1	5	7	5	68		8						1	10	3	5	112
2	1	3		4				1					6			15
3	2	3	7	64				17					9		12	114
4	4	2	26	42				15	25		34		10	1		159
5		9	9	17						4			7			46
6		6	14	73							44	2	8	1	4	152
7	33	13	14	10		3						370	9	5	8	465
E	39	28	45	68		11	3	6	7	2	5	9	249	131	46	649
8	21	26	24	17		3		1	1			3	197	26	13	332
0	21	14	68	25		12	3	16	3		8	5	33	22	65	295
Tot.	322	268	359	512		112	15	114	159	46	152	465	649	332	295	3800
GC	TCF 949			TDF 512	TORF	SCF 127		SDF 319			SORF 152	SRWF 465	TTE 649	STE 332	TO 295	
GC	TTF 1461				TORF	STF 446					SORF 152	SRWF 465	TTE 649	STE 332	TO 295	
SSF	SLF 1461					STF 446					SORF 152	SRWF 465	TTE 649	STE 332	TO 295	

$$T.V.P. = (S.L.F. + T.T.F.) \underline{2110}$$

$$P.A.F. = (S.L.F. + S.T.F. + S.O.R.F. + S.R.W.F.) \underline{2524}$$

$$S.A. = (S.T.F. + S.O.R.F. + S.R.W.F. + S.T.E.) \underline{1395}$$

$$C.F. = (T.C.F. + S.C.F.) \underline{1076}$$

$$D.F. = (T.D.F. + S.C.F.) \underline{831}$$

$$T.O. = \underline{295}$$

$$P.A.E. = (T.T.E. + S.T.E.) \underline{981}$$

TABLE V

TALLIES AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS FIVE

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A	127	48	10	30	3	3			2			8	6	1	3	241
B	21	84	14	184		21		4	3				7	61	18	417
C	29	62	113	78	3	46		6	29		42		26	18	35	487
D	36	101	117	139	10	107		17	40	7	10	7	111	53	58	813
R	2	7	4	5	91						2		3		3	117
1	1	53	48	86	1	23							1		2	215
2																
3	1	1	8	19				18								47
4	3	5	26	43		1			20		1		34	2	8	143
5			1	6						2						9
6		2	20	26	2						209		4		8	271
7	4	2	2	3		1						335	11		2	360
E	7	18	39	124	3	2			36		3	9	369	69	44	723
8	2	23	46	32					1				107	7	1	219
0	8	11	39	38	4	11		2	12		4	1	44	8	66	248
Tot.	241	417	487	813	117	215		47	143	9	271	360	723	219	248	4310
GC	TCF 1145			TDF 813	TORF 117	SCF 215	SDF 199			SORF 271	SRWF 360	TTE 723	STE 219	TO 248		
GC	TTF 1958				TORF 117	STF 414				SORF 271	SRWF 360	TTE 723	STE 219	TO 248		
SSF	SLF 2075					STF 414				SORF 271	SRWF 360	TTE 723	STE 219	TO 248		

$$T.V.P. = (S.L.F. + T.T.F.) \underline{2798}$$

$$P.A.F. = (S.L.F. + S.T.F. + S.O.R.F. + S.R.W.F.) \underline{3120}$$

$$S.A. = (S.T.F. + S.O.R.F. + S.R.W.F. + S.T.E.) \underline{1264}$$

$$C.F. = (T.C.F. + S.C.F.) \underline{1360}$$

$$D.F. = (T.D.F. + S.C.F.) \underline{1012}$$

$$T.O. = \underline{248}$$

$$P.A.E. = (T.T.E. + S.T.E.) \underline{942}$$

APPENDIX D

TALLIES OF PROCEDURES, ACTIVITIES AND
STRATEGIES IN THE FIVE CLASSES

TABLE VI

TALLIES OF PROCEDURES, ACTIVITIES AND STRATEGIES IN CLASS ONE

	<u>P.D.</u>	<u>Aperçu</u>	<u>Lecture</u>	<u>Récapitulation</u>	<u>Grammaire</u>	<u>Total</u>
A	225	141	30	78	237	711
B	24	266	4	178	112	584
C	36	70	76	67	157	406
D	64	270	88	230	190	842
R			222			222
1	5	155		107	45	312
2	1		3		2	6
3						
4	2	1	65	1	51	120
5	4					4
6			165			222
7	98	3			55	156
E	3	2	1	3	82	91
8	2	4		1	4	11
0	<u>30</u>	<u>97</u>	<u>22</u>	<u>92</u>	<u>72</u>	<u>313</u>
Total	494	1009	676	757	1064	4000

TABLE VII

TALLIES OF PROCEDURES, ACTIVITIES AND STRATEGIES IN CLASS TWO

	<u>P.D.</u>	<u>Lecture</u>	<u>Grammaire</u>	<u>Drill</u>	<u>Tests</u>	<u>C.M.</u>	<u>Total</u>
A	82	216	26	5	4		333
B	6	72	7	2	14		101
C	42	138	20	41	44	43	328
D	38	236	124	59	29	6	492
R		139			36		175
1		23	1	1			25
2		3		2			5
3							
4		23	22			15	60
5	5	4		48			57
6		238					238
7	44	12	50		232		338
E	83	279	531	25	149	44	1111
8	25	148	26	9	36	57	301
0	<u>73</u>	<u>214</u>	<u>78</u>	<u>36</u>	<u>165</u>	<u>120</u>	<u>686</u>
Total	398	1745	885	228	709	285	4250

TABLE VIII

TALLIES OF PROCEDURES, ACTIVITIES AND STRATEGIES IN CLASS THREE

	<u>P.D.</u>	<u>Aperçu</u>	<u>Lecture</u>	<u>Récapitu- lation</u>	<u>N.O.</u>	<u>NE-CR</u>	<u>Gram.</u>	<u>S.Conv.</u>	<u>Tests</u>	<u>C.M.</u>	<u>Total</u>
A	81	78	14	5	21	29	16	41			335
B	11	116	21	107	11	33	16	109	2		426
C	18	58	19	58	6	137	59	36	11	5	407
D	15	77	18	68	5	96	63	29		4	375
R		2	43								45
1	12	103	12	105	10	9	3	84			338
2				2	1	4	1	2			10
3											
4		1	1	1		6	7	1		1	18
5		1		4		1	2	1			9
6		1	84			61	12			1	159
7	42	16		1		121	284		248		712
E	28	37	17	20	4	86	203	3	2	7	407
8	20	18	4	14	5	31	68	6	1	1	168
0	<u>15</u>	<u>23</u>	<u>19</u>	<u>32</u>	<u>4</u>	<u>26</u>	<u>34</u>	<u>25</u>	<u>22</u>	<u>11</u>	<u>211</u>
Total	242	531	252	467	67	640	768	337	286	30	3620

TABLE IX

TALLIES OF PROCEDURES, ACTIVITIES AND STRATEGIES IN CLASS FOUR

	<u>P.D.</u>	<u>Apercu</u>	<u>Lecture</u>	<u>N.O.</u>	<u>Grammaire</u>	<u>Drill</u>	<u>Total</u>
A	17	225		32	39	9	322
B	18	125	10	74	16	25	268
C	14	105	17	74	112	37	359
D	10	178	34	128	95	67	512
R							
1		88		20	4		112
2		2	8	3	1	1	15
3	4	36		74			114
4	1	8	29	34	80	7	159
5						46	46
6	1		63		88		152
7		226			239		465
E	18	152	20	179	186	94	649
8	15	110	6	61	89	51	332
0	<u>7</u>	<u>114</u>	<u>7</u>	<u>78</u>	<u>68</u>	<u>21</u>	<u>295</u>
Total	105	1369	194	757	1017	358	3800

TABLE X

TALLIES OF PROCEDURES, ACTIVITIES AND STRATEGIES IN CLASS FIVE

	<u>P.D.</u>	<u>Lecture</u>	<u>Recapitu- lation</u>	<u>N.O.</u>	<u>Grammaire</u>	<u>Drill</u>	<u>Tests</u>	<u>Total</u>
A	42	74	18	85	20	2		241
B	21	35	50	268	43			417
C	28	64	36	183	151	20	5	487
D	13	94	74	351	213	40	28	813
R		117						117
1		8	41	148	18			215
2								
3				47				47
4	1	5	1	13	89	34		143
5						9		9
6	5	203			61	2		271
7	74	11		1	274			360
E	16	53	20	91	464		79	723
8	19	35	12	54	97		2	219
0	<u>9</u>	<u>46</u>	<u>17</u>	<u>79</u>	<u>82</u>	<u>8</u>	<u>7</u>	<u>248</u>
Total	228	745	269	1320	1512	115	121	4310

APPENDIX E

PROPORTION AND SEQUENCE OF PROCEDURES AND
ACTIVITIES IN THE FIVE CLASSES

TABLE XI

142.

PROPORTION (PERCENTAGE) AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS ONE

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A	9.5	2.9	1.0	1.6		.2					.1	2.0	.2		.4	17.8
B	1.2	4.3	.7	4.1		2.9			.1		.1		.1	.1	1.2	14.6
C	1.2	.8	2.6	1.5	.1	1.1			.4	.1	1.0	.3	.1		1.1	10.2
D	3.0	3.5	2.2	4.4	.1	2.5			2.0		.3	.4		.1	2.8	21.1
R			.1		5.3											5.6
1	.2	1.9	.6	4.6		.4									.1	7.8
2	.1														.1	.2
3																
4	.1		.3	.8	.1				.6		1.1				.1	3.0
5			.1													.1
6	.1	.1	.5	2.2							2.7				.1	5.6
7	1.7	.2	.3	.3								1.2			.1	3.9
E	.3		.2	.1									1.7		.1	2.3
8		.1	.1										.1			.3
0	.6	.9	1.6	1.6		.7	.1		.1		.3		.1		1.9	7.8
Tot.	17.8	14.6	10.2	21.1	5.6	7.8	.2		3.0	.1	5.6	3.9	2.3	.3	7.8	100.
GC	TCF			TDF	TORF	SCF		SDF			BORF	SRWF	TTE	STE	TO	
	42.5			21.1	5.6	8.0		3.1			5.6	3.9	2.3	.3	7.8	100.
GC	TTF				TORF	STF					BORF	SRWF	TTE	STE	TO	
	63.6				5.6	11.1					5.6	3.9	2.3	.3	7.8	100.
SSF	SLF					STF					BORF	SRWF	TTE	STE	TO	
	69.1					11.1					5.6	3.9	2.3	.3	7.8	100.

$$T.V.P. = (S.L.F. + T.T.F.) \underline{71.4}$$

$$P.A.F. = (S.L.F. + S.T.F. + S.O.R.F. + S.R.W.F.) \underline{89.6}$$

$$S.A. = (S.T.F. + S.O.R.F. + S.R.W.F. + S.T.E.) \underline{20.8}$$

$$C.F. = (T.C.F. + S.C.F.) \underline{50.5}$$

$$D.F. = (T.D.F. + S.C.F.) \underline{24.2}$$

$$T.O. = \underline{7.8}$$

$$P.A.E. = (T.T.E. + S.T.E.) \underline{2.6}$$

PROPORTION (PERCENTAGE) AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS TWO

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A	3.2	.4	.2	.9	.2						.1	.9	1.0	.5	.6	7.8
B	.2	.2	.1	.4	.1	.2			.1			.1	.4	.5	.2	2.4
C	.6	.2	2.6	.9	.1		.1		.4	.1	.3	.1	.3	.3	1.9	7.7
D	1.1	.4	.3	1.7	.2	.3			.8	1.1	.1	.6	2.6	1.3	1.1	11.6
R	.3	.2		.3	2.1								.3	.6	.3	4.1
1		.1		.4									.1			.6
2				.1												.1
3																
4			.4	.2					.1		.3		.3		.1	1.4
5		.1	.2	.7						.2	.1		.1		.1	1.3
6			.1	.7							4.4		.1		.3	5.6
7	.5	.1	.3	.5								5.6	.8	.2		8.0
E	.9	.3	.8	3.2	.8				.1		.1	.6	14.9	2.0	2.6	26.1
8	.4	.1	.4	.8	.5								2.9	1.2	.9	7.1
0	.6	.4	2.4	.9	.3	.1					.3		2.4	.7	8.1	16.1
Tot.	7.8	2.4	7.7	11.6	4.1	.6	.1		1.4	1.3	5.6	8.0	26.1	7.1	16.1	100.
GC	TCF			TDF	TORF	SCF		SDF			SORF	SRWF	TTE	STE	TO	
	17.9			11.6	4.1	.7		2.8			5.6	8.0	26.1	7.1	16.1 100.	
GC	TTF				TORF	STF					SORF	SRWF	TTE	STE	TO	
	29.5				4.1	3.5					5.6	8.0	26.1	7.1	16.1 100.	
SSF	SLF					STF					SORF	SRWF	TTE	STE	TO	
	33.6					3.5					5.6	8.0	26.1	7.1	16.1 100.	

$$T.V.P. = (S.L.F. + T.T.F.) \underline{59.8}$$

$$P.A.F. = (S.L.F. + S.T.F. + S.O.R.F. + S.R.W.F.) \underline{50.6}$$

$$S.A. = (S.T.F. + S.O.R.F. + S.R.W.F. + S.T.E.) \underline{24.1}$$

$$C.F. = (T.C.F. + S.C.F.) \underline{18.6}$$

$$D.F. = (T.D.F. + S.C.F.) \underline{14.3}$$

$$T.O. = \underline{16.1}$$

$$P.A.E. = (T.T.E. + S.T.E.) \underline{33.2}$$

TABLE XIII

PROPORTION (PERCENTAGE) AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS THREE

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total	
A	3.4	2.0	.8	.7		.3			.1			.5	.6	.5	.4	9.3	
B	.9	1.7	.6	2.1		4.3				.2	.1		.4	.6	.8	11.8	
C	1.1	1.5	2.7	1.0		.9			.1		1.1	.4	.9	.5	1.0	11.2	
D	.8	1.7	1.2	1.4		1.8	.1		.2	.1	.1	.6	1.5	.4	.6	10.4	
R					1.1										.1	1.2	
1	.8	3.0	2.0	1.8		1.1							.2		.5	9.3	
2	.2						.1									.3	
3																	
4			.1	.1					.1				.1	.1		.5	
5		.1											.1			.3	
6			.9	.6							2.6		.2		.1	4.4	
7	.4	.3	.4	.2		.1						17.5	.6	.2	.1	19.7	
E	.4	.6	.8	1.8		.2			.1		.2	.4	4.0	2.0	.6	11.2	
8	.9	.1	.4	.4								.1	2.5	.2	.1	4.6	
0	.2	.7	1.3	.3	.1	.7	.1				.1	.2	.4	.2	1.6	5.8	
Tot.	9.3	11.8	11.2	10.4	1.2	9.3	.3		.5	.3	4.4	19.7	11.2	4.6	5.8	100.	
GC	TCF 32.2			TDF 10.4	TORF 1.2	SCF 9.6		SDF .8			SORF 4.4	SRWF 19.7	TTE 11.2	STE 4.6	TO 5.8		
GC	TTF 42.6				TORF 1.2	STF 10.4					SORF 4.4	SRWF 19.7	TTE 11.2	STE 4.6	TO 5.8		
SSF	SLF 43.9					STF 10.4					SORF 4.4	SRWF 19.7	TTE 11.2	STE 4.6	TO 5.8		

$$T.V.P. = (S.L.F. + T.T.F.) \underline{55.1}$$

$$P.A.F. = (S.L.F. + S.T.F. + S.O.R.F. + S.R.W.F.) \underline{78.3}$$

$$S.A. = (S.T.F. + S.O.R.F. + S.R.W.F. + S.T.E.) \underline{39.1}$$

$$C.F. = (T.C.F. + S.C.F.) \underline{41.9}$$

$$D.F. = (T.D.F. + S.C.F.) \underline{11.1}$$

$$T.O. = \underline{5.8}$$

$$P.A.E. = (T.T.E. + S.T.E.) \underline{15.9}$$

TABLE XIV

PROPORTION(PERCENTAGE) AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS FOUR

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total
A	3.8	1.1	.5	.3		.1		.1	.1			1.4	.5	.5	.3	8.5
B	.2	.9	.7	.8		.6	.1	.3			.1	.1	.3	1.8	1.2	7.1
C	.5	1.1	1.4	.9		.4	.1	.7	.6	.1	1.1	.2	.4	.5	1.5	9.5
D	.7	1.1	1.3	1.3		1.0	.1	.5	2.6	1.0	.4	.3	1.7	.9	.7	13.5
R																
1	.1	.2	.1	1.8		.2							.3	.1	.1	3.0
2		.1		.1									.2			.4
3	.1	.1	.2	1.7				.5					.2		.3	3.0
4	.1	.1	.7	1.1				.4	.7		.9		.3			4.2
5		.2	.2	.5						.1			.2			1.2
6		.2	.4	1.9							1.2	.1	.2		.1	4.0
7	.9	.3	.4	.3		.1						9.7	.2	.1	.2	12.2
E	1.0	.7	1.2	1.8		.3	.1	.2	.2	.1	.1	.2	6.6	3.5	1.2	17.1
8	.6	.7	.6	.5		.1						.1	5.2	.7	.3	8.7
0	.6	.4	1.8	.7		.3	.1	.4	.1		.2	.1	.9	.6	1.7	7.8
Tot.	8.5	7.1	9.5	13.5		3.0	.4	3.0	4.2	1.2	4.0	12.2	17.1	8.7	7.8	100.
GC	TCF 25.0			TDF 13.5	TORF	SCF 3.3		SDF 8.4			BORF 4.0	SRWF 12.2	TTE 17.1	STE 8.7	TO 7.8	
GC	TTF 38.4				TORF	STF 11.7					BORF 4.0	SRWF 12.2	TTE 17.1	STE 8.7	TO 7.8	
SSF	SLF 38.4					STF 11.7					BORF 4.0	SRWF 12.2	TTE 17.1	STE 8.7	TO 7.8	

T.V.P. = (S.L.F.+ T.T.F.) 55.5P.A.F. = (S.L.F.+S.T.F.+
S.O.R.F.+ S.R.W.F.) 66.4S.A. = (S.T.F.+S.O.R.F.+
S.R.W.F.+ S.T.E.) 36.7C.F. = (T.C.F.+S.C.F.) 28.3D.F. = (T.D.F.+S.C.F.) 21.9T.O. = 7.8P.A.E. = (T.T.E.+S.T.E.) 25.8

TABLE XV

PROPORTION (PERCENTAGE) AND SEQUENCE OF PROCEDURES AND ACTIVITIES IN CLASS FIVE

	A	B	C	D	R	1	2	3	4	5	6	7	E	8	0	Total	
A	3.0	1.1	.2	.7	.1	.1			.1			.2	.1		.1	5.6	
B	.5	2.0	.3	4.3		.5		.1	.1				.2	1.4	.4	9.7	
C	.7	1.4	2.6	1.8	.1	1.1		.1	.7		1.0		.6	.4	.8	11.3	
D	.8	2.3	2.7	3.2	.2	2.5		.4	.9	.2	.2	.2	2.6	1.2	1.4	18.9	
R	.1	.2	.1	.1	2.1						.1		.1		.1	2.7	
1		1.2	1.1	2.0		.5									.1	5.0	
2																	
3			.2	.4				.4								1.1	
4	.1	.1	.6	1.0					.5				.9	.1	.2	3.3	
5				.1						.1						.2	
6		.1	.5	.6	.1						4.9		.1		.2	6.3	
7	.1	.1	.1	.1								7.8	.3		.1	8.4	
E	.2	.4	.9	2.9	.1	.1			.8		.1	.2	8.6	1.6	1.0	16.8	
8	.1	.5	1.1	.7									2.5	.2		5.1	
0	.2	.3	.9	.9	.1	.3		.1	.3		.1		1.0	.2	1.5	5.8	
Tot.	5.6	9.7	11.3	18.9	2.7	5.0		1.1	3.3	.2	6.3	8.4	16.8	5.1	5.8	100.	
GC	TCF 26.6			TDF 18.9	TORF 2.7	SCF 5.0		SDF 4.6			SORF 6.3	SRWF 8.4	TTE 16.8	STE 5.1	TO 5.8		100.
GC	TTF 45.4				TORF 2.7	STF 9.6					SORF 6.3	SRWF 8.4	TTE 16.8	STE 5.1	TO 5.8		100.
SSF	SLF 48.1					STF 9.6					SORF 6.3	SRWF 8.4	TTE 16.8	STE 5.1	TO 5.8		100.

$$T.V.P. = (S.L.F. + T.T.F.) \underline{64.9}$$

$$P.A.F. = (S.L.F. + S.T.F. + S.O.R.F. + S.R.W.F.) \underline{72.4}$$

$$S.A. = (S.T.F. + S.O.R.F. + S.R.W.F. + S.T.E.) \underline{29.3}$$

$$C.F. = (T.C.F. + S.C.F.) \underline{31.6}$$

$$D.F. = (T.D.F. + S.C.F.) \underline{23.5}$$

$$T.O. = \underline{5.8}$$

$$P.A.E. = (T.T.E. + S.T.E.) \underline{21.9}$$

APPENDIX F

PROPORTION OF CLASS TIME SPENT IN PROCEDURES, ACTIVITIES
AND STRATEGIES IN THE FIVE CLASSES

TABLE XVI

PROPORTION (PERCENTAGE) OF CLASS TIME SPENT BY CLASS ONE IN EACH OF THE CATEGORIES IN EACH OF THE STRATEGIES DURING FIVE CLASS PERIODS

	<u>P.D.</u>	<u>Aperçu</u>	<u>Lecture</u>	<u>Récapitulation</u>	<u>Grammaire</u>	Total
A	5.6	3.5	.8	2.0	5.9	17.8
B	.6	6.7	.1	4.5	2.8	14.6
C	.9	1.8	1.9	1.7	3.9	10.2
D	1.6	6.8	2.2	5.8	4.8	21.1
TTF	8.7	18.7	5.0	13.8	17.4	63.6
R			5.6			5.6
1	.1	3.9		2.7	1.1	7.8
2			.1		.1	.2
3						
4	.1		1.6		1.3	3.0
5	.1					.1
STF	.3	3.9	1.7	2.7	2.5	11.1
6			4.1		1.4	5.6
7	2.5	.1			1.4	3.9
E	.1	.1		.1	2.1	2.3
8	.1	.1			.1	.3
0	.8	2.4	.6	2.3	1.8	7.8
Total	12.4	25.2	16.9	19.0	26.6	100.

TABLE XVII

PROPORTION (PERCENTAGE) OF CLASS TIME SPENT BY CLASS TWO IN EACH OF THE CATEGORIES IN EACH OF THE STRATEGIES DURING FIVE CLASS PERIODS

	<u>P.D.</u>	<u>Lecture</u>	<u>Grammaire</u>	Drill	Tests	C.M.	Total
A	1.9	5.1	.6	.1	.1		7.8
B	.1	1.7	.2	.1	.3		2.4
C	1.0	3.3	.5	1.0	1.0	1.0	7.7
D	.9	5.6	2.9	1.4	.7	.1	11.6
TTF	4.0	15.6	4.2	2.5	2.1	1.2	29.5
R		3.3			.9		4.1
1		.5					.6
2		.1		.1			.1
3							
4		.5	.5			.4	1.4
5	.1	.1		1.1			1.3
STF	.1	1.2	.5	1.2		.4	3.5
6		5.6					5.6
7	1.0	.3	1.2		5.5		8.0
E	2.0	6.6	12.5	.6	3.5	1.0	26.1
8	.6	3.5	.6	.2	.9	1.3	7.1
0	1.7	5.0	1.8	.9	3.9	2.8	16.1
Total	9.4	41.1	20.8	5.4	16.7	6.7	100.

TABLE XVIII

PROPORTION (PERCENTAGE) OF CLASS TIME SPENT BY CLASS THREE IN EACH OF THE CATEGORIES IN EACH OF THE STRATEGIES DURING FIVE CLASS PERIODS

	<u>P.D.</u>	<u>Aperçu</u>	<u>Lecture</u>	<u>Récapitu- lation</u>	<u>N.O.</u>	<u>NE-CR</u>	<u>Gram.</u>	<u>S.Con.</u>	<u>Tests</u>	<u>C.M.</u>	<u>Total</u>
A	2.2	2.2	.4	1.5	.6	.8	.4	1.1			9.3
B	.3	3.2	.6	3.0	.3	.9	.4	3.0	.1		11.8
C	.5	1.6	.5	1.6	.2	3.8	1.6	1.0	.3	.1	11.2
D	.4	2.1	.5	1.9	.1	2.7	1.7	.8		.1	10.4
TTF	3.5	9.1	2.0	8.0	1.2	8.1	4.3	5.9	.4	.3	42.6
R		.1	1.2								1.2
1	.3	2.9	.3	2.9	.3	.3	.1	2.3			9.3
2				.1		.1		.1			.3
3											
4						.2	.2				.5
5				.1			.1				.3
STF	.3	2.9	.4	3.1	.3	.6	.4	2.4			10.4
6			2.3			1.7	.3				4.4
7	1.2	.4				3.3	7.9		6.9		19.7
E	.8	1.0	.5	.5	.1	2.4	5.6	.1	.1	.2	11.2
8	.6	.5	.1	.4	.1	.9	1.9	.2			4.6
0	.4	.6	.5	.9	.1	.7	.9	.7	.6	.3	5.8
Total	6.7	14.7	7.0	13.0	1.9	17.7	21.2	9.3	7.9	.8	100.

TABLE XIX

PROPORTION (PERCENTAGE) OF CLASS TIME SPENT BY CLASS FOUR IN EACH OF THE CATEGORIES IN EACH OF THE STRATEGIES DURING FIVE CLASS PERIODS

	<u>P.D.</u>	<u>Aperçu</u>	<u>Lecture</u>	<u>N.O.</u>	<u>Grammaire</u>	<u>Drill</u>	<u>Total</u>
A	.5	6.0		.8	1.0	.2	8.5
B	.5	3.3	.3	2.0	.4	.7	7.1
C	.4	2.8	.5	2.0	3.0	1.0	9.5
D	.3	4.7	.9	3.4	2.5	1.8	13.5
TTF	1.6	16.7	1.6	8.1	6.9	3.6	38.4
R							
1		2.3		.5	.1		3.0
2		.1	.2	.1			.4
3	.1	1.0		2.0			3.0
4		.2	.8	.9	2.1	.2	4.2
5						1.2	1.2
STF	.1	3.6	1.0	3.5	2.3	1.4	11.7
6			1.7		2.3		4.0
7		6.0			6.3		12.2
E	.5	4.0	.5	4.7	4.9	2.5	17.1
8	.4	2.9	.2	1.6	2.3	1.3	8.7
0	.2	3.0	.2	2.1	1.8	.6	7.8
Total	2.8	36.0	5.1	19.9	26.8	9.4	100.

TABLE XX

152.

PROPORTION (PERCENTAGE) OF CLASS TIME SPENT BY CLASS FIVE IN EACH OF THE CATEGORIES IN EACH OF THE STRATEGIES DURING FIVE CLASS PERIODS

	<u>P.D.</u>	<u>Lecture</u>	<u>Récapitu- lation</u>	<u>N.O.</u>	<u>Gram.</u>	<u>Drill</u>	<u>Tests</u>	<u>Total</u>
A	1.0	1.7	.5	2.0	.5	.1		5.6
B	.5	.8	1.2	6.2	1.0			9.7
C	.7	1.5	.8	4.3	3.5	.5	.1	11.3
D	.3	2.2	1.7	8.1	4.9	.9	.7	18.9
TTF	2.4	6.2	4.3	20.6	9.9	1.4	.8	45.4
R		2.7						2.7
1		.2	1.0	3.4	.5			5.0
2								
3				1.1				1.1
4		.1		.3	2.1	.8		3.3
5						.2		.2
STF		.3	1.0	4.8	2.6	1.0		9.6
6	.1	4.7			1.4	.1		6.3
7	1.7	.3			6.4			8.4
E	.4	1.2	.5	2.1	10.8		1.8	16.8
8	.4	.8	.3	1.3	2.3		.1	5.1
0	.2	1.1	.4	1.8	1.9	.2	.2	5.8
Total	5.3	17.3	6.2	30.6	35.1	2.7	2.8	100.

APPENDIX G

OBSERVER RELIABILITY AND CONSISTENCY

TABLE XXI

OBSERVER RELIABILITY I

Category	Observer #1	Observer #2	% #1	% #2	% Diff.	(Ave.%) ²
A	67	54	7.0	6.6	.4	.472
B	135	112	14.2	13.7	.5	1.960
C	127	83	13.3	10.2	3.1	1.392
D	181	194	19.0	23.7	4.7	4.580
R	3	4	.3	.5	.2	.002
1	76	72	8.0	8.8	.8	.738
2						
3	13	11	1.4	1.3	.1	.020
4	13	7	1.4	.9	.5	.014
5						
6	86	84	9.0	10.3	1.3	.941
7	6	2	.6	.2	.4	.002
E	130	98	13.6	12.0	1.6	1.638
8	69	62	7.2	7.6	.4	.548
0	47	35	4.9	4.3	.6	.212
Total	953	818	99.9	100.1	14.6	12.519

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 14.6) - 12.5}{100 - 12.5} = .83$$

TABLE XXII

OBSERVER RELIABILITY II

Category	Observer #1	Observer #2	% #1	% #2	% Diff.	(Ave.%) ²
A	54	70	7.1	8.7	1.6	.624
B	98	98	12.9	12.2	.7	1.588
C	100	105	13.1	13.1	.0	1.716
D	72	95	9.4	11.9	2.5	1.145
R						
1	74	78	9.7	9.7	.0	.941
2	4	5	.5	.6	.1	.004
3						
4	8	9	1.0	1.1	.1	.012
5	8	8	1.0	1.0	.0	.010
6	70	70	9.2	8.7	.5	.810
7	107	108	14.0	13.5	.5	1.904
E	97	91	12.7	11.4	1.3	1.464
8	35	34	4.6	4.2	.4	.194
0	35	30	4.6	3.7	.9	.176
Total	762	801	99.8	99.8	8.6	10.588

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 8.6) - 10.6}{100 - 10.6} = .90$$

TABLE XXIII

OBSERVER RELIABILITY III

Category	Observer #1	Observer #2	% #1	% #2	% Diff.	(Ave.%) ²
A	11	11	1.2	1.2	.0	.014
B	76	80	8.6	8.7	.1	.757
C	86	78	9.7	8.4	1.3	.828
D	188	203	21.2	22.0	.8	4.666
R	2	2	.2	.2	.0	.000
1	42	42	4.7	4.5	.2	.212
2						
3	20	20	2.3	2.2	.1	.076
4	38	42	4.3	4.5	.2	.194
5	9	9	1.0	1.0	.0	.010
6	75	72	8.5	7.8	.7	.672
7	6	7	.7	.8	.1	.006
E	245	260	27.6	28.1	.5	7.784
8	21	20	2.4	2.2	.2	.076
0	68	78	7.7	8.4	.7	.656
Total	887	924	100.1	100.0	4.9	15.951

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 4.9) - 16.0}{100 - 16.0} = .94$$

OBSERVER CONSISTENCY IN SCORING TAPED CLASS I

Category	Observa- tion #1	Observa- tion #2	% #1	% #2	% Diff.	(Ave.%) ²
A	17	19	2.34	2.69	.27	.062
B	70	69	9.66	9.48	.18	.916
C	85	73	11.72	10.03	1.69	1.184
D	62	54	8.55	7.42	1.13	.638
R						
1	49	49	6.76	6.73	.03	.456
2	2	1	.28	.14	.14	.000
3						
4	2	1	.28	.14	.14	.000
5	10	1	.00	.14	.14	.000
6	31	33	4.28	4.53	.25	.194
7	253	253	34.90	34.75	.15	12.131
E	76	85	10.48	11.68	1.20	1.228
8	25	35	3.45	4.81	1.36	.171
0	53	55	7.31	7.55	.16	.546
Total	725	728	100.01	100.01	6.84	17.526

$$\pi = \frac{P_o - P_e}{100 - P_e} = \frac{(100 - 6.8) - 17.5}{100 - 17.5} = .92$$

TABLE XXV

158.

OBSERVER CONSISTENCY IN SCORING TAPED CLASS II

Category	Observation #1	Observation #2	% #1	% #2	% Diff.	(Ave.%) ²
A	114	122	14.09	14.90	.81	2.102
B	110	114	13.60	13.92	.32	1.893
C	109	107	13.47	13.06	.41	1.760
D	131	134	16.19	16.36	.20	2.650
R	76	73	9.39	8.91	.48	.837
1	51	45	6.30	5.50	.80	.348
2	3	2	.37	.24	.13	.001
3						
4	55	55	6.80	6.72	.12	.459
5						
6	56	59	6.92	7.20	.28	.498
7	28	28	3.46	3.42	.04	.118
E	14	12	1.73	1.47	.26	.026
8	3	4	.37	.49	.12	.002
0	59	64	7.29	7.81	.52	.651
Total	809	819	99.98	100.00	4.49	11.345

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 4.5) - 11.3}{100 - 11.3} = .95$$

TABLE XXVI

OBSERVER CONSISTENCY IN SCORING LIVE VERSUS TAPED CLASSES I

Category	Observation #1	Observation #2	% #1	% #2	% Diff.	(Ave.%) ²
A	79	67	7.38	7.03	.35	.520
B	169	135	15.79	14.17	1.62	2.244
C	140	127	13.08	13.33	.25	1.745
D	221	181	20.65	18.99	1.66	3.928
R	0	3	.00	.32	.32	.001
1	86	76	8.04	7.97	.07	.642
2						
3	15	13	1.40	1.36	.04	.019
4	5	13	.47	1.36	.89	.008
5						
6	65	86	6.07	9.02	2.95	.570
7	2	6	.19	.63	.44	.002
E	176	130	16.45	13.64	2.81	2.268
8	77	69	7.20	7.24	.04	.521
0	35	47	3.27	4.93	1.66	.168
Total	1070	953	99.99	99.99	13.10	12.636

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 13.1) - 12.6}{100 - 12.6} = .85$$

TABLE XXVII

OBSERVER CONSISTENCY IN SCORING LIVE VERSUS TAPED CLASSES II

Category	Observation #1	Observation #2	% #1	% #2	% Diff.	(Ave.%) ²
A	82	72	9.76	9.66	.10	.943
B	120	90	14.29	12.08	2.21	1.740
C	133	112	15.83	15.03	.80	2.380
D	130	116	15.48	15.57	.09	2.310
R	51	62	6.07	8.32	2.25	.516
1	34	39	4.05	5.23	1.18	.215
2						
3	13	8	1.55	1.08	.47	.017
4	0	1	.00	.13	.13	.000
5						
6	39	39	4.64	5.23	.59	.244
7	82	74	9.76	9.93	.17	.969
E	79	54	9.40	7.25	2.15	.693
8	49	46	5.83	6.17	.34	.360
0	28	32	3.33	4.30	.97	.146
Total	840	745	99.99	99.98	11.55	10.533

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 11.6) - 10.5}{100 - 10.5} = .87$$

TABLE XXVII I

OBSERVER CONSISTENCY IN SCORING LIVE VERSUS TAPED CLASSES III

Category	Observation #1	Observation #2	% #1	% #2	% Diff.	(Ave.%) ²
A	90	83	10.75	9.70	1.05	1.047
B	78	81	9.32	9.46	.14	.882
C	94	92	11.23	10.75	.48	1.208
D	210	191	25.09	22.31	2.78	5.617
R	24	50	2.88	5.84	2.96	.190
1	37	48	4.42	5.61	1.19	.252
2						
3						
4	39	30	4.66	3.50	1.16	.166
5						
6	58	61	6.91	7.13	.22	.493
7	10	12	1.19	1.40	.21	.017
E	101	113	12.07	13.20	1.13	1.598
8	49	42	5.85	4.91	.94	.289
0	47	53	5.62	6.19	.57	.358
Total	847	856	99.99	100.00	12.83	12.117

$$\pi = \frac{Po - Pe}{100 - Pe} = \frac{(100 - 12.8) - 12.1}{100 - 12.1} = .854$$