CURRICULUM-BASED MEASUREMENT NORMING FOR READING FLUENCY

AND WRITTEN EXPRESSION

FOR FRENCH IMMERSION STUDENTS IN SCHOOL DISTRICT #57

By

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ABSTRACT

Standardized tests are not always appropriate to assess French Immersion students. In School District #57, Learning Assistance (L.A.) teachers identified the need for an easy, inexpensive and reliable test. Curriculum-Based Measurement was a logical choice as it is directly related to classroom materials and instruction, and it is widely used in the English program to assess reading fluency, written expression and basic mathematics skills.

The purpose of this project was to develop French CBM probes for reading fluency and written expression, and to develop local norms for the French Immersion program. The specific measures selected were Words Read Correctly, Total Words Written and Words Spelled Correctly. Norming tables were created with the data obtained during three norming periods. These tables will permit L. A. teachers and classroom teachers to assess and monitor students' progress efficiently and inexpensively.

This report explains in detail the steps taken to develop the reading fluency and the written expression probes, the administration procedures and the scoring rules. It also verifies the reliability and the stability of the probes over time. The various probes are shown to be equivalent within grade.

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INTRODUCTION

Learning Assistance teachers are often asked to evaluate students and establish programs for students who are academically or behaviorally challenged. Requests for such assessment come from teachers, parents, in-school administrators, school board administrators and Ministry of Education officials. In order to assess a student efficiently and accurately, Learning Assistance teachers need to use tests that have adequate normative data, are easy to administer, inexpensive, and reliable. Often, commercial standardized tests are used as they offer norming tables so that students can be compared with other students of their age or grade level. However, these tests fail to demonstrate students' progress accurately (Deno, 1985, 1992; Marston, 1989). Consequently, they are not very practical for decision-making about a student's instructional program. Commercial tests have many other disadvantages: they are expensive, time consuming, and not considered valid in many cases as they are not related to any specific curriculum (Fuchs & Deno, 1994).

Curriculum-Based Measurement is a standardized measurement system that measures basic skills in reading, spelling, written expression and mathematics. Its assessment focuses on measurements that are observable such as counting words read correctly in one minute and counting words spelled correctly during three minutes given a story starter (Marston, 1989).

The advantages of CBM are numerous and important: (a) the tests are tied to the student's curriculum (the materials in which instruction occurs) and not on a series of problems created by commercial test developers (Deno, 1985); (b) the tests are quick to administer and facilitate frequent administration by teachers/educators; (c) the tests can

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have many multiple forms (Baker & Good, 1995). (d) The tests are inexpensive to produce in terms of time and expense (Deno, 1985; Marston, 1989); (e) they measure academic behaviors in the basic skills that are observable in a specific domain (Deno, 1985; Deno, Marston, Mirkin & Lowry, 1982; Marston, 1989); and (f) tests are relatively unobtrusive (Deno, 1985; Marston, 1989). However, it is important to remember that CBM is one indicator and does not preclude using other specific tests to pinpoint particular problems in academic areas (Shinn & Bamonto, 1998).

Many studies have demonstrated the reliability and validity of Curriculum-Based Measurement as an indicator of student progress in the basic skill areas (Shinn & Hubbard, 1992). CBM results were also compared to teachers' holistic judgement on rating of the students' reading proficiency and were found to correlate highly (Marston, Mirkin, Deno, 1984; Marston, 1989). Deno (1985) also found that "all of the curriculumbased measures were highly correlated with performance on the standardized, normreferenced tests except for the word meaning test" (p. 222).

School District #57 (SD57, 1995a) recognized all the advantages that Curriculum-Based Measurement offers to teachers and specialists who make decisions about student placement and educational programs. In order to get assistance for a student who needs services beyond the resources available at his or her school, educators have to be able to assess certain skills frequently to present a precise picture of the child's performance. CBM was adopted as it matches the problem-solving process identified by the School Support Services (School District #57, 1996b) and the one defined by Salvia and Ysseldyke (1991), i.e., screening, program planning, pupil progress monitoring, and program evaluation. Students of the French Immersion program were included in the

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CBM for Mathematics (Walraven & MacMillan, 2000), but not in the earlier CBM for Reading Fluency and Written Expression (SD57, 1996a) as English was not their language of instruction. In its 1995 report, the district committee on the development of local norms for Curriculum Based Measurement recommended developing such norms for the French Immersion program (School District #57, 1995a). Some tests, such as <u>Bilan Qualitatif de l'Apprentissage de la Lecture</u> (Campeau-Filion & Gauthier, 1984) and <u>Test de Rendement pour Francophone (n.d.)</u> were available but these tests were developed for children with French as their first language. These tests were not valid for the French Immersion students whose first language is English. Hence, the purpose of this project is to develop CBM norming tables for Reading Fluency and Written Expression for the French Immersion program.

METHODS

This project closely follows the steps used in other projects as it is a replication of the English CBM Reading Fluency and Written Expression (SD57, 1996b). However, some variations in procedures are explained with more detail as the use of the French language created the need for new scoring rules and new reading probes.

Subjects

School District #57 offers French Immersion from Kindergarten to grade 12. French Immersion is a program for non-Francophone children. Both parents generally speak English at home and have at best a limited background in French. Students are immersed in the French language from the first day of school. Most of the schooling is done in French. English instruction starts in grade three or four, depending on the class organization. The students have a choice of three French Immersion schools in Prince George. Two schools offer the program from Kindergarten to grade seven and one school from Kindergarten to grade five. The students of the latter school go then to the district Middle school for grades six and seven. All the students continue on to secondary school where French becomes a smaller portion of their instruction. By grade 12, students have only one course in French.

The population for this study consisted of the entire within-district population of the French Immersion students of School District #57. There were between 240 and 321 students tested depending on the testing period. A detailed distribution by school and grade is shown in Table 1.

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Table 1

Grade	School A	School B	School C	School D	Total per
	N	N	n	n	grade
1	18	29	17	-	64
2	16	14	18	-	48
3	12	19	16	-	47
4	16	6	13	-	35
5	13	11	11	-	. 35
6	-	12	21	8	41
7	-	16	25	10	51
Total	75	107	121	18	321

Number of French	Immersion S	Students (1	n) p	er School	and	per	Grade i	n SD57

All the French Immersion students from grade one to seven were tested for both Reading Fluency and Written Expression. Grade one students were not tested in the first two periods, as they have not yet received sufficient instruction to develop basic skills (Shinn, 1989).

Instruments

Development of Reading Fluency Norming Probes

Three reading probes per grade level were developed from texts used in class. All the elementary French Immersion teachers in the district sent me a list of readers or books that they use in their classroom during a school year. Most primary teachers use readers from the series <u>Je lis</u>, j'écris, <u>A mots Découverts</u>, <u>Contes Roses/Jaunes</u>, <u>Mirabelle</u> and <u>Baluchon</u>. Intermediate teachers use a variety of texts from novels, Science or Social Studies textbooks. A selection of passages or complete stories was chosen as probe material for each grade level. Three probes per grade were considered sufficient for this project, as there were only four schools to assess and the sample size was small. Two examples of probes, one for the primary grade and for the intermediate grade, are in Appendix A.

The selection of probes was an important procedure as it was essential that probes were equivalent in difficulty in each grade level (Marston & Deno, 1982). Probe difficulty must increase as grade level increases. Tilly and Carlson (1992) recognize the difficulty of choosing materials that were representative of each grade level expectations. They warn "that large differences in text difficulty makes drawing valid conclusions from student test data more difficult" (p.10). It is important to choose materials that fall within a specific reading level.

Readability was an important step in the norming project. School District #57 used the Fry's Readability Graph to determine the readability of their probes (SD57, 1995b). Unfortunately, this test could not be used for French texts. Thus, tables to establish the readability had to be created. I based the criteria on a sequential table established by the Abbotsford School District in British Columbia (n.d.). For each grade level, their table shows the sounds introduced, worked on, and mastered during that school year. I built tables indicating the sounds expected to be mastered in each grade level during a school year (Appendix B). I included the sight words expected to be mastered in grade one and grade two in their respective table. I kept passages that had more than 80 appropriate words for the grade level in the first 100 words. There is an example of the assessment of three probes in a detailed grade level table in Appendix C.

I used a second method to verify that the difficulty level of the probes was appropriately chosen for the grade. Six to seven students from various grade levels read

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probes from a different grade level than their own. If an average reader from grade five, assessed last year, had difficulty reading more than 20 words in the first 100 words of a grade four probe, the probe was reconsidered for a higher level. I also showed the texts to teachers of different grade levels and asked for feedback.

In addition to the level of difficulty, other criteria had to be considered when choosing the probes. The stories should not be written as poems or plays, include many unusual proper nouns, or use extensive dialogue (Shinn, 1989; Tilly & Carlson, 1992). The length criterion was quite difficult to achieve. The guidelines suggest that texts should be approximately 150 words in the primary grade levels (SD57, 1995b) and at least 250 words for intermediate grade levels. Grade one to three texts were shorter as French Immersion texts are generally shorter than comparable grade level texts for English as a first language.

Texts chosen in this project were a combination of texts students are expected to read in Language Arts, Science or Social Studies. There was a possibility that some texts might have already been read in class by certain students as the materials were taken from the classroom curricula. Fuchs and Deno (1994) note that degree of familiarity can become "a source of measurement error" (p. 19) and that "conclusions about the students" general level of proficiency could then be overly optimistic" (p. 19). Due to varying levels of familiarity, the validity of the probes will be difficult to assess. However, statistical tests comparing the level of difficulty among the same grade level probes will show whether a text was possibly too familiar for all students, or just for certain students.

Each text was retyped so that pictures would not provide clues, and so that type style differences would be minimized. Two different copies of each text were prepared.

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The examiner used a copy that has the number of words per line and a space to write the results. The students read the copy with the words only.

Development of Written Expression Norming Probes

The starting sentences in the writing probes were translated from the English language. These probes, developed by SD57 teachers, used criteria developed by Tilly and Carlson (1992). Three out of six possible probes were chosen using two selection criteria. The first criterion used was to have a starter that would not elicit controversial stories. Basic vocabulary in the sentence was the second criterion chosen so that grade one and two students would be able to understand the language. The written expression probes are in Appendix D.

Two teachers, one teaching French Language Arts in a Secondary School and one who taught from Kindergarten to grade five in French Immersion, met with me to establish standardized rules for scoring the written passages of the students. We based the rules on the Written Expression Scoring Rules established by the CBA Institute of the University of Oregon (Baker, Collins & Goodwin, 1992). Our committee added several rules to the list of rules defining "What is a correctly spelled word?" (p. 94-95) established by Baker et al. For example, students had to write the acute and grave accents correctly to get full score. Abbreviations could replace the English series of words, i.e. NASA was acceptable. English words were rejected except for proper names such as films, persons and cities. The committee felt that rules showing grammar should be included in the list (Appendix E) as a reminder about looking at each word as a separate entity regardless of the grammar.

Procedures

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Reading Fluency Probes Administration

I translated the scoring procedure of the CBA Training Institute of the University of Oregon (Baker, Collins & Goodwin, 1992) to determine what counted as a word read (Appendix F). Learning Assistance teachers met for half a day to be instructed about the administration and the scoring of the tests, and to listen to the texts read by students on a tape recorder. Each L.A. teacher scored two readings for each of three grade levels. They compared their scores and discussed the differences heard on the tape. Notes were taken about possible mistakes in pronunciation, accents and liaisons (tying two words together; for example: *un ami* becomes *un nami*). Unfortunately, there was not enough time to listen to all the grade levels. Comments and questions were exchanged throughout the testing period when someone was confused or uncertain about a word. After the first norming period, one L.A. teacher was replaced by a new teacher. I reviewed the directives and the scoring rules with her before the second testing period.

For each grade level, students were divided into three groups: A, B and C. The L.A.teacher assigned a letter to the students following the list provided by each teacher. Each school was assigned with a different letter/ reading probe. In the fall, the L.A. teacher from School A assigned probe A to the first student on the class list, and then cycled through the list for the remaining students. The L.A. teacher from School B assigned probe B first, and School C assigned probe C first. This method was used to avoid having the biggest number of students with a certain letter if all the groups at each grade level had an odd or even number. Students read a different probe in the winter and

spring periods. For example, if a student read probe B in October (fall), he/she read probe C in January (winter) and probe A in April (spring).

The first norming period was in late October. Only students in grade two to grade seven were tested. L.A. teachers administered the reading tests in their own schools. The L.A. teachers from School C administered the reading tests to grades 6 and 7 of School D as there is no L. A. teacher for the French Immersion program in that school. In the last norming period, she also administered all the reading probes in School B.

All students were recorded on tape to increase the accuracy of the scoring. L. A. teachers were able to listen many times to a student's reading if it was not clear or too fast. The examiners had to follow specific directions to ensure uniformity. The directions were translated from the Directions for 1-minute Administration of Reading Passages of Baker, Collins and Goodwin (1992). Students were asked to read to the best of their abilities. They were told they would be stopped after one minute. If students hesitated with a word for three seconds, the L.A. teachers had to say the word and mark it as incorrect. The administration procedure and the scoring rules are given in Appendix F. Written Expression Probes Administration

The written expression probes were administrated by each French Immersion teacher administered the written expression probes to his or her own class. They had specific directions (Appendix E) to follow to ascertain the uniformity of the administration of the tests. Each school started with a different probe. All the students of Schools A and D started with probe A. School B students started with probe B and School C students with probe C. In January and April, students had a different starter sentence (or probe) to write about.

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Students were asked to continue a story starter for three minutes. They had one minute to gather ideas. They were not allowed to ask for words in French or to get help with spelling. Only I did the scoring to ensure uniformity in the process (Shinn, 1989). I followed the rules defined by the committee members. At times, I found unexpected spelling. I noted these cases to ensure similar marking in the event of future occurrences.

Analysis

All the results for both Reading Fluency and Written Expression were put into tables per school and per grade level. I used Excel 97 to record the data and to do statistical tests. I used the Analysis of Variance (ANOVA) for one factor to assess probes' difficulty at each grade level. The Pearson correlation test was used to establish the equivalence and stability coefficient for the scores over time and across probes. The correlation value \underline{r} is a measure of stability and equivalence; stability of the repeated testing of students, and equivalence of the different probes used for testing.

Ethics Approval

The project was approved by School District #57 and the University of Northern British Columbia Ethics Committee. In order to keep the students' results confidential, student library numbers were used in all testings, and school names were replaced by letters. I also sent a letter to all the parents of French Immersion students explaining the project (Appendix G). Letters of approval are in Appendix G.

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RESULTS

Preliminary Analysis

Demographic analysis

The number of participants ranged from 240 to 317 students during the three norming periods. The results in Table 2 show that the number of students participating in the written expression assessment is different from the number of students participating in the reading fluency assessment in each of the norming periods. The difference in numbers is due to absentees during testing days, and to students moving in or out of schools. The increase in the spring is largely due to the inclusion of grade one students. Table 2

Number of Students (n) Being Tested During the Three Norming Periods

	Fall	Winter	Spring
	n	n	n
Reading Fluency	249	240	317
Written Expression	244	248	300

The total number of French Immersion students registered in April was 320. The population consisted of 47.7% boys and 52.3% girls. Table 3 shows the percentage of boys and girls for each grade level. Most grades had a noticeable difference in the boy/girl ratio.

Table 3

	Number of boys	Percentage %	Number of girls	Percentage %	Total students
Grade 1	32	50.0	32	50.0	64
Grade 2	18	37.5	30	62.5	48
Grade 3	27	57.5	20	42.5	47
Grade 4	16	45.7	19	54.3	35
Grade 5	13	37.1	22	62.9	35
Grade 6	22	54.0	19	46.0	41
Grade 7	25	49.0	26	51.0	51
Total	153	47.7	168	52.3	321

Percentage of Boys and Girls per Grade Participating in the CBM Norming.

The percentage of students reading each probe was as evenly distributed as possible. In each school and for each testing period, students were evenly assigned a different probe. Table 4 shows the number of students and the percentage of the population for each probe and for all the testing periods.

Table 4

Number of Students (n) and Percentage for Each Reading Fluency and Written Expression Probe.

		Fa	.11		Winter			Spring				
	Read	ling	Writ	ting	Read	ling	Writ	ting	Read	ling	Wri	ting
Probe	n	%	n	%	n	%	n	%	n	%	n	%
A	84	33.7	73	30.0	79	32.9	104	41.9	103	32.5	93	32.3
В	83	33.3	74	30.3	79	32.9	72	29.0	103	32.5	105	36.5
С	82	33.0	97	39.8	82	34.0	72	29.0	· 111	35.0	90	31.2
Total	249	100	244	100	240	100	248	100	317	100	288	100

The percentage of students using each of the three writing probes is not the same for each probe, as the number of students varies from one school to another. Table 5 shows the number of students per probe for each grade level for the fall norming period. In grade six, for example, there are 19 students who wrote in response to probe C and only eight students who wrote in response to probe A in the first norming period. Only six students used probe B in grade four.

Table 5

	Probe A	Probe B	Probe C	Total
Grade 2	16	12	17	. 45
Grade 3	11	18	14	43
Grade 4	16	6	13	35
Grade 5	12	11	10	33
Grade 6	8	12	19	39
Grade 7	10	15	24	49
Total	73	74	97	244

Numbers of Students (n) per Grade for Each Written Expression Probe in Fall

Problems with Class List

Learning Assistance teachers (L.A. teachers) used class lists to assign probes. In the second norming period, lists were not reviewed and new students to the school were not included. For the last testing period, each L.A. teacher used recent lists to insure that all students were given both tests.

Main Analysis

Descriptive Statistics

Table 6 shows various statistics for each grade level and each norming period for

Reading Fluency.

Table 6

Mean SD Min Max Skew Grade Kurtosis Fall -. Grade 1 Winter -. _ ---22.21 1.24 Spring 18.58 1 75 0.87 Fall 29.45 21.01 3 75 0.66 -0.62 10 Winter 25.80 140 1.28 3.02 Grade 2 42.43 55.48 30.89 8 126 0.51 -0.46 Spring Fall 57.09 21.34 23 117 0.65 0.62 124 0.44 -0.89 Grade 3 Winter 67.69 25.39 28 71.07 25.10 30 137 0.46 -0.09 Spring 127 Fall 87.31 21.23 43 -0.26 -0.49 91.32 22.16 33 128 -0.75 0.26 Grade 4 January 96.20 20.70 44 135 -0.19 -0.08 Spring 41 119 0.36 -0.20 75.15 19.78 Fall 119 -0.66 78.70 21.81 35 0.05 Grade 5 Winter 21.77 122 0.13 -0.83 83.55 44 Spring Fall 69.13 17.36 39 116 0.59 0.40 Grade 6 14.91 44 112 0.15 0.11 Winter 75.64 120 0.47 0.49 76.54 16.40 46 Spring 22.64 136 0.09 -0.07 77.34 30 Fall 142 -0.05 Grade 7 Winter 80.20 22.48 41 0.51 80.30 22.87 31 123 -0.10 -0.50 Spring

Descriptive Statistics of Reading Fluency Results for Three Norming Periods

For the most part, the data are positively skewed across all grades and norming periods but close to the normal distribution value of 0. The kurtosis values are a mix of

small positive and negative values, close to a normal distribution. In grade two, for the fall, there is an odd value for the kurtosis and the skew: both values are very high.

The means increase from fall to winter and from winter to spring at each grade level. There is a more noticeable increase in grade two and three from fall to winter. As shown in Figure 1, the increase is minimal for grades four, five, six and seven between certain testing periods. As a result, the curve on the percentile graph has some raw scores for winter under the fall curve, or very close to it. A graph with raw scores and a graph with a smoothed curve are in Appendix H. Smoothing was necessary and will be discussed in more detail in a subsequent section.



Figure 1. Mean and SD by Grade and Norming Period for Reading Fluency

The grade four mean is greater than the grades five, six and seven means in all the norming periods. Students read more words in grade four than in grade five, six and seven. There is also a decrease in words read from grade five to six.

Table 7 shows the descriptive statistics of the results for written expression. Only the results for the Words Spelled Correctly (WSC) are in the table. The results for Total Words Written (TWW) are in Appendix I. They follow the same pattern as the WSC. Table 7

		Mean	SD	Min	Max	Skew	Kurtosis
	Fall	-	-	-	-	-	-
Grade 1	Winter	-	-	-	-	-	-
	Spring	10.40	8.32	1	38	1.53	2.41
	Fall	8.47	5.30	0	21	0.60	-0.64
Grade 2	Winter	12.78	7.67	1	33	0.79	0.01
	Spring	15.91	7.58	4	30	0.31	-1.13
	Fall	16.28	8.52	2	44	0.97	1.38
Grade 3	Winter	20.91	11.43	5	66	1.42	3.85
	Spring	21.23	11.12	6	62	1.19	2.76
	Fall	23.94	9.58	2	42	0.09	-0.03
Grade 4	Winter	30.35	10.68	5	54	0.00	0.21
	Spring	31.56	8.49	13	56	0.28	0.91
	Fall	30.58	10.19	7	49	-0.30	-0.59
Grade 5	Winter	36.73	13.38	9	59	-0.47	-0.40
	Spring	39.31	11.30	19	76	0.89	1.97
	Fall	37.49	12.35	14	65	0.41	-0.18
Grade 6	Winter	45.43	14.43	. 18	72	0.07	-0.91
	Spring	45.49	12.40	23	77	0.37	-0.19
	Fall	46.47	12.78	26	73	0.23	-1.03
Grade 7	Winter	51.82	12.94	30	84	0.66	-0.05
	Spring	51.94	14.95	27	. 89	0.42	-0.42

Descriptive Statistics of Written Expression (WSC) Results for Three Norming Periods

For the most part, the data are positively skewed across all grades and norming periods, except for two norming periods in grade five. The kurtosis values are a mix of small positive and negative values, close to a normal distribution. There is a normal distribution, skew of 0, in grade four for the winter testing period suggesting a normal distribution of the curve. In grade three, the kurtosis values are high and they correspond with higher positive values of skew.

The means are increasing consistently from grade one to seven as shown in Figure 2. In grades two, five and six, the mean in the fall is lower than the previous grade in the

spring. In all the grades, the mean increases noticeably between fall and winter but not as much between winter and spring.



Figure 2. Mean and SD by Grade and Norming Period for Written Expression (WSC).

Analysis of Probe Difficulty

It is important that probes within the same grade level offer the same challenge to students. I used two methods to verify the probe difficulty. I used the analysis of variance (ANOVA) test for single factor to compare the means among the probes. The ANOVA results for reading fluency and written expression are in Tables 8 and 9. An alpha level of .05 was chosen. In Tables 8 and 9, the letters <u>ns</u> mean there is no significant difference among the three probes. The letters <u>sig</u> indicate that there is a significant difference among the probes. The probes are ranked from most to least difficult.

Analysis of Reading Fluency Probe Difficulty

Table 8 indicates that of the 19 tests of differences for probe difficulty, there were only two instances, spring grade two and spring grade seven, of a significant difference. This is taken as evidence of a general lack of difference among probes within grade. Table 8

	Probe	Mean	Probe	Mean	Probe	Mean
	Fall	Fall	Winter	Winter	Spring	Spring
Grade 1					ns	
					A	21.3
					С	21.4
					В	23.8
Grade 2	ns		ns		sig	
	В	25.00	В	35.13	А	39.4
	А	28.06	А	40.13	С	55.07
	С	35.67	С	51.44	В	73.01
Grade 3	ns		ns		ns	-
	А	50.36	A	61.23	A	62.19
	В	55.75	С	68.94	В	68.93
	С	64.80	В	72.62	С	83.50
Grade 4	ns		ns		ns	
	В	79.81	В	86.75	Α	88.56
	Α	84.83	Α	93.64	В	98.94
	С	96.67	С	94.00	С	100.39
Grade 5	ns		ns		ns	
	С	73.09	А	77.67.	В	73.82
	B	74.36	С	78.82	С	87.33
	А	77.75	В	79.80	A	89.70
Grade 6	ns		ns		ns	
	С	64.58	Α	68.17	С	73.31
	А	65.77	В	76.46	В	75.83
	В	76.69	С	81.29	А	80.14
Grade 7	ns		ns		sig	
	С	72.59	В	71.67	С	69.71
	В	75.63	С	78.93	В	81.40
	Α	83.71	Α	89.38	Α	91.20

Reading Fluency Probe Differences Across Norming Periods for Grade One to Seven

Analysis of Written Expression Probe Difficulty

I used the scores of the Words Spelled Correctly (WSC) variable to compare the level of difficulty of the writing probes. I analyzed the results of the number of Words Spelled Correctly, and not the Total Words Written results as both sets are highly correlated (Marston, 1989). Analysis of one set can be transposed to the other series of results. In Table 9, the one factor ANOVA test indicates there is a significant difference among the probes 10 out of 18 times.

Table 9

	Probe Fall	Mean	Probe	Mean	Probe	Mean
		Fall	Winter	Winter	Spring	Spring
Grade 1					sig	
					В	6.80
					А	9.67
					С	14.50
Grade 2	ns		sig		ns	
	B	5.75	С	8.29	А	12.83
	C	8.71	Α	14.33	В	16.94
	A	10.25	В	14.82	С	17.29
Grade 3	sig		sig		sig	
	B	11.94	С	13.72	A	16.53
	C	17.93	А	23.31	В	21.06
	A	21.27	В	28.50	С	28.73
Grade 4	sig	•	ns		ns	
	B	12.83	В	27.27	В	27.75
	C	24.00	С	28.67	С	32.38
	A	28.06	A	34.69	A	37.00
Grade 5	ns		ns		ns	
	B	25.73	С	32.33	A	37.91
	C	31.60	В	35.25	В	38.55
	A	34.17	А	41.50	С	41.15
Grade 6	sig		ns		sig	
	B	29.58	С	43.00	A	39.25
	С	39.63	А	44.33	В	44.57
	A	44.25	В	51.86	C .	54.13
Grade 7	sig		ns		sig	
	B	40.07	А	49.38	A	43.08
	С	46.13	С	50.56	В	51.84
	A	56.90	В	60.56	С	62.80

Written Expression Probe Differences Across Norming Periods for Grade One to Seven

In the fall, the order of the probes is the same for all grades. Note that the group that wrote in response to probe B in the fall was given probe C in winter and probe A in spring. The meaning of these patterns are discussed in a later section. Students who wrote on probe A had the best results. There was a significant difference among the probes in all the grades except for grade five.

Reliability of the Measures

I used the Pearson Correlation test to evaluate the stability of the probes over time (from fall to spring). I compared the scores of the fall to those of winter, the scores of winter to those of spring, and for the entire period of testing, from fall to spring.

Table 10 indicates a consistent relationship for Words Read Correctly (WRC) between the norming periods for grades two and five. The <u>r</u> value is consistent for all the periods. In grades three and seven, the correlation is higher in the winter and spring periods. In grades four and six, contrary to what is expected about the progression of the reading skills, there is a lack of decrease in the fall-spring (6 month) period. The highest correlation value is in grade five.

Table 10

Grade	r	Г	r
	Fall – Winter (3 month)	Winter – Spring (3 month)	Fall – Spring (6 month)
Grade 2	77	.78	.77
Grade 3	.79	.80	.70
Grade 4	.74	.73	.80
Grade 5	.87	.87	.86
Grade 6	.76	.69	.79
Grade 7	.68	.81	.74

Pearson Correlation for Words Read Correctly Scores Between Norming Periods

* Grade one was tested only in Spring

Table 11 indicates a higher correlation between the Words Spelled Correctly (WSC) scores in the winter-spring period for all the grades. It decreases in the fall-spring period for most grade levels as the period covered is larger, thus more prone to fluctuation in the students' writing abilities or motivation. The <u>r</u> value increases in grade five only, going from .52 to .60. The <u>r</u> values for writing are lower than the <u>r</u> values for reading, thus less stable.

Table 11

Grade	r Fall – Winter (3 months)	r Winter – Spring (3 months)	r Fall – Spring (6 months)
Grade 2	.57	.71	.48
Grade 3	.73	.75	.72
Grade 4	.42	.45	.30
Grade 5	.32	.52	.60
Grade 6	.66	.77	.65
Grade 7	.49	.84	.56

Pearson Correlation for Words Spelled Correctly Scores Between Norming Periods

* Grade one was tested only in Spring

Creation of Norming Tables and Smoothing

In order to build norming tables, all the students' results were ranked from 1 to 99 percentile. Raw scores and percentiles of each testing period were put on one graph for each grade level. The resulting graphs show the students' improvement in the skills tested through the testing periods. Unfortunately, some results were less than to the results of the previous testing period. As a result, some curves were below the curve of the next norming period. Hence, the curves needed to be smoothed. I hand-smoothed most curves in the three categories reported on, Words Read Correctly (WRC), Total Words Written (TWW) and Words Spelled Correctly (WSC).

I generally lowered the scores in the fall and winter, instead of increasing them, so that cut-off scores are not artificially inflated. I changed the scores as minimally as possible, to just below the score of the later testing period. I had to make so many changes that I did not try to make the curves as smooth as possible. I did not modify any graph for grade one as students read and wrote only in the spring.

I created the norming tables using the data of the modified graphs. Some percentile data were available directly from the results. Some other data needed to be pulled from the curve. Table 12 is an example of a norming table for reading fluency for the grade three students. The two set of scores for written expression, i.e., Total Words Written (TWW) and Words Spelled Correctly (WSC) are in the same norming table for each grade. An example is in Appendix J.

Table 12

	И	ords Read Correc	tly - Grade Three	
	Fall	Winter	Spring	
Percentile	WRC	WRC	WRC	Description
99	112	121	129	
95	88	109	115	
90	80	101	102	Well above average
85	76	94	96	
. 80	71	88	90	
75	68	83	88	Above Average
70	66	78	84	
65	64	75	79	
60	63	70	76	
55	61	65	72	
50	57	60	70	Average
45	56	58	68	
40	52	55	64	
35	47	53	61	
30	45	51 .	57	
25	42	50	54	Below Average
20	39	48	51	
15	35	40	43	
10	31	38	38	Well Below Average
5	27	34	36	
1	24 .	28	32	

Norming Table for Reading Fluency – Grade Three

DISCUSSION

Many statistical tests are required to develop reliable assessment tools. If the tools are reliable, the norming tables emerging from the results can be considered reliable as well. Consequently, it is important to examine the results of the statistical tests performed in this project. The sensitivity of the probes to students' growth, the difference between the probes and, finally, the reliability of the probes will be discussed.

Issues Raised by Data

Students' Growth

Overall the curve of the means for reading fluency (Figure 1) shows a normal upward curve that plateaus in grades six and seven. The curve for CBM reading fluency in English also shows an increase from grade one to seven, with a slower growth rate at the upper intermediate levels (SD57, 1996a). The two curves were judged to be similar.

In grades two and three, the curve shows a steady improvement from one period to the other. In these grades, much emphasis is on reading skills instruction, with the result that students demonstrate considerable reading growth in a short time period. Grades six and seven students show less growth in their reading skills, as indicated by the plateau shown on the curve. This corresponds to a shift in reading instruction focus. In the upper intermediate grades, the emphasis is on reading as a way to obtain information through the application of skills taught in earlier grades.

There is a constant increase from grade one to seven with the written expression. This was not observed with the English written expression (SD57, 1996a). There is a second effect that is apparent. Students improve between each period, but more noticeably between fall and winter. The means in the fall for grades two, five and six are slightly inferior to the mean of the previous grade level for the spring period. This phenomenon is called the Summer Effect. Students don't use their writing skills in the summer as much and their spelling is not as sharp as in winter or spring. The saw tooth effect is similar to the one observed with the English CBM.

Reading Fluency Probe Difficulty

Comparable assessment instruments are essential when they are used to compare students' abilities. It is then important to build instruments that are comparable in difficulty over extended periods of time, as they offer "several instructionally related advantages over measuring student performance on ever-changing or increasingly more difficult samples of material" (Fuchs & Deno, 1994, p. 20). The results obtained from the methods used to verify the level of difficulty of the probes have an impact on the effectiveness and the reliability of the norming tables created in this project. The results show no significant differences among the reading fluency probes for all the grade levels, indicating that probes are of equal difficulty. Although the English reading fluency probes within grade were judged to be of equal difficulty, greater variation among theses probes was apparent.

Using texts from the classrooms' curricula brings a risk of having some students being familiar with a probe. The results could be affected by this situation and the norming scores could be higher than if all students would read a new text, especially if the sample is small. However, it is part of the CBM characteristics to use texts studied in class. This situation happened during the course of this project. In grade two, three students had read one of the texts. However, their scores were average and did not stand out from the others. It did not affect the results.

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Written Expression Probe Difficulty

The selection of probes is also important for the written expression norming. The results were greatly affected by the group of students using a specific probe. In the first norming period, probe A has the highest mean in all the grades. These students, with the exception of grade four and five in winter and grade four in spring, always had the most words correctly spelled. It can be explained by the fact that they are all from the same school and that they participated in a program to enhance written expression. They had used the program <u>Write On</u> (Hart, 2001) since the beginning of the school year. The students who had the least correctly spelled words except for grade four (winter and spring) and grade seven (winter) are from the same position. Even though the ANOVA test suggests a difference in difficulty between the probes in 10 instances out of 19, the difference can be attributed to the strength of the students. It is evident that a school effect has influenced the scores.

Reliability of the Measures

The <u>r</u> values demonstrate that the reading fluency probes were stable over time and across probes. The range of <u>r</u> values is wider for the French Immersion CBM (.68 to.87) than for the <u>r</u> values for the English CBM (.77 to .89) reported in the school district technical report (SD57, 1996a). The median in English is .85 and the median in French is .78. Values from the Pearson test demonstrate that the reading probes are stable over time. I regard these two values as equal.

The correlation between the written expression probes is not as satisfactory as the reading probes. The <u>r</u> values for the Words Spelled Correctly vary greatly from one

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period to the other for all the grades, except for grade three. The range of \underline{r} values is from .30 to .77. Similar data for the English CBM are not available for comparison. However, the correlation coefficients for Total Words Written are available; they range from .48 to .69 (SD57, 1996a). The median value in English is .62 and the median in French is .58; they are both similar. In both instances, the correlation coefficients are lower than the values for reading.

The decrease in stability for the written expression probes can be explained by the fact that reading and writing are different cognitive activities. Reading a text for one minute does not require any creativity or inspiration as writing does. Therefore, students' performance in written expression can be affected by their mood or motivation on any given day. Hence, more uneven performances are to be expected.

Norming Tables

We were successful in our attempt to create local norms for the French Immersion program. The regularity of the smoothed curves across testing times and the similarity to the English norming curves are a demonstration of this.

Limitations

The population of the students registered in French Immersion was quite small with a maximum of 321 students. In order to have more students in the study, the researcher would have had to include French Immersion students from another school district. This option would have contradicted the purpose of establishing local school district norming tables and created many logistical problems.

The number of students varied for each testing period due to student absentees. The limited time allotted to French Immersion Learning Assistance teachers in each school did not permit the testing of students who were absent for a long period.

SUMMARY

The objectives of this project were to develop efficient and inexpensive tools for Learning Assistance teachers to use with French Immersion students, and to create norming tables for reading fluency and written expression. The project was based on standard methods used in the School District #57 norming study (1996a). Three reading fluency probes for grades one to seven were developed. The ANOVA test shows no significant difference in difficulty between the probes. The written expression probes show significant difference in difficulty for many probes but the grouping of the students had an effect on the results as one group was stronger in written expression skills. Based on all the preceding analysis, both sets of probes, reading fluency and written expression, are considered reliable testing instruments.

The norming tables created in this project are a tremendous asset for the French Immersion program. They provide logical and usable norms for reading fluency and written expression.

All the results show similar reliability to the previous English study (1996a).

Implications for Further Research

French Immersion students start receiving formal English Instruction in grade three or four depending on the composition of their classes (split or one grade only). Even though they can read in English at that point, they do not spell in English as well as their peers who have had English instruction since Kindergarten. Anecdotal discussions suggest that by grade seven, French Immersion students have caught up with their counterparts from the English program. It would be interesting to compare the French Immersion students' CBM scores for reading fluency and written expression to CBM scores in their first language after English instruction has begun. One might suppose that they would write more in their first language as they are more comfortable in English. One might also expect no significant difference between their reading fluency scores as they have read and been read to in English from a very young age.

While much research has demonstrated the "validity of CBM reading as a measure of general English reading proficiency, including comprehension" (Marston & Deno, 1982; Shinn & Good, 1992), there is no general consensus about second languages. A study by Baker and Good (1995) provides "initial support for the validity of CBM reading as a measure of English reading proficiency, including reading comprehension, for bilingual students."(p. 572). However, Bertin (1988) demonstrates in her study that knowing the linguistic code and the meaning of each word individually are not sufficient to comprehend the text as a whole. As a fifteen year experienced educator, I support Bertin's view. Students may be able to decode extremely well but may not know the meaning of the words or the idea expressed. Developing a French CBM test for comprehension like a cloze-test and comparing the scores with CBM scores for reading fluency could enhance our knowledge about this topic.

CBM has proven reliable for assessing the basic skills of students in French Immersion. If these scores compared to the achievement grades letters French Immersion students receive at school, would they be highly correlated? Do the CBM scores give a realistic picture of the academic performance of the students? It would be interesting to compare letter grades of academic subjects, such as Language Arts, Social Studies, Mathematics and Science to CBM scores for reading fluency and Mathematics. That

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research was done for the English students and indicated positive correlation between CBM scores and grades (Fewster, 2000).

Implications for Practice

Creating norming tables for French Immersion is certainly an asset for French Immersion L.A. teachers and classroom teachers. The norming tables are easy to use and results give a good idea where a student's basic skills are compared to others. Teachers often need to evaluate the progress of a grade one or grade two student and help parents make a decision for his or her future placement. It is in the early primary grades that schools, parents and teachers prefer to decide if French Immersion is the right program for their child. CBM testing is quick to conduct and teachers themselves can administer it frequently.

CBM is also a useful tool for quickly assessing quickly a large group of students. In the fall, teachers often do not know all their students' abilities and can not ask for support from their L. A. teacher at that point. The scores generated by CBM allow them to quickly evaluate the students and give the necessary support early in the year.

My data are available for research study comparing boys to girls' scores. Knowing if one of the genders has much lower scores in reading fluency or written expression could help teachers evaluate and adapt their teaching strategies to the gender composition of their class.

The norming tables created in this project were designed to assess students of School District #57. Exporting the norming tables to other districts would have to be done with caution. Other school district French Immersion programs are in a different context which may affect the learning progression of their students. For example, school districts might have only one French Immersion school, a big turn over of teachers every year, many trilingual students, an advisor, full-time L.A. teachers, and so on. The norming tables might not be reliable in these different contexts. However, I am available to help any school district who may want to develop CBM probes and norming tables for their French Immersion students.

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Appendix A

Examples of Primary (gr. 2) and Intermediate (gr. 5) Reading Probes

(Teacher's Copies)

Nom:	2 - C
Niveau:	
Date:	

Dans ma maison.	3
Dans le salon, on se repose, on lit et on parle.	14
C'est là qu'on reçoit la visite.	20
C'est là aussi qu'on regarde la télévision.	27
Voici la cuisine.	30
Papa et maman travaillent beaucoup ici.	36
Souvent, la table est dans la cuisine.	43
Alors, la famille mange dans la cuisine.	50
L'heure du repas est un moment bien agréable.	58
Dans la chambre à coucher, il y a un lit pour dormir.	70
On se repose et on s'amuse aussi dans sa chambre.	80
Mon ami a des lits superposés.	86
Je suis bien dans mon lit quand il fait froid.	96
Les lits ont des couvertures chaudes et un bon oreiller.	106
Je fais souvent de beaux rêves.	112
Souvent, je me cache sous le lit.	119
Je saute aussi dessus.	123
C'est agréable de lire au lit.	129
J'aime bien parfois manger dans mon lit.	136
Ce qui est important, c'est que je peux y dormir.	146

Nombre de mots lus:	
Nombre d'erreurs:	
Nombre de mots lus correctement:	

35

Nom:	
Niveau:	
Date:	

Un loup-garou comme mari?	5
Il était une fois, au Nord du Grand Lac des Esclaves,	16
dans le Territoire du Nord-Ouest, une jeune femme	25
inuit qui habitait avec ses deux frères. Elle n'était pas	35
encore mariée. Ses deux frères s'inquiétaient pour son avenir.	44
Or, un jour un très bel homme vint leur rendre visite.	55
Elle fût vite impressionnée par la gentillesse de cet inconnu.	65
Ce jeune homme se montra très habile et très responsable.	75
Les deux frères l'aimèrent bien. Ils crurent qu'il serait un	85
bon mari pour leur petite soeur. Quelques semaines après,	94
le jeune visiteur demanda à cette jolie dame de l'épouser.	104
Elle aimait beaucoup et accepta de le marier.	112
Heureux, les époux emménagèrent dans leur maison.	119
La nuit de noces, la mariée fût soudainement réveillée	128
par des bruits. Elle entendit des hurlements. La jeune épouse	138
voulut que son mari aille voir ce qui se passait dehors.	149
À sa grande surprise, son mari n'était pas là. Elle décida	160
donc d'aller voir d'où venaient ces bruits. Elle ne vit rien.	171
Elle retourna se coucher. Quelques heures plus tard,	179
elle entendit encore des bruits. Mais, cette fois-ci,	188
ils venaient de l'étable. Les animaux s'agitèrent. Pour se	197
protéger, elle apporta une fourche. Un animal était là	206
c'était un loup.	209

Nombre de mots lus: _____ Nombre d'erreurs: _____ Nombre de mots lus correctement:

Appendix B

Graphemes and Sight Words Introduced (-), Worked on (+) and Acquired (\cdot)

from Grade One to Seven

sounds	Grade	Grade	Grade	Grade	Grade	Grade	Grade
	1	2	3	4	5	6	7
Letters sounds	+						
Simple syllable Ex: ba, mo	-						
Inverse syllable: Vowel - conson-	-	+					
nant // Cons vowel - cons.							
Simple sound	-	+					
Ex: on, ou, en, in, un, an, er, et, ai,							
ei, au, oi, ch, qu, ui, eu							
Silent "h"	-	+		•			•
Sound "o" open and close	-	+					
Complex sounds: ex: ph, eau, ain,		-	+				
ein						· · · · · · · · · · · · · · · · · · ·	
Syllables with 2 consonants		-	+				
Ex: br, fl, gr,							
M before p and b		-	+ .				
Ex: campagne, chambre							
Complex sounds: eu, oeu. Ex: oeuf			-	+			
Complex sounds Ex: noeud			-	+			
S = Z Ex: fraise		-	+	+			
Ent – ending in verbs Ex: aiment		-	+	+	+	+	+
Ent - as a sound Ex: lentement		-	+	+	+	+	+
"tion"			-	+	+		
"ille"			-	+			
"ail", "aille"			-	+	+		
"eil", "eille"			-	+	+		
"ouille", "ouil"			-	+	+		
"oeil", "euille", "ueille", "eil"				-	+		
Sight words 1	+	-		1			
A, à, aller, allons, arrive, au, aussi, autre,							
avec, beau, belle, bien, bon, bonjour, ce,							
bonne, ces, cette, comme, content, deux,							
en et faire, fait, gros, il, il v a ils, i'ai ie.							
je suis, jouer, la, le, leur, leurs, lui, ma,		· ·					
mais, manger, marche, mes, moi, mon, ne							
pas, notre, nous, on, où, par petit, petite,							
plus, pour, pres, qu', que, qui, sa, sans, si,							
son, sur, ta, te, toi, tous, tout, toute, tres, tu,							
vite. voir. vois. voit. veut. veux. v							
Sight words 2		+	-			1	
Aux, achète, appelle, apportons, autour, autre	e, bientôt,						
cette, ces, chante, chez, chien, combien, depu	uis,						
derrière, écris, en, enfants, faites, froid, il y a	, jamais,						
Jouons, leur, lis, monsieur, neige, nos, on, pa	r, parce						
c'est sait sans sien soi tire touiours toute	travail						
tres, va-t-en, vieux, voici, vos	,						

Appendix C

Table of Graphemes for Grade Five and Assessment of Probes

Sounds	(-) introduced	Probe A	Probe B	Probe C
	(+) to work on	Mon	Mouvements	Un loup-garou
	(.) acquired	anniversaire	de l'océan	commme mari?
Complex sounds		7		
Ex: ph, eau, ain, ein				
Syllables with 2		8	6	5
consonants				
Ex: br, fl, gr,				
M before p and b	•			1
Ex: campagne, chambre				
Complex sounds: eu,				1
oeu. EX: boeuf,				
Complex sounds: eu,	•			
oeu. Ex: noeud,		•		
"s" = "z" ex: fraise		2	3	2
"ent" - ending in verbs	+		8	3
Ex: ils marchent	the second se			
"ent" – as a sound	+	1	1	
Ex: lentement				· · · · · · · · · · · · · · · · · · ·
"tion"	+		2	
"ille"				1
"ail", "aille"	+		· · · · · · · · · · · · · · · · · · ·	
"eil", "eille"	+	1		
"ouille", "ouil"	+			
"euil", "euille", "ueille"	+			
"veil", "oeil"				
Others		1	4	7
		magnifiques	d'est, en est.	s'inquiétaient.
			équateur.	impressionnée
			superficiels	esclaves, inuit.
			P	homme, or.
				femme
Words with more than		4	1	2
3 syllables		magnifiques.	superficiels	Territoire.
5		merveilleuse.		s'inquiétaient.
		marguerites.		impressionnée.
		anniversaire (2)		gentillesse.
				responsable
Hard words (others and		5	4	10
words with > 3 svl. not				
included in others)				
Easy words		95	96	90

Appendix D

CBM Written Expression Probes

41

Numéro de l'élève: _______ Niveau: ______ Date: ______

Écris une histoire qui commence par...

Hier, un singe est entré dans l'école en passant par la fenêtre et ...

TME: TMBE:	
-	TMBE:

Α

Numéro de l'élève: Niveau: Date:

Écris une histoire qui commence par...

Je jouais dehors lorsque tout à coup des extra-terrestres ...

43

B

 •			
	•		
 		 -	
 		 	•
		TME:	
		TMBE:	

Numéro de l'élève: ______ Niveau: ______ Date: _____

Écris une histoire qui commence par...

J'ai trouvé un crayon magique et ...

				_
			P	
		IM	E: DE.	
		INI	DE: -	

.

44

С

Appendix E

Directions for Administration of Written Expression Probes

and Scoring Procedure

<u>Directives pour l'administration du test CBM d'écriture</u> (Directions for Administration of Written Expression Probes)

Matériel: test, chronomètre, les directives

- 1- Assurez-vous que les élèves aient un crayon bien aiguisé et une gomme à effacer.
- 2- Assurez-vous qu'ils connaissent leur numéro d'élève.
- 3- Donnez les feuilles de test aux élèves et demandez-leur d'écrire leur numéro d'élève et de tourner la feuille à l'envers lorsqu'ils ont fini.
- 4- Dites ces directives (n'ajoutez pas d'autres directives, s.v.p.)
 Vous allez écrire une histoire. Premièrement, je vais vous lire une phrase qui est un début d'histoire. Vous allez ensuite continuer l'histoire, (écrire ce qui arrive après ce début d'histoire). Je vais vous donner 1 minute pour penser à l'histoire et ensuite vous allez écrire pendant 3 minutes. Il ne faut pas oublier qu'il faut écrire le mieux possible. Si vous ne savez pas comment écrire un mot, écrivez-le du mieux possible, comme vous pensez. Vous ne pouvez pas me demander des mots en français (suivez bien cette règle cela va ralentir leur écriture s'ils vous posent des questions 3 minutes d'écriture sans interruption).
 Faites du mieux que vous pouvez. Avez-vous des questions? (pause)
 Voici le début de l'histoire: ...
- 5- Après avoir lu le début de l'histoire, laissez les élèves réfléchir pendant 1 minute. Vérifiez qu'aucun élève ne commence à écrire.

Après 30 secondes, dites: vous devriez être en train de réfléchir à ...(phrase de l'histoire)

- 6- Après que la minute soit terminée, dites: **Commencez à écrire maintenant**. Commencez à compter la période de 3 minutes.
- 7- Encouragez les élèves à se concentrer sur le travail à accomplir.
- 8- Après 90 secondes, dites: vous devriez être en train d'écrire au sujet de (sur)
 ... (début de l'histoire)
- 9- Après 3 minutes, dites: Arrêtez, déposez vos crayons. Vous avez bien travaillé. Merci.
- 10- Ramassez les feuilles. Assurez-vous qu'ils ont écrit leur numéro d'élève

<u>C.B.M. – Écriture - Règles de correction</u> (Scoring Procedure)

Le test vérifie deux habiletés en écriture: l'aisance à écrire et l'épellation. Pour que les résultats soient comparables entre les écoles, il est important que les correcteurs/trices appliquent les mêmes règles pour compter le nombre total de mots écrits et le nombre total de mots bien épelés. En cas de doute, il faudra contacter la coordinatrice du projet.

1- Comment compter les mots:

a) <u>L'apostrophe</u>: une lettre suivie d'une apostrophe sera compté pour un mot car la lettre remplace un mot.
 Exemples: L'écureuil - 2 mots (le écureuil)

J'ai - 2 mots (je ai) Ce n'est pas - 4 mots (ce ne est pas)

b) <u>Le trait d'union</u>: si le trait d'union unit 2 mots qui existent séparément, on comptera 2 mots pour ce groupe. Par contre, si un des mots n'existe pas séparément, on comptera 1 mot pour ce groupe de mots.

Exemples: Porte-feuille - 2 mots Peut-être - 2 mots Est-ce que - 3 mots Pré-test - 1 mot

- c) Les mots anglais: chaque mot sera compté.
- d) Les mots inventés: les mots inventés seront comptés.
- <u>Les abréviations</u>: les abréviations seront comptés pour un mot Exemples: BBQ - 1 mot

T.V. ou tv - 1 mot

CD - 1 mot

 f) <u>Les nombres</u>: les nombres doivent être écrits avec des lettres. Exemples: Les 2 chaises - 2 mots J'ai 8 ans - 3 mots J'ai vingt-cing ans - 5 mots

2- Comment compter les mots bien épellés:

On ne doit pas tenir compte des différentes règles de grammaire de la langue française.

 a) <u>L'accord des verbes au sujet</u>: si le verbe existe avec l'épellation du texte, il sera compté comme "bon". Il ne doit pas s'accorder avec le sujet.
 Exemple: Ils mange - 2 mots bien épelés Nous avons bus - 3 mots bien épelés b) <u>L'accord des verbes aux temps et modes</u>: si le verbe existe avec l'épellation du texte, il sera compté comme "bon". Une mauvaise utilisation du temps ou du mode de verbe ne doit pas être pénalisé.

Exemples: Ils ont mange - 3 mots bien épelés Vous pensé - 2 mots bien épelés J'ai mettre - 3 mots bien épelés

 <u>L'accord des adjectifs et des noms</u>: les noms et adjectifs ne seront pas pénalisés s'ils ne sont pas accordés aux genres (féminin/masculin) et au nombre (singulier/pluriel)
 Exemples: Les beau fille - 3 mots bien épelés

Le petite chaises vert - 4 mots bien épelés

 d) <u>Les déterminants:</u> le choix erroné d'un déterminant (article, adjectif possessif) ne sera pas pénalisé si le mot est bien épelé. Exemples: Ma chapeau - 2 mots bien épelés

La école - 2 mots bien épelés

 <u>Les homophones</u>: le choix erroné d'un homophones ne sera pas pénalisé si le mot utilisé est bien épelé.
 Exemples: Les chiens on mangé l'heure os. - 6 mots bien épelés

nples: Les chiens on mangé l'heure os. - 6 mots bien épelés Mait yeux sons bleus - 3 mots bien épelés

- f) <u>Les accents</u>: les accents sur les voyelles doivent être précis (bonne direction).
 Exemples: Trés fâché 1 mot bien épelé Le gàteau - 1 mot bien épelé
- g) <u>Les noms propres de personnes ou d'animaux</u>: si l'orthographe des noms propres de personnes ou d'animaux varie dans le texte, l'orthographe du mot le plus utilisé sera pris en considération. Exemples: Sabrinae, Sabrinae - 2 mots bien épelés
- h) <u>La majuscule au début d'une phrase</u>: on ne comptera une faute si le premier mot de la phrase n'a pas de majuscule.
- i) <u>Les lettres inversées</u>: si la lettre inversée produit un mot bien orthographié, ce mot sera accepté. Mais si la lettre produit un mot qui n'existe pas ou qui n'est pas bien écrit, il ne sera pas considéré comme mot bien épelé.

Exemples: Doule au lieu de boule - 0 mot bien épelé Bon au lieu de don - 1 mot bien épelé

 j) <u>Les abréviations</u>: les abréviations sans points entre les lettres seront considérées comme bien orthographiés.

Exemple: La tv - 2 mots bien épelés La NASA - 2 mots bien épelés

Appendix F

Directions for Administration of Reading Probes

and Scoring Procedure

Directives pour l'administration du test CBM de lecture (Directions for Administration of Reading Probes)

Matériel:

- Copie de lélève (probe A, B ou C)
- Copie du professeur (avec le nombre de mots par ligne)
- Un chronomètre
- Un enregistreuse à cassette
- 1- Placer la copie de l'élève devant lui.
- 2- Placer la copie du professeur dans un cartable (ou autre) devant vous de façon à ce que l'élève ne voit pas ce que vous écrivez.
- 3- Dites ces directives à l'élève: Quand je dirai "vas-y", tu pourras commencer à lire à voix haute du début du texte (montrez le début avec votre doigt). Lis le texte du mieux que tu peux. Je vais t'arrêter après 1 minute. Si tu as de la difficulté avec un mot, je t'aiderai. As-tu des questions?
- 4- Dites le nom de l'élève ou son numéro de bibliothèque dans l'enregistreuse. Dites ensuite: vas-y. Commencez le chronomètre quand l'élève dit le premier mot. Si l'élève hésite sur le premier mot du texte pendant 3 secondes, dites-lui le mot, inscrivez-le comme une faute et commencez le chronomètre quand il dira le deuxième mot.
- 5- Suivez la lecture sur votre copie. Soulignez ou encerclez les mots que l'élève lit incorrectement.
- 6- Si l'élève hésite ou ne sait pas un mot pendant 3 secondes, dites-lui le mot et inscrivez-le comme une faute.
- 7- A la fin de la minute, inscrivez une barre oblique (/) pour indiquer la fin de la lecture et dites: **arrête.**
- 8- Remerciez l'élève et dites-lui un mot d'encouragement. Passez à l'élève suivant.

* Occasionnellement, un élève lira à toute vitesse, c'est-à-dire qu'il lira rapidement et sans expression. Dites-lui que ce n'est pas un test de vitesse et qu'il doit lire du mieux qu'il peut. Recommencez la lecture.

Règles de correction pour CBM lecture

(Scoring Procedure)

1- Mots lus correctement

- a) Mots bien prononcés
- b) Mots corrigés par le lecteur lui-même
- c) Mots répétés (comptés pour un mot)
- d) Mots dits avec un accent différent (dialecte)
- e) Mots insérés sont ignorés

2- Mots considérés comme "incorrect"

- a) Mots mal prononcés ou changés pour un autre mot (même si c'est une substitution logique).
- b) Mots omis
- c) Hésitations
- d) Mots dits dans le mauvais ordre (inversés)

3- Règles spéciales

- a) Nombres numéraux et ordinaux
- b) Mots avec apostrophes
- c) Mots avec trait d'union
- d) Abréviations

Appendix G

Letters of Permission

Information Letter to Parents



SCHOOL DISTRICT NO. 57 (PRINCE GEORGE)

1894 Ninth Avenue, Prince George, B.C. V2M 1L7

Phone: (250) 561-6800 Fax: (250) 561-6801 www.schdist57.bc.ca

October 23, 2001

Sylvie St. Pierre Teacher College Heights Elementary School

Dear Sylvie:

This letter is to confirm our telephone conversation regarding your request to develop reading and writing norms for the French Language Arts curriculum as a part of your master's thesis.

You spoke with Dave Devore in September and received tentative permission to expand the request for a project. Although the School District Curriculum Department is not planning the development of French CBM norms in the next few years, we do give permission in principle for this project to go forward. However, the permission of each of the principals of the four schools mentioned will need to be obtained before you initiate the project in their school.

Your letter of September 26th outlines the project very well. As we discussed during our conversation, you have agreed to use the students' numbers rather than their names on the data in order to protect confidentiality. Please also forward to me a copy of the UNBC Ethics Committee approval.

The school district receives many requests for research projects. Although we do try to support many of these projects, in principle, and encourage schools to accept research students into their schools, we are unable to provide any release time for projects of this nature.

If you have any questions, please do not hesitate to call me. Good luck with your project.

Sincerely,

spell

Bonnie Chappell Director of Curriculum & Instruction

BC/hg

CC: D. DeVore, Director C. Anserello, School Services Administrator French Immersion Principals

UNBC

UNIVERSITY OF NORTHERN BRITISH COLUMBIA

Research Ethics Board

MEMORANDUM

To: Sylvie St. Pierre

Peter MacMillan Education Program

- From: Alex C. Michalos Chair, Research Ethics Board
- Date: December 12, 2001
- Re: Ethics Proposal 2001.1207.112 Curriculum Based Measurement Norming Tables for Reading Fluency and Written Expression for SD #57 French Immersion Program

Thank you for submitting the above noted proposal to the UNBC Research Ethics Board for review. Your proposal has been approved and you may begin your research.

If you have any questions regarding the above, please feel free to contact me.

Sincerely,

CELY Michal

Dr. Alex C. Michalos, Chair UNBC Research Ethics Board

Dear Parents,

During this school year, Learning Assistance Teachers (L.A.T.) in the French Immersion schools are conducting a series of tests in reading and writing with French Immersion students. These tests, Curriculum-Based Measurement (CBM), have been used in our School District for many years for all the students at the elementary levels but in English only. In a 1995-96 report, the School District has recommended the development of probes and norming tables for French Immersion.

As a U.N.B.C. graduate student in Education, I have taken this endeavor on as the final project for my Master of Education degree, and has been approved by the School District Administration. Being a French Immersion Learning Assistance Teacher myself, I am taking on a task that is part of the L.A.T.'s regular responsibility, thus developing a project that is relevant for the students' ongoing evaluation. Although the results will be part of the University project, both student names and school names will not be used in the project nor in the report to the school board. Library numbers are used to keep track of student data. However, each school L.A.T. will have access to student names and results as assessing is part of their regular responsibility.

Testing is done in October, January and April for grade two to seven. Grade one students are tested only in April. The series of three tests are to establish norming tables so that educators can have a bench mark to compare students at different periods of the school year. These tests are easy to administer and measure the student progress in the same curriculum used the French Immersion classroom. It is very difficult to find standardized tests for French programs and the results of this project will help both L.A.T.s and classroom teachers to develop programs relevant to the needs and skills of the students.

If you have any concerns or questions about the tests or the UNBC project, you can contact your school L.A.T. or myself, Sylvie St-Pierre, L.A.T. (UNBC student) at College Heights Elementary School at 964-4408 or at home at 562-9268. Merci, thank you!

I would like to reiterate and assure you that both school and student names are kept confidential.

Sincerely,

Sylvie St-Pierre French Immersion teacher grade 5/6 French Immersion Learning Assistance Teacher Ecole College Heights Elementary School

Appendix H

Graph with Raw Scores and Graph with a Smoothed Curve (Grade Six)





Appendix I

Descriptive Statistics of Written Expression (TWW) Results

for Three Norming Periods

		Mean	SD	Min	Max	Skew	Kurtosis
	Fall	-	-	-	-	-	-
Grade 1	Winter	-	-		-	-	
	Spring	15.48	10.50	1	48	1.17	1.34
	Fall	11.82	7.22	1	31	0.60	-0.39
Grade 2	Winter	17.41	9.19	4	41	0.80	0.03
	Spring	19.12	8.16	5	34	0.08	-1.04
	Fall	20.23	9.44	5	50	1.12	1.54
Grade 3	Winter	25.20	12.71	8	73	1.18	2.80
	Spring	24.86	11.66	8	68	1.18	2.98
	Fall	28.43	11.24	2	50	-0.15	0.19
Grade 4	Winter	35.26	11.17	6	64	0.02	0.96
	Spring	36.53	8.99	21	61	0.51	0.45
	Fall	35.12	10.15	8	52	-0.47	0.31
Grade 5	Winter	40.97	13.86	10	64	-0.43	0.50
	Spring	44.77	12.24	24	84	0.83	1.90
	Fall	42.62	12.70	19	71	0.38	-0.25
Grade 6	Winter	.50.76	13.69	27	78	0.31	-0.92
	Spring	51.03	12.53	28	81	0.50	0.06
	Fall	50.00	13.66	30	82	0.25	-0.75
Grade 7	Winter	57.10	13.20	35	90	0.65	0.01
	Spring	56.70	14.41	30	92	0.22	-0.45

Descriptive Statistics of Written Expression (TWW)

Appendix J

Norming Table for Total Words Written (TWW) and Words Spelled Correctly (WSC) for Grade Six

	T	otal Wo	rds Writt	en and V Grade	Words Sp six	elled Con	rrectly
	Fa	all	Winter Spring				
Percentile	TWW	WSC	TWW	WSC	TWW	WSC	Description
99	70	64	77	71	80	76	
95	66	62	71	68	72	70	
90	63	53	66	62	67	62	Well above average
85	56	49	66	58	66	59	
80	51	.47	63	54	63	55	
75	50	45	59	53	59	54	Above Average
70	49	44	55	50	56	51	
65	45	43	52	48	53	49	
60	43	40	51	47	-52	48	
55	42	38	50	46	51	47	
50	42	38	49	45	50	46	Average
45	40	37	47	42	49	44	
40	39	35	44	40	48	42	
35	38	32	43	38	46	40	
30	37	29	40	36	45	38	
25	35	28	39	34	43	36	Below Average
20	32	27	37	33	41	34	
15	29	26	36	31	39	32	
10	28	23	34	29	38	31	Well Below Average
5	25	22	31	24	32	28	
1	20	16	28	19	29	24	