



Using English Achievement Data to Promote Immersion Education

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More than thirty years of language immersion instruction in Canada and the United States have produced an impressive body of research demonstrating its benefits to students. This research indicates that students gain proficiency in a second language, develop cultural awareness, and perform as well as or better than their non-immersion peers on English proficiency tests (Rubio, 1998).

As a result of this success, new immersion programs are started every year. Today well over 300,000 students in Canada are enrolled in partial or full-immersion programs. In the United States, more than 200 K-12 immersion programs have been started since the first U.S. immersion program began in 1971.

Still, the 40,000 students enrolled in U.S. immersion programs represent less than one percent of the total students enrolled in public schools in the United States (Rhodes & Lynch, 1997). It is clear that the immersion concept remains relatively unknown in this country.

Even in districts that currently have immersion programs, much teacher and administrator time is spent explaining and justifying the program's aims and philosophy. With the increasing emphasis on students' achievement in the basic skills of math, reading, and writing, along with the development of state standards, second language instruction is not always seen as a top priority by district and state personnel. Although some forward-thinking states in the nation have included foreign language in the core curriculum, in the state of Minnesota, "World Languages" is the only optional area of the ten areas of learning required as part of the State Preparatory Standards for students in grades K-8 (Minnesota State Rule 3501).

Budget concerns force district administrators to carefully prioritize instructional programs. Since 1995, at least four immersion programs in the United States have been terminated or replaced with other programs. In addition, two of the largest citywide immersion magnet schools have had to decrease the size of their programs (Rhodes & Lynch, 1997).

The expansion of immersion programs into middle schools and high schools brings on issues of personnel, facility, and material costs. Indeed, expansion into middle and high school grades is too often neglected in districts and not considered a top priority. Rhodes and Lynch (1997) report that that 64 percent of all immersion schools in the country are at the elementary level, while only 22 percent are at the middle school/junior high level, and just 8 percent at the high school level.

One of the most frequent questions that current and prospective parents have about language immersion education is whether or not their child will perform as well as children in non-immersion schools on English standardized tests (Bredesen & Bredesen, 1999). Research consistently shows that immersion students perform as well as or better in all subject areas in English by the time they reach fourth or fifth grade (see "Research Findings" below). The common perception that less exposure to English instruction should produce lower English test scores, however, persists.

Immersion educators must be well prepared to address the concerns of parents, district administrators, and school board members by providing clear research and data to support the benefits to students of language immersion education. Student achievement

in reading, writing, and math is a top priority for state and district administrators as well as for parents. Research and data focusing on immersion students' ability to perform well on English achievement tests are crucial for promoting the introduction or the continued development of language immersion education within a school district.

Research Findings: English Learning Outcomes of Language Immersion Students

General Findings

As mentioned previously, extensive research has been undertaken to determine whether immersion students are able to keep up with their English-educated peer group in subjects taught to them in their target language. Genesee (1987) cites longitudinal studies of immersion programs in different parts of Canada (St. Lambert, Montreal, Ontario, New Brunswick, and British Columbia). He concludes that early total immersion students, who typically receive 100 percent of their instruction in the target language in grades K-1, often experience a lag in reading, spelling, and written vocabulary skills when English is first introduced into the curriculum in Grade 2. They reach parity with students in all-English instruction, however, within one to two years of receiving English language arts instruction. There is no lag with the "interpersonal communication" skills of speaking and listening comprehension. In fact, immersion students were found to perform better than their non-immersion peers in these skills

(Genesee, Tucker & Lambert, 1975, cited in Genesee, 1987).

Swain and Lapkin (1982) evaluated the results of achievement testing in math, science, and social studies. Their findings also showed that, in the long run, “immersion students are able to maintain standards of achievement consistent with those of their English-educated peers.” IQ results of students tested yearly showed a general trend in which the IQ scores of immersion students increase more than those of English-program students, suggesting possible beneficial effects of the bilingual experience on cognitive development.

Rubio (1998) refers to more recent comparative studies of immersion and non-immersion students. Findings from programs in the United States, including Milwaukee, Cincinnati, Louisiana, and Greensboro, North Carolina, are consistent with early Canadian studies. Research has repeatedly indicated that immersion students perform as well as or better than their monolingual English peers on all standardized measures of mathematics, science, social studies, and in English language arts after some English instruction has been added to the curriculum.

Findings Related to the Effectiveness of Language Immersion for Children from Different Social Class Backgrounds

For the most part, early immersion research in Canada was conducted with students from middle- to upper-class backgrounds, since they made up the majority of the immersion student population (Genesee, 1987). It was therefore not certain if students from other socioeconomic classes and ethnic backgrounds were able also to perform as well as or better than their non-immersion peers. Subsequent studies have shown that students representing lower socioeconomic classes benefit as much as the middle class students from participation in immersion. Students from different socioeconomic classes and ethnic groups perform as well as or better than their English-only peers on English tests (Holobow, 1988, 1998; Holobow, et al., 1987; Genesee, 1992).

Minnesota Immersion Student Performance: Consistent with Research Findings?

In order to see if students enrolled in Minnesota immersion schools score at or above their non-immersion peers on English tests, the scores of students at four language immersion schools were compared with scores of students at schools with comparable socioeconomic status. The results were taken from the 1999 Fifth Grade Minnesota Comprehensive Assessments (MCAs), which are reading, math, and writing assessments given annually to all public school fifth graders in Minnesota. The content of the tests is derived from the areas of learning listed in the state preparatory standards required of all Minnesota elementary schools. The socioeconomic status of students is measured by the percentage of students at each school who are receiving free and reduced lunch services. In order to control for the effect of student mobility, scores were used only for those students who were enrolled at their school before Jan. 1, 1999 (tests were administered in March of 1999).

Immersion and Comparison Schools

The four immersion schools studied have very different student populations. Table 1 provides a description of each school (Rhodes & Lynch, 1997; Minnesota Department of Children, Families and Learning, 1999).

Nine non-immersion schools from metro-area districts (both urban and suburban) were selected to compare with each of the immersion schools. Comparison schools were selected randomly according to the percentage of

students receiving free and reduced lunch services. The schools were selected without looking at testing results. For example, Emerson, with 56 percent of its students receiving free/reduced lunch, was compared with schools having free/reduced lunch student percentages ranging from 50 to 56 percent. An average score was calculated from the scores reported for the nine comparison schools. In addition, each immersion school’s scores are compared with its overall district average.

Results of the Fifth Grade Minnesota Comprehensive Assessments

The 1999 Minnesota Comprehensive Assessment (MCA) results for each of the immersion schools, the average scores for the nine comparison schools, the rank of the immersion school in each group, and the local school district average scores are shown in Tables 2-5. Average raw scores were reported by the Minnesota Department of Children, Families and Learning for each school in reading and math. Students at each school were divided into four groups to take the writing assessment. Different prompts were given to assess varying styles of writing. For the purposes of this study, an average score of the four tests was calculated for the average writing score of each school.

The results were not analyzed for statistical significance. The only variable used for comparison was the percentage of free and reduced lunch. However, the results provide a snapshot of how Minnesota immersion students compare with English-only students on English standardized tests.

Students from Normandale French Immersion clearly out-performed their non-immersion peers in comparable schools on the 1999 MCAs (see Table 2).

TABLE 1. Characteristics of Four Minnesota Immersion Schools

<i>School</i>	<i>District</i>	<i>Year Began</i>	<i>Total No. Students</i>	<i>Percent free/reduced lunch</i>	<i>Time English is introduced</i>
<i>Adams K-6, full immersion</i>	<i>St. Paul</i>	<i>1986</i>	<i>680</i>	<i>22%</i>	<i>2nd grade, half hour per day</i>
<i>Emerson K-8, two-way immersion</i>	<i>Minneapolis</i>	<i>1995; partial in 1985</i>	<i>550 (30% native Spanish speakers)</i>	<i>56%</i>	<i>Literacy introduced in students' first language</i>
<i>Normandale K-5, full immersion</i>	<i>Edina (suburb)</i>	<i>1991</i>	<i>550</i>	<i>3%</i>	<i>3rd grade, one hour per day</i>
<i>Robbinsdale K-5, full immersion</i>	<i>Robbinsdale (suburb)</i>	<i>1987</i>	<i>660</i>	<i>10%</i>	<i>2nd grade, half hour per day</i>

Normandale ranked first among the ten schools in reading, writing, and math. The Normandale averages for each of the three tests clearly exceeded the average student scores of the comparison schools as well as the overall average for the district.

TABLE 2. Normandale French Immersion (Edina)

Subject	Rank*	Average Student Scores		
		Normandale (3%**)	Comparison Schools (2-4%)	Edina I.S.D. (4%)
Reading	1	1679	1569	1587
Math	1	1616	1526	1545
Writing	1	1671	1580	1628

Table 3 shows Robbinsdale Language Immersion's test scores as compared to other schools having similar student populations as well as the district as a whole. The average scores reported for the school clearly exceeded the average scores for the district as a whole. Among the ten schools, Robbinsdale ranked fourth in reading and math and third in writing.

TABLE 3. Robbinsdale Language Immersion School

Subject	Rank*	Average Student Scores		
		Robbinsdale (10%**)	Comparison Schools (9-11%)	Robbinsdale I.S.D. (25%)
Reading	4	1522	1528	1482
Math	4	1514	1498	1438
Writing	3	1615	1598	1504

Adams Spanish Immersion's test scores compared to other schools having similar populations are shown in Table 4. Among the ten comparable schools, Adams ranked third in reading, sixth in math, and fourth in writing. In addition, the average scores reported for the school show that students in the immersion school scored better than other students in the district overall.

TABLE 4. Adams Spanish Immersion School (St. Paul)

Subject	Rank*	Average Student Scores		
		Adams (22%**)	Comparison Schools (19-25%)	St. Paul I.S.D. (66%)
Reading	3	1511	1471	1338
Math	6	1435	1445	1302
Writing	4	1548	1515	1405

Emerson ranked first in reading and math when compared with the other schools with similar free and reduced lunch counts (see Table 5). The average scores reported for Emerson clearly exceeded the average scores for the Minneapolis district.

While the results of the three Spanish immersion programs were not as impressive as those reported for Normandale's French Immersion program in Edina, they do support research

that indicates that immersion students score as well as or better than their non-immersion peers on English assessments. Each of the schools exceeded the average score of the comparison schools in two of three areas. All out-performed the district as a whole

when average scores were compared. Indeed, the scores are remarkable given the diversity of the student populations.

Using Assessment Data

Teachers and administrators use assessment data daily to identify individual student strengths and areas of need. Schools and districts use data to identify and improve curricular and systemic weaknesses. Some educators are uneasy about using comparative school data, such as the MCA results presented in this paper. However, given the educational context in the United States and the importance given to standardized test scores, comparative data can be a very effective tool for promoting the benefits of immersion education

and for identifying benchmarks for improvement.

Promoting Immersion Education

As mentioned previously, current and prospective parents are often concerned about immersion students' ability to perform well on English standardized tests after being instructed primarily in their target language. Addressing general immersion findings is valuable, but site-specific findings

TABLE 5. Emerson Spanish Immersion School (Minneapolis)

Subject	Rank*	Average Student Scores		
		Emerson (56%**)	Comparison Schools (50-56%)	Minneapolis I.S.D. (69%)
Reading	1	1421	1373	1310
Math	1	1437	1373	1297
Writing	6	1427	1437	1297

offer additional information that strengthens and supports immersion education in particular contexts. It is one thing to say, "Research shows X." It is a more powerful statement to say, "Our data and results support research that shows X."

As immersion educators, we know that students who participate in immersion education gain many benefits that can't be effectively measured by traditional means of assessment. If we can provide additional evidence, however, that immersion students also do well on standardized testing when compared with non-immersion schools with similar demographics, we will not have to work as hard to justify the time spent on the activities used to develop cultural awareness and to improve target language skills. Data can show that time spent on these activities is not used at the expense of the acquisition of English skills. At the same time, we must be aware that in the United States context, we are fighting an uphill battle when it comes to beliefs about second language acquisition. All the data in the world may not be enough to alter belief systems in a context where the benefits of bilingualism are hardly

*Indicates immersion school's rank among the ten schools with comparable free and reduced lunch percentages.

**Indicates percentage of students receiving free and reduced lunch.

recognized by the government and the majority of U.S. citizens (Hakuta, 1986).

The Benefits of Benchmarking

Research and test results of immersion students indicate that they perform as well as or better than their peers in non-immersion schools on English standardized testing. With the exception of Normandale French Immersion, the schools discussed in this article were out-performed by some non-immersion schools in reading, math, and writing on the Minnesota Comprehensive Assessments. What are the factors that benefited the highest scoring schools? Do these schools have curricula, methods for delivering curricula, methods for using data, teacher training, school-wide incentive programs, or other activities that have led to their success? Identifying best practices, or benchmarking, can potentially provide valuable information for improving immersion schools.

Summary

Research from Canada and the United States over the past thirty years shows that students enrolled in immersion programs perform as well as or better than their non-immersion peers on English standardized tests, after English has been introduced into the curriculum for one or two years. This remains true even when demographic factors are taken into account. Despite this research, parents and district and state administrators sometimes hold to the perception that less class time spent with English instruction should automatically produce lower English test scores. It is therefore important for immersion educators to produce comparative data to back up research results.

All fifth grade students in Minnesota take the Minnesota Comprehensive Assessments (MCAs) each year. Results of the 1999 MCAs were used to compare the performance of immersion stu-

dents at four schools with that of students attending non-immersion schools. The comparison schools had similar percentages of students qualifying for free or reduced lunch. Results of the tests were consistent with research that indicates that immersion students score as well as or better than their non-immersion peers do on standardized tests in English.

Immersion educators can productively use comparative testing results. These data can be utilized to effectively promote immersion education by assuring parents, administrators, and community residents that immersion students perform well on assessments given in English. Despite increases in the numbers of immersion schools in the United States, less than 1 percent of students enrolled in public schools currently are enrolled in language immersion programs (Rhodes & Lynch, 1997). The potential for developing new immersion schools within existing school districts or as charter schools is tremendous. Because public school finances are limited, clear data are necessary to “sell” immersion education.

I believe, and expect, that all language immersion schools are capable of achieving the impressive results demonstrated by schools such as Normandale when compared with non-immersion schools. By benchmarking with non-immersion schools, and by networking with other immersion schools, language immersion educators can adapt best practices to help ensure the success of all immersion students. Making that success public may help to increase the number of immersion students enrolled in public school districts and charter schools.

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