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Early French Immersion: How has the original Canadian model stood the test of time?

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More than three decades ago, in 1965, a well-researched experiment began in a St. Lambert, Quebec kindergarten which was to help refine our understanding of how languages are learned and how they can be successfully taught (Lambert & Tucker 1972). Early French immersion - as it came to be called, sought to redress the failure of English school programs in Quebec to bring English-speaking children to high level, functional French language proficiency. In Quebec, as elsewhere, school programs were notoriously unsuccessful at bringing most children to functional proficiency in a language other than that of their home and wider community. The succeeding decades were, however, to offer an alternative. Thanks to the insights and excellent research of those who led the St. Lambert experiment, and to strong institutional and public support for French second language education, the immersion approach has increasingly offered English-speaking Canadian children a route to lasting second language skills. From the twenty-some children in the St. Lambert kindergarten, enrolments in Canadian French immersion programs at last count stood at over 325,000 half of them in Ontario (Canadian Parents for French 2000, p. 53). This translates into over 10% of the students in English language schools studying French (who themselves represent some 55% of elementary school students and 47% of secondary school students) (Commissioner of Official Languages 1998). Current programs are now receiving the children of the first generation of French immersion students, and some are even taught by immersion graduates. Canadian immersion has been particularly influential because of the meticulous research which has put it under the microscope in its various forms for the past 35 years, and documented it in several thousand reports to school boards, articles, book chapters, masters and doctoral theses, and books. This vast literature permits a retrospective analysis of what the immersion experience has taught Canadian educators and others about L2 learning and teaching.

This chapter will revisit the original St. Lambert experiment and similar early French immersion programs in order to recount their key features as well as their social contexts and outcomes. Then, other immersion and content-based language teaching formats which share some but not all features of early French immersion will be considered. Finally, the question will be addressed as to which program features and contextual elements have proven essential for effective school second language

learning across settings, and which, while less crucial, have been shown to significantly influence the success of school language learning.

The discussion will focus on programs for majority language learners, proficient speakers of the dominant local language, who study a second language for cultural and occupational enhancement rather than out of necessity. Their explicit goal is "additive bilingualism" (Lambert 1987), the development of high level second language (L2) proficiency while maintaining native proficiency in their first language (L1). School L2 programs for minority children, often referred to as 'submersion', bring additional complications and require a far more complex and context-specific analysis than is possible here.[1]

1. Prototype Canadian early French immersion model

1.1 Program features

Certain assumptions about second language acquisition were basic to the original early French immersion (hereafter EFI) model. One was that young humans are naturally equipped to acquire language knowledge incidentally as they hear it in the context of daily activities, and that this ability diminishes gradually as children grow older. A second assumption was that, to become fluent, children need very frequent and varied exposure to the second language for an extended period of time. One of the greatest obstacles to the success of most school language programs lies in the limited amount of time which can be devoted to language instruction. A third assumption was that language should not be taught formally as a system, but rather should be made available to learners in the context of activities which engage their interest, and which require language comprehension - and eventually - production. Thus ideal conditions for second language learning to be incorporated into school instruction were: 1) an early start - as early as possible; 2) intensive, contextualized exposure to monolingual use of the L2 over a period of years, and 3) motivating activities which engage the learner in understanding and using the target language. The corresponding instructional features of EFI were, and remain:

- *the earliest possible school starting age* (i.e., age four to six, beginning in kindergarten or grade one),
- *intensive L2 exposure over an extended period* (i.e., initial provision of all school instruction through the second language by a native speaker teacher, followed by a bilingual phase with at least half the instruction in the L2 over six or more years of elementary school), and

1 Schooling for such children in the dominant local language, their L2, runs the risk of promoting 'subtractive bilingualism' in the absence of strong, ongoing support for maintenance and development of their L1.

- *use of the L2 to teach the school curriculum* (i.e., student learning of substantive, varied and motivating school subject matter through the L2, including L2 language arts).

When the first EFI programs were conceived, the idea that a child's very first school experience would be in an unknown language was probably their most controversial feature. In fact, the most radical solution provided by EFI was finding a way of providing enough school time for children to become fluent in another language – by delivering most school instruction through the medium of the L2.

1.2 Contextual features

In addition to the explicit features of EFI, there were a number of contextual features present in the St. Lambert program and many subsequent EFI programs across Canada which researchers only later identified as important – perhaps even crucial – to the success of these programs. Certain characteristics of the learners themselves and of the relationship between the two languages involved were found to influence success in school language learning, while the nature of the school system and the surrounding sociolinguistic context was a key element in the initiation and implementation of an EFI program:

- *Learners were majority language speakers*, surrounded by their own language when interacting with peers, at home, and in the larger community. There was therefore no threat to their continued development of English language skills nor to their identity as English speakers. Furthermore, after several years of instruction in French, English language arts was introduced as a school subject.
- *Learners were all in the 'same boat'*, in that their proficiency as speakers of the instructional language was very limited. Because of this, teachers naturally made linguistic and pedagogical adjustments to ensure that students learned their school subjects, i.e., the teachers provided "comprehensible input" in the L2 (Krashen 1985). The learners also shared the same first language, which ensured social solidarity among them.
- *The program was optional, and learners were thus 'volunteers'*, whose parents had made an effort to get them into the program and were positive about it and about their learning French. This support and encouragement probably led to children's enhanced motivation for immersion learning.
- *Both languages were valued by parents, the immediate community, and the larger society*, exhibiting high levels of "ethnolinguistic vitality" (Giles et al. 1977). This ensured wide social support for learners.
- *The two languages were typologically related*, with many cognates and a largely shared writing system; they also represented very similar cultures, with broadly shared belief systems and values, daily life patterns, holidays, and artifacts ranging from Barbie dolls to snowmobiles and maple syrup (Weber & Tardif 1991). This

common background minimized the linguistic and cultural gaps that children were expected to bridge when learning their school curriculum through the L2.

- *School funding and decision making was under local political control*, which meant that parent activism could lead to innovation in local school programs. A well organized and informed group of parents, supported by experts in the field, could convince a local school board to experiment with a new program such as EFI, which, if successful, could be maintained.
- *Native speaker teachers of the immersion language were widely available* who, although they were not specifically trained in immersion teaching, were experienced in teaching the required curriculum and willing to do this in French instead of English.
- *'Authentic' pedagogical and other source materials for native speakers of the L2 were plentiful*. Even though most materials for native speakers required adaptation of language or content for the immersion context, the task of curriculum development for French in Canada was far lighter than it would have been for another target language.

Subsequent studies of immersion type programs confirmed the facilitative effects of all of these contextual features for language learning, at least at initial stages, as well as certain long-term limitations of such instruction.

1.3 Outcomes

The well-known pattern of outcomes for early immersion programs elsewhere in Canada has been highly consistent with the results of the St. Lambert program (Lambert & Tucker 1972, Genesee 1987, Halsall 1989, Calvé 1991, Lapkin et al. 1991). In general, outcomes for EFI can be summarized over the longer term as 'two for one', that is, EFI students achieved both a high level of L2 development *and* mastery of school subject matter equivalent to that of similar students studying through their L1, English. These results hold for mathematics, geography and other social sciences, science, and the other components of the elementary school curriculum including English L1 development. The only apparent lag experienced by EFI learners during elementary school in comparison with similar students learning a parallel curriculum through their L1, English, is a temporary one, in the area of English language arts (reading, writing and spelling).

English language development in fact never stops during EFI, in or out of school, and three years of instruction entirely in French from kindergarten through grade 2 produces no long-term negative effects on English oral or literacy skills. EFI children do, however, on average experience a lag in standardized test performance on English literacy skills from the time of immersion program entry until English instruction is introduced. This is normally overcome within the year in which a daily English language arts period is begun (i.e., generally by the end of grade 2), the only exception being English spelling, for which catch-up may require another year (generally the end

of grade 3). Thereafter, EFI children's English test scores are similar to and may surpass those of similar English program children (Genesee 1987, Lapkin et al. 1991, Bournot-Trites & Reeder 2001, Turnbull et al. 2001). A longitudinal, comparative study (Harley et al. 1986) indicated enhancement of certain English language and study skills of EFI students compared with matched English program students by the end of elementary school, while a study of former EFI and English program students at university (Neufeld 1993) suggested that early immersion confers an advantage in the use of figurative language and metaphors in English.

Children also maintain their English cultural identity in immersion, which is not surprising, as in most cases programs are located in otherwise English language schools, and most children have little or no contact with French out of school (Van der Kielen 1995). Moreover, there is evidence that French immersion, particularly EFI, has a positive and lasting effect on children's attitudes toward French Canadian culture when compared with those of children in English programs (Lambert 1987, MacFarlane & Wesche 1995), reducing perceived social distance and encouraging spontaneous contact with francophones, French language media and francophone culture.

With respect to French second language (L2) learning, early immersion results are very positive when compared with other school language programs. During their elementary school years EFI children develop highly functional academic and social language skills in both oral and written French which allow them to do their schoolwork at their age and grade level, and which in the case of listening and reading approach native speaker norms by the end of elementary school. In the long run these skills have been shown to be quite robust (Wesche 1993a). All types of French immersion programs consistently lead to far stronger French proficiency in all skills than do traditional (forty minutes per day) French programs. Both the young starting age and the far greater total school exposure time than in other L2 programs appear to contribute to this result (Edwards 1989, Halsall 1989, Lapkin et al.1991).

Not surprisingly, EFI children's language skills show certain shortcomings when compared with those of French native speakers (Vignola & Wesche 1991, Harley 1992, Wesche 1993a). Immersion children tend to use more restricted vocabulary, largely limited to domains experienced in school, to overuse high frequency verbs, and to show L1 influences in their production grammar (Harley 1992). They also tend not to initiate conversations in French, but rather to use it reactively, when required, such as in school or on excursions to areas where French is spoken (Genesee 1987). While some claim that there is an "immersion dialect" which may reflect some "fossilization" of non-standard forms (Harley & Swain 1984, Lyster 1987), research has demonstrated that even immersion students who lack wider contact with native speakers continue to progress toward native speaker norms throughout secondary school (Harley 1992).

The limitations of the immersion context for development of native-like speaking and writing skills have been hypothesized to lie in the somewhat restricted contexts for communication offered by the school setting; insufficient pedagogical focus on production, and on correct and appropriate language use; the limited number of native speaker models (teachers), specifically, the lack of native-speaker peers (Harley & Swain 1984, Lyster 1987, 1990); and the fact that as children get older they are more likely to imitate the language use of their classmates than of their teachers (Tarone & Swain 1995). Researchers and educators have sought ways to overcome these limitations through greater emphasis on speaking and writing activities to improve fluency (Swain 1988, 1995) and on "form-focussed" tasks embedded in communicative activities to improve accuracy (Harley 1989, Day & Shapson 1991, Kowal & Swain 1997, Lyster & Ranta 1997, Swain 2001). It also appears that language contact experiences with francophone peers are highly desirable for the development of conversational fluency and more native-like oral and written usage (Vignola & Wesche 1991, MacFarlane 1997).

Regardless of the immersion classroom's limitations, EFI students from diverse backgrounds develop high levels of L2 proficiency while developing their English (L1) proficiency and academic knowledge as well as do similar students who receive their instruction through their L1. When compared with other school programs, EFI may be seen as the most effective means of school second language instruction yet developed for majority language children (Laurén 1994, p. 4).

2. Other forms of immersion

While early immersion has taken a particular form across Canada and yielded highly consistent results, it is not a program that lends itself to universal application, even where advanced, functional L2 skills are a widely sought educational goal. In the ethnically heterogeneous and highly mobile public school populations of Canada's large cities, alternatives to multi-year, cumulative programs are necessary. A further issue in some parts of the country is the lack of availability of native speaker teachers, appropriate materials and other teaching resources. Finally, not all parents wish to give so much priority to second language learning. The immersion idea has thus taken other forms in other contexts. How do these other forms differ from EFI, and what does experience with them reveal about the programmatic and contextual features which characterized the original model? Which features are now seen by researchers as essential to successful school language programs?

2.1 Later starting ages

The success of EFI inspired the establishment of other forms of French immersion in Canada, including 'middle' or 'delayed' entry (MFI) (starting at grade 4, age 9), and 'late' entry (LFI) (starting at grade 6 or 7, age 11-12), both of which, like EFI, have engendered considerable research. All three types begin with a 'monolingual phase' in

which most or all instruction is given through the L2, French. Like early immersion, middle and late start varieties prepare students for bilingual secondary school programs in which approximately a third of the course work is taken through French.

Findings of some forty studies comparing early and later starting ages for Canadian French immersion programs were synthesized in a review of research on immersion entry points for the former Ottawa Board of Education (Wesche et al. 1996). With respect to language, academic and other attitudinal outcomes the following comparative patterns were found for different immersion starting ages (Wesche et al. 1996):

French language skills

From group comparisons of EFI, MFI and LFI immersion through grade 8/9, it is apparent that learners in each of the three programs are successful in mastering levels of functional French proficiency which far outdistance levels gained in regular (40-60 minute/day) programs. As would be expected from the relatively longer intensive exposure to French, EFI students generally outperform MFI students, and MFI students tend to outperform LFI students. EFI students tend to have an advantage in message focused, face-to-face oral language use, and to report higher self-confidence in using the language. In spite of the apparent advantages for EFI, many MFI and LFI students catch up to EFI averages by grade 8 on reading and written grammar measures, perhaps due both to self-selection for such programs by students already successful in regular French programs and overall school achievement, and to greater pedagogical emphasis on analytical (versus experiential) instruction and use of written materials with these groups (Dicks 1992). In a replicated study of EFI and LFI students who were subsequently placed together in bilingual secondary programs from grades 9-12, by the time of graduation no measurable group differences in any French language skills were found (Wesche 1993a). Even so, graduating EFI students tended to retain higher self-confidence than LFI students in their oral language abilities. It is not known whether their proficiency advantage at grade 9 would have been maintained had they continued their French immersion schooling in a separate program.

Academic achievement

Studies from various parts of Canada found no negative effects for EFI or MFI elementary school immersion students in mathematics, science and social studies achievement when tested in English, although in some cases students in earlier grades had lower scores when tested on the same subject matter in French, their language of study. LFI students with limited previous French instruction (e.g. 20-30 minutes/day) appeared to experience a temporary initial lag in grade 6/7 academic achievement, but none of the studies reviewed showed EFI/LFI academic differences as of grade 12. Less is known about MFI grade 12 academic outcomes, but studies at earlier grade levels tend to show MFI linguistic and academic outcomes between those of EFI and LFI students (Dicks 1994).

Language attitudes

Canadian French immersion students generally report very positive attitudes toward their immersion programs, as do graduates of high school bilingual programs which follow elementary and middle school immersion instruction. This is especially true with respect to EFI students. As noted earlier, research on EFI has provided some evidence that in comparison with regular language programs, immersion supports more positive student attitudes toward francophone culture, leads to reduced social distance, and promotes the desire for (if not always the realization of) spontaneous contact with francophones (Lambert 1987, MacFarlane & Wesche 1995).

Overall, EFI, MFI and LFI programs (all with 80-100% of instruction initially in French) appear to work quite well for the somewhat complementary clienteles they attract. A strong case can, in fact, be made for a school board to offer both EFI and a later starting program in tandem to accommodate mobile school populations and individual differences of students. However, from a language planning standpoint, it is important to note that wherever EFI is offered together with MFI or LFI, it attracts and retains a far larger, more socially and academically diverse student clientele than either later-starting program. Thus early total immersion has particular appeal for contexts in which the societal goal is for a large proportion and broad range of children to develop functional skills in a second language. Even though at-risk students are somewhat under-represented in most EFI programs compared to regular English language programs, many academically below-average students are nonetheless successful in developing their French skills in EFI and may perform relatively better than in regular (one period a day) French programs, especially during the first, pre-reading years which emphasize contextualized L2 oral communication. Later entry programs, particularly LFI, generally attract an academically stronger clientele who have been successful in regular ('Core') French programs. Thus while all three starting ages for immersion programs appear to work well for the clienteles they attract, EFI retains some important advantages.

2.2 Less intensive exposure to the L2

A variety of so-called 'partial immersion' options have also been tried, such as 50/50 programs with half the instruction in the L1 and half in the L2 (alternating the instructional language between mornings and afternoons, or every second day), and 75-minute a day 'extended' French programs similar to many U.S. partial immersion programs. Such programs make it possible to explore the importance of intensity of instruction, and the question of how much L2 exposure is needed to ensure adequate language development for learners to be able to maintain grade level learning in their other academic studies.

2.3 Early start and lower initial intensity

Early start programs using a half English/half French format have provided a test of the importance of the second essential feature of the St. Lambert study, an initial

'monolingual phase' versus an initial 'intensive dose'. One Ottawa area school board ran a 50/50 EFI program in all its 23 elementary schools from the early 1970s to the time of Board reorganization in 1997 (Ottawa Roman Catholic Separate School Board (ORCSSB) 1993, 1995). This early partial immersion program involved equal use of English and French as instructional languages from kindergarten/grade 1 through grade 6, with middle school and secondary school follow up programs. French language arts, social studies, the arts, physical education and science were taught in French, while mathematics, religion, family life and English language arts were taught in English. Instructional time totaled 2925 hours by the end of grade 6 (as compared with approximately 4680 for EFI). The program was intended to be 'universal', i.e., for all children, in a school board characterized by a high percentage of families with neither English nor French as home languages, as well as a shifting population with many families moving into or out of the region during their children's elementary schooling.

It was found over time that up to 20% of elementary students (varying according to the school, approximately half of them second language speakers of English) had to be accommodated in other ways during French instruction, so that although the program was intended for all students, local schools had to find alternative arrangements for some. The program nonetheless worked well for most students, leading to French language results at the end of elementary school between those of 75-minutes/day extended programs and those for EFI. During a 1995 review of a plan to move to 50/50 middle French immersion (ORCSSB 1995), parents showed strong support for the existing program – and for even greater intensity of French instruction. Parents also tended to support establishment of alternative programs for some students such as those from non-English backgrounds, a position which most educators in the study favored.

These findings demonstrate that a second language can be effectively taught in a 50/50 program, but that gains vis-a-vis early 'total' immersion will be lower, or roughly commensurate with the relative total time spent in the L2. The results also indicate that early intensive L2 learning may not be appropriate for all children, including those from third language backgrounds who are not yet proficient in the dominant local language; thus such programs should be optional.

2.4 Later start, short exposure, non-academic school content

For three years in the mid-1990s, the former Ottawa Board of Education tried an experimental one-year, half-day French program in one school for a class of grade 5/6 students in Core French, called the *bain linguistique* ('language bath'). Its purpose was to improve the French oral skills and self confidence of students who had been in 40 minutes per day of Core French throughout elementary school. The *bain linguistique* increased exposure to French from the 120 hour Core program to 450 hours for one school year, after which the students were to return to regular Core instruction. The hope was that an 'intensive dose' of French would lead to long-term improvement of

Core French program outcomes. Students spent half their day in French, working within the French second language curriculum and carrying out certain school activities (e.g., music, recreation). Academic subjects, however, including English, mathematics, and science, were taught in English.

In an evaluation of two cohorts in this program, the students' French listening and speaking skills improved notably during their *bain linguistique* year, in marked contrast to a comparison group in 40 minutes a day of French instruction (Wesche et al. 1994). Their self-reported enthusiasm for French study also increased, as well as self-confidence in using French to communicate in the classroom. Somewhat ironically, however, many of the *bain linguistique* students opted to enter LFI programs in grade 7, thus circumventing the program's objective to improve the long-term Core French experience. In spite of its success in exceeding the French language objectives of the Core program, *bain linguistique* outcomes fall far short of those achieved in the much longer-term immersion programs.[2]

In Quebec, similar one or two-semester Intensive English programs at the end of elementary school to bolster Core English programs have been well researched and showed similar short term results (Lightbown & Spada 1994). In addition, follow-up studies in secondary school confirm that the L2 abilities developed in these programs are well established, so that students who have had them continue to perform better than students who have not. In other words, a substantial period of intensive second language exposure builds fluency which is maintained once students return to the regular program (Lightbown & Spada 1994). A recent study (Collins et al. 1999) reports on Intensive English outcomes for a program format in which the regular French medium school instruction is confined to five months and the remainder of the school year is spent with students immersed in communicative English activities. Compared with a model in which regular instruction in both languages is spread over 10 years, the 'intensive dose' led to superior English learning outcomes for the massed learning conditions. Like the comparative outcomes of early total immersion versus a 50/50 format, the 'language bath' experience in both French and English as second languages confirms the value of more intensive use of the number of hours that are available for language teaching in school programs. The latter programs also demonstrate that substantive content other than academic subjects can also be an effective vehicle for intensive school language learning. In fact, such content is almost certainly more efficient for brief intensive interventions with learners whose L2 proficiency is not adequate for learning grade-level academic content. While such intensive programs offer an attractive alternative for some contexts, their language proficiency objectives and outcomes do not rival those of long-term immersion instruction.

2 The project was discontinued due to funding cuts and school board amalgamation, so it is not possible to know what the long-term effects would have been, or whether the *bain linguistique* program could have been as effectively implemented in other schools.

3. Immersion around the world

Immersion type programs on which research findings are available have also been established in many other languages and in school systems around the world (see Laurén 1994, Buss & Laurén 1995, Artigal 1997, Johnson & Swain 1997). Although these are generally confined to particular schools, school systems or regions, they serve significant and increasing school populations in some areas. Early immersion in Swedish, Finland's second official language (mainly in the Vaasa area), probably represents the sociolinguistic context most similar to Canada's where such a program has been tried (Björklund 1997). In the United States, immersion programs in Spanish were begun as early as the 1960s in California (Campbell et al. 1985), and recent statistics show over 242 current school immersion programs in 28 states and Washington, D.C., mainly in Spanish, but also in ten other languages including Chinese, Japanese, Russian, and Korean. Of these, approximately 40% are of the early immersion type, while 60% are partial immersion programs (like Canada's 'extended' programs) (Center for Applied Linguistics 2001a).

In the 1980s, schools in Australia's largest cities began experimenting with varied immersion programs in French, German and Hebrew, many of which are still in place (Clyne et al. 1995; de Courcy 1997; Clyne, this volume). These early initiatives were followed a few years later by the introduction of a number of Asian and European languages in varied immersion-type formats, starting at different grade levels and offering varied percentages of the school day through the second language. Some of the latter courses have involved single-school or even single-teacher initiatives, often lacking the infrastructure and resources needed for long-term maintenance. While such programs have arguably brought worthwhile second language learning experiences in different languages to many English speaking Australian schoolchildren, longer-established programs continue to show what is possible with sustained immersion instruction (see, for example, Clyne et al 1995, de Courcy 1997).

Germany offers a number of examples of immersion programs, ranging from nursery school immersion in French, English and other languages, to bilingual high schools in English and boundary languages – French, Italian and Hungarian (Endt 1992). The most thoroughly researched program is the delayed partial English immersion variant first established on an experimental basis in a small number of Schleswig-Holstein schools on the initiative of a Kiel university team under Henning Wode. The success of this program, reflected in detailed research on English language outcomes by the Kiel team (Burmeister 1994, 1998; Wode 1994a,b, 1995, 1999; Wode et al. 1994, 1996; Burmeister & Daniel, this volume), led to acceptance of the program as a regular option by the Schleswig-Holstein Ministry of Education. This late-starting, low-intensity immersion-type program is quite successful in enhancing the English proficiency of its academically able *Gymnasium* clientele.

4. Immersion in other socio-cultural contexts

4.1 English-speaking children in Quebec French medium schools

In Quebec, provincial legislation governing the language of instruction requires most children from non-francophone backgrounds, including English-speaking children whose parents did not attend Quebec English language schools, to attend French medium public schools alongside native speakers. It has thus been possible to compare the performance of English-speaking children in French-medium schools and students in French immersion programs in the English school system. In the former schools, not only is the regular curriculum given in French, but all the administrative staff and all the teaching staff except those teaching English are native French speakers. English second language instruction is begun in grade 4, usually for half an hour per day. Research in one such school (Genesee et al. 1985, Genesee 1987) found that in spite of the French instructional environment, much of the social interaction between English and French-speaking students took place in English, probably because the majority of the students in the school were L1 speakers of English or immigrants acculturated to English rather than French speakers. For this reason, the researchers dubbed the program "super immersion" for anglophone students (Genesee 1987, p. 69) Their study compared test results for French proficiency and other subjects of several cohorts of grade 4–6 anglophone students with those of EFI, LFI and francophone students. In grades 4 and 5, there was an overall tendency for EFI students to score as high on French proficiency measures as did anglophone students in the French medium schools, but the latter students tended to outperform EFI students by grade 6 in all aspects of French except oral production. With respect to their francophone peers, the anglophone students in French medium schools performed relatively less well in all aspects of French proficiency in grade 4, but improved relative to them in grades 5 and 6 in all areas except oral production. The comparatively strong performance of EFI students was surprising, especially considering that they were only receiving about half their school instruction in French by this time. It could probably be attributed both to the efficacy of the EFI program and to certain limitations of the French medium program for second language speakers. In fact, the French-medium students had very limited peer interaction with native speakers in French, and unlike the EFI students, also lacked pedagogical approaches which supported them as second language learners.

These data indicate that while the relationship between time of exposure and L2 acquisition is strong, it is not linear. Rather, *time on task*, i.e., using the language in varied, personally meaningful ways, is likely the critical aspect. To be effective, the curriculum must be adapted for the language abilities and needs of learners. Furthermore, language exposure alone is not sufficient; the curriculum must also provide learners opportunities to use the language with fluent speakers. The data also suggest that effective L2 pedagogy can be quite effective in initial stages in the absence of native speaker peers, and that integrating first and second language

speakers in the same school setting – while providing a potentially rich environment for L2 fluency development, does not automatically lead to interaction in the target language between the two groups of learners.

4.2 Two-way immersion programs

A highly successful, 'upscale' version of immersion is found in U.S. 'two-way' language programs, which serve approximately equal school populations of native speakers from each of two languages (mainly Spanish and English) in bilingual programs. Following a format developed in the 1960s in the Coral Way School program in Miami, some 248 two-way programs are now found in 23 states and Washington, D.C. (Center for Applied Linguistics 2001b), always in locations in which at least two significant language groups are present. Language arts instruction is provided separately for first and second language speakers of each language, and the remainder of the curriculum is taught to mixed groups of students in one language or the other (but not both). These programs have been highly successful in developing additive bilingual skills in both majority and minority language children (Christian 1994, Christian & Whitcher 1995, Rhodes et al. 1997).

4.3 The European Schools

What might be classed the 'luxury' model of immersion-like multilingual schooling, another parallel development from the late 1950's, is found in the European Schools now in seven major European Union administrative centers (e.g., Brussels, Karlsruhe). Their purpose is to educate the linguistically diverse children of EU employees alongside local children (Baetens Beardsmore & Swain 1985). With the mandate to develop learners' home languages and cultural knowledge while promoting a 'European' identity, these multilingual schools have recently expanded from their original Dutch, English, French, German, Greek, Italian and Spanish languages of instruction to accommodate EU employees from new member states such as Sweden. A child enrolled in such a school will receive elementary and secondary school education from native speaker teachers through at least three languages, including his or her home language, the local language and one of the EU's official languages (French, English or German). Students also have diverse opportunities to interact in school with native speakers of each language.

The European schools are particularly interesting for their success in incorporating ambitious language arts components in each language into the regular school program. In the case of a second or third language, language arts instruction is provided for a period of time before the language is used as a medium of instruction. These schools also provide regular contact with native speaker peers and adults – opportunities also widely available out of class. This contrasts with the experience of Canadian immersion children, who are lucky to be involved in class trips to French-speaking areas or bilingual exchanges once or twice during their schooling. The importance of these components is indicated by the results of a comparative study (Baetens

Beardsmore & Swain 1985, Baetens Beardsmore 1993), in which, although Canadian French immersion students gave solid performances, grade 8 European School learners of French outperformed immersion learners of the same age on tests of both grammatical accuracy and conversational fluency. These results probably relate not only to the unique curriculum but also to the characteristics of many of the students (in terms of parents' socio-economic level, educational background and knowledge of other languages), and to the immediate pertinence of the L2 for both social interaction and consequential school-leaving exams.

Needless to say, the European Schools are very expensive and extremely complicated to run. However, they successfully provide multilingual schooling to approximately 12,000 children, demonstrating what is possible for school language instruction under favorable conditions. They are thus a beacon for multilingual education elsewhere.

4.4 Typologically different languages, universal application

Immersion in an L2 which is typologically distinct from the L1 offers special challenges. One large natural experiment involving thousands of Chinese speaking children was Hong Kong's late immersion-type program in English (Johnson 1997, Marsh et al. 2000). From the 1970s to 1997, Hong Kong gradually changed from a dual education system of study in Chinese (Cantonese) or English medium schools to a system in which some 90% of the students studied in Chinese at the elementary level, then changed to English language instruction in secondary school. Little systematic 'bridging' was available for students entering English-medium schooling with inadequate English skills (Johnson 1997). Near-universal, English-medium secondary school instruction was given by teachers whose L1 was Cantonese. The L1 and L2 were very distinct from one another, and instructional policy demanded strict adherence to the curriculum leading to school-leaving exams, which largely prevented teachers from attempting pedagogical adaptations to accommodate learners' limited L2 proficiency. In addition to having to adhere to strict curriculum sequences to be covered, teachers were often handicapped by inadequate English proficiency. To communicate science, social studies and other content-based on English texts, teachers often resorted to 'mix' (a mixture of Chinese with English content words) supported by English language texts.

Overall, outcomes in both English language (Johnson 1997) and subject learning (Marsh et al. 2000) were disappointing. This appears to be a case in which contextual variables of various kinds undermined the advantages of intensive L2 exposure. These results demonstrate the hazards of universal application of late immersion, particularly in a situation in which the L1 and L2 are very different, learners enter the program with inadequate L2 (English) proficiency to support English medium instruction, curricular and pedagogical adaptation is not possible, and teachers themselves may not fully master the instructional language.

5. Content-based language instruction

In addition to the immersion variants described above, related content-based language teaching approaches exist in diverse contexts which share the feature of using the target language as a significant instructional language for school or even university subject matter content, together with adjustments to pedagogy and/or linguistic input (Mohan 1986, Brinton et al. 1989, Wesche 1993b, Met 1994). However, they generally lack the early start of EFI, since they exist at all instructional levels, and exposure to the second language is generally less intensive than with immersion and lasts for a shorter period of time. While some content-based courses – particularly at the post-secondary level – serve foreign language programs, such approaches are also used for English as a second language (ESL) instruction in schools (Snow & Brinton 1997, Early 2001), universities and adult occupational training programs (Wesche 2000; Wesche & Skehan, forthcoming). Content-based instruction has been tried with a wide range of subject areas and occupations, either in 'sheltered' (pull-out) or mainstream instructional contexts which offer language support and other pedagogical adaptations for L2 speakers. Such instruction has become popular in advanced post-secondary English language programs which prepare international students for university study through their second language.

Innovative post-secondary foreign language programs in several North American colleges and universities provide students with the experience of hearing and reading original texts in the foreign language and in perfecting their academic or professional skills for work in international contexts (Krueger & Ryan 1993, Wesche 1993b, Stryker & Leaver 1997). Anderson et al. (1993) have made a distinction between the goals of humanities-based foreign language applications which involve social studies and literature content from more utilitarian English-for-academic-purposes courses. They call the former "language enhanced content instruction" to reflect their emphasis on written and oral texts themselves, which are generally authentic cultural documents selected for value in reflecting particular authors, periods, contexts and ideas rather than necessarily as models for language learning.

In spite of their differences, all these cases involve substantive disciplinary content in a variety of fields taught through the target language to non-native speakers in ways that allow students to succeed in spite of their limited L2 proficiency, while helping them to improve that proficiency. As with immersion, instructors base their teaching on authentic materials, but these and the presentation language are selected and adapted as required to make the language and new material comprehensible to students and permit them to learn the content. This "scaffolding" of language input promotes learners' language development as they learn new concepts and immerse themselves in "real-life" uses of their second language (Mohan 1986, Met & Lorenz 1997). All of these approaches to simultaneously teaching both a second language and other substantive content share this key feature with early immersion, but differ in that learners are generally older, the intensity of second language exposure is lower, and the period of

instruction is often months rather than years. In addition, learners taking non-language courses with language support in high schools and universities also begin with relatively high second language proficiency (see below).

5.1 Advanced adult learners, low intensity

'Late, late immersion', involving academic course work by university students through a second language, offers an extreme contrast with EFI. Learners are young adults, exposure is low-intensity (3 to 4.5 hours per week), and the instructional period is relatively brief (courses last either one or two three-month semesters). Learners furthermore begin such instruction with both high level, functional L2 proficiency and high academic ability.

The bilingual University of Ottawa provides an example of this type of program in two target languages. It offered so-called 'sheltered' academic credit courses in psychology, history and other disciplines to second language speakers of French and English starting in the early 1980s. [These courses, although highly successful, were replaced a few years later by second language courses tailored to the language needs of students who took selected academic discipline courses for native speakers through their L2 (Burger et al. 1997)]. The original sheltered courses were partially modeled on immersion in that a special discipline course section was given for high intermediate to advanced L2 speakers by the regular professor, using the same curriculum as for native speakers. Language support was provided by a language teacher who would give a brief lesson at the beginning of each class to introduce new terms and provide previews and reviews of course content. This teacher also served a tutorial function, helping students with written drafts of homework, and sometimes acted as an intermediary with the discipline professor. These courses resembled immersion in their emphasis on regular curriculum content taught through students' second language and serving segregated classes of L2 speakers sharing the same L1. They were taught entirely in French to English speakers, and in English to French speakers, used authentic, information dense texts and other regular course materials, and involved spontaneous pedagogical and linguistic adjustments by the regular professors to accommodate students' language difficulties.

Comprehensive program evaluations (Edwards et al. 1984, Hauptman et al. 1988) showed the courses to be effective vehicles for improvement of academic French or English L2 skills, with learner gains equal to or greater than those made by similar students in well-taught language courses. Students were almost without exception successful in their subject-matter learning, and generally reported greater self-confidence and lower anxiety in using the second language than the comparison group, as well as a reinforced intention to continue studying it. This program has demonstrated that older second language learners in a low-intensity program can improve their second language proficiency while learning university content taught

through their L2. However, these were not beginners; such content would only be within the grasp of speakers with advanced L2 proficiency.

6. Back to the basics

Given several decades of accumulated experience with the above and other forms of immersion and content-based language teaching approaches, what can be said about the original Canadian EFI model, the assumptions that motivated it and its core features? What do the successes and failures of experiments with immersion and content-based language instruction tell us about how second languages can be most effectively taught in school settings? Which features of the Canadian model have been readily adaptable to other contexts, and which have not? Substantial research supports the following conclusions:

6.1 Early starting age

A younger start in a communication-oriented program will generally be advantageous for children whose L1 is well established and continues to develop. Children with a wider range of academic abilities are more successful in early immersion than is the case in later starting programs. Furthermore, long-term oral fluency development and self confidence in using the language tend to be stronger among EFI children. However, many students, particularly those who are academically successful and do well in regular (low intensity) early language programs, are highly successful in later starting programs.

6.2 Intensity of instruction and continued exposure over many years

An intensive dose of 'immersion' in a language is generally more effective for learning it than the same dose spread over a longer time. Even if it is a brief intervention of only a few months, an intensive dose can give students a leap ahead which makes subsequent low intensity instruction more effective.

The total amount of exposure time to a language is also very important; it takes a long time to learn a language well. But total cumulative exposure time is a crude measure; what really counts is 'time on task', or time spent actively learning and using the language in varied ways.

6.3 Learning of substantive school content as a vehicle for L2 learning

Highly motivated communication opportunities in the language are vital to the development of proficiency. Activities which encourage language analysis and attention to form, including feedback on learners' communicative production, has also been shown to enhance accuracy when carried out in contexts of communication (for review, see Swain 2001).

Use of the second language as a vehicle for learning school subject matter works very well for long-term programs. However, linguistic and pedagogical adaptation to accommodate learners' limited language ability appears essential to this success, especially at the beginning of immersion or other intensive programs. School content is particularly desirable in that it can accommodate intensive exposure and varied, motivated use over many years, allowing time for the development of high level second language proficiency alongside grade-appropriate academic knowledge in many domains. Non-immersion intensive programs may, however, use other kinds of substantive communicative activities effectively in a school setting, especially for less intensive or shorter-term intervention. It appears that to be successful, these alternatives must provide learners with engaging comprehensible language input, sustained meaningful practice and opportunities to interact with varied texts and speakers.

Interaction of second language learners with native speaker peers is highly desirable, and ultimately probably necessary if they are to reach native-like proficiency. Immersion school instruction can only do so much; there is a need for contact with native speakers other than teachers in diverse situations both in and out of school. In areas where communities representing several valued languages coexist, specialized programs which achieve this better than regular immersion are possible. Two-way immersion programs and multilingual schooling are two excellent (if logistically challenging) models. Over the longer term, schooling in which second language students are integrated into regular schools for native speakers will generally work better than immersion over the long term for developing L2 skills, but second language pedagogical support and L1 language arts instruction will be needed to ensure that academic development and first language literacy do not suffer.

6.4 Contextual factors

Contextual factors including characteristics of the learners, the languages involved and the curriculum interact in various ways to influence learning outcomes. Majority language learners who voluntarily enrol in an intensive program will tend to succeed better than minority language children and 'non-volunteers'. While academically able learners starting later entry immersion programs around age 9 or 12 can often catch up to early immersion learners in L2 proficiency during secondary school, a successful later start appears to work well for a more limited, high ability segment of the school population, and also depends upon appropriate curriculum and highly qualified teachers.

The relative status of learners' L1 and the instructional language, as well as their typological relationships, will also affect language outcomes. The relative socio-linguistic status of the immersion language will largely determine the availability of sufficient numbers of highly fluent, including native speaker teachers, as well as the availability of appropriate source materials in the language. It will also influence

parental – and ongoing political – support for an intensive program, and thus be related to long-term learner motivation. A target language which is more similar to the L1, both linguistically and in cultural representation, will lead to more rapid progress by L2 immersion learners than one which is quite different. These factors and the availability of sustained program funding will influence the number and quality of teacher training programs which promote appropriate pedagogy for immersion or other content-based language teaching, a vital ingredient if programs are to be maximally effective. Finally, the way educational systems are organized and their responsiveness to societal demands will largely determine whether immersion programs are established in the first place, and whether there is the political will to maintain them.

7. Conclusion

For designers of school language programs, early immersion, like the original Volkswagen Beetle - the 'people's car', remains widely applicable. Assuming that one can afford a car, the classic Beetle, still used in many countries, remains economical to own and run, easy to drive and repair, and durable, reflecting good design and craftsmanship. It can be useful in many contexts with only minor adaptations. If one has enough resources, a model which offers somewhat better performance may be found - just as the modern version of this car offers a more powerful engine, greater comfort and more safety features. Likewise, models tailored to the possibilities and constraints of given context are also possible; such as an all-terrain model, a station wagon or camper. But if relative economy, durability and broad applicability are the criteria, and again assuming that one has the infrastructure (distributors, trained mechanics and repair facilities, good roads and proper fuel) the classic VW model – and the original EFI design – are still quite serviceable. They had the fundamentals right, and these have not changed.

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