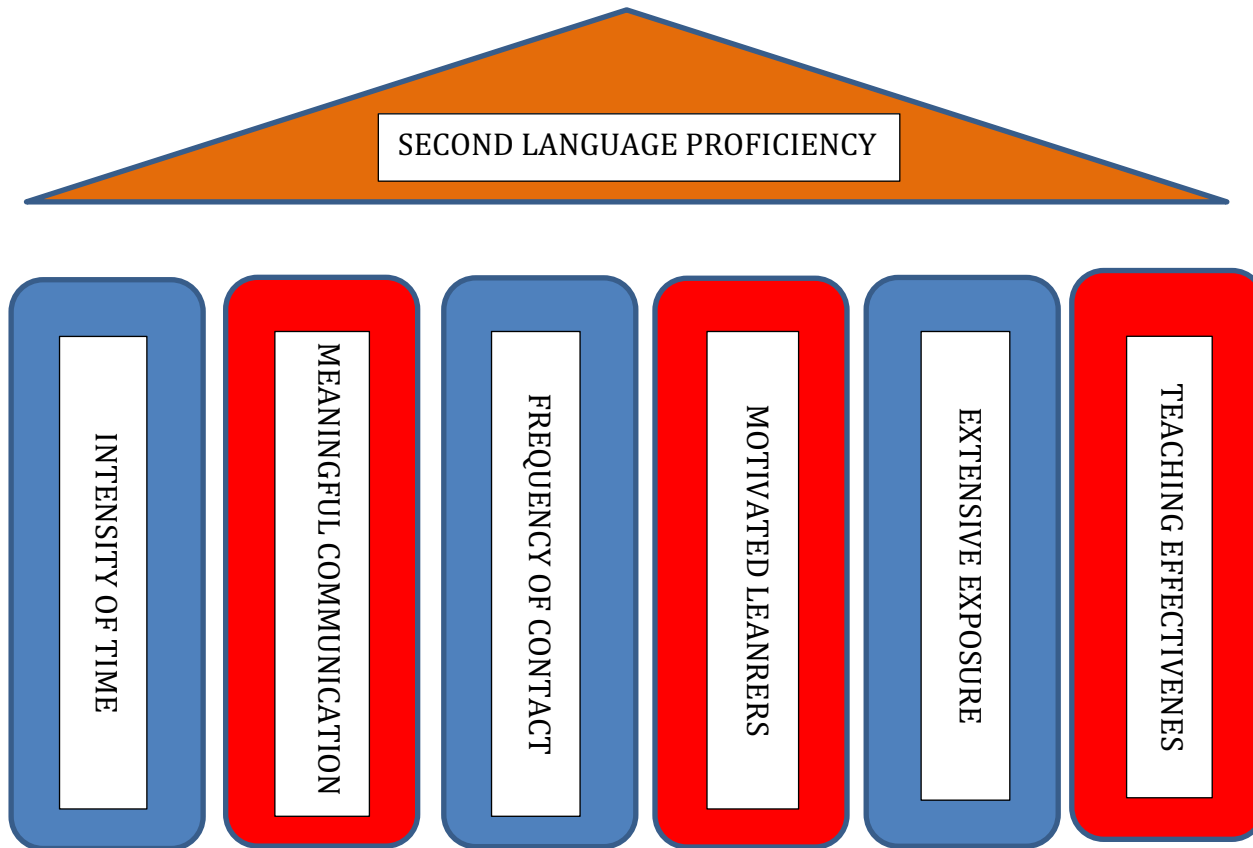


Temporal Pillars of Instructed Second Language Acquisition : Intensity, Frequency, and Extensiveness

Joseph Dicks, November 2022



The NB Chapter of Canadian Parents for French submission to the commission on official languages with respect to French second language learning included a reference to a model that is founded on six key “pillars” of successful second language programs. I designed this model with three fundamental and interrelated components of successful language learning in mind: time, motivation, and teaching competency.

While motivation and teaching competency are without question critical elements, for the purpose of this essay I will focus on the three temporal pillars: intensity, frequency, and extensiveness (also referred to as duration or cumulative time).

I would argue, and I believe few would disagree, that in an ideal language learning context, the learner is exposed to the language for a considerable part of the day, week, or term (intensity), every day if possible (frequency), and for an extended duration (weeks, months, or years). Indeed, in initial language acquisition, babies and young children acquire language exactly through this kind of intense, frequent, and extensive exposure to language. It is interesting to note that this is true for children who acquire one language in unilingual family settings as well as for those who acquire two languages simultaneously in bilingual family settings.

However, schools do not possess the advantages of natural language learning in a family setting. One obvious difference is that the time available for exposure to a new language is limited in school settings. It is not surprising that the original inventors of a novel French language learning program in St Lambert, Quebec in 1969 were parents. The program they envisioned was one that, to the extent possible in a school setting, would emulate language acquisition in natural, home and related environments. It was also quite telling when these parents consulted Dr. Wallace Lambert of McGill University's psychology department and the renowned neurosurgeon Dr. Wilder Penfield regarding the nature of an effective school-based language learning program "the doctors offered their support in spirit but their initial advice overall was to focus on bilingual education in the home rather than try to create structural affordances for it in the school system" (The Canadian Encyclopedia, "The Founding "Mothers" of French Immersion", Jan, 2020).

Those parents were persuasive and persistent, however, and we now know that the St. Lambert French Immersion experiment was extremely successful. Learners high levels of French fluency in particular can be attributed to the structure of the program that to some degree mimics the home setting: it is intense (initial exposure in early years and throughout the program – many hours per day), frequent (every school day), and extensive (from K to Grade 12). Other successful elements like reading, writing, aural comprehension, and ability to learn complex subject matter in the second language, and less successful elements such as accuracy of language use and sociocultural competence may be attributed to other factors present or lacking in the motivational and teaching pillars.

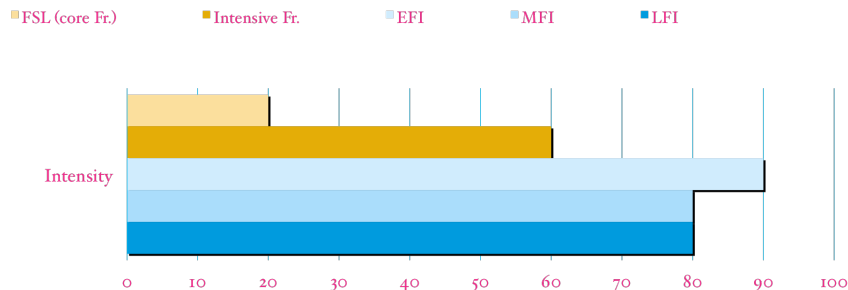
We also know, however, that not all second language programs incorporate these three temporal pillars to the same extent. In some cases, one, two, or all three temporal pillars are minimally present or not present at all. Let's look at a couple of common examples from the Canadian context: Core French and Intensive French.

Core French is by far the most popular French second language program in Canada. Typically Core French students receive French instruction frequently—often every day or 4 days out of 5 in a week. In this respect, the frequency pillar can be considered to be strong. However, with regard to intensity of time and cumulative hours of instruction, Core French is lacking. Often, French second language class periods are between 30 and 50 minutes in length. Since teachers or students have to move in and out of the classroom, this time can often be reduced by 5 minutes or so. Also, due to the limited intensity, the extensiveness (number of cumulative hours of exposure to the language) of Core French is restricted.

Intensive French is an alternative to Core French and French Immersion. In this program students receive an initial intense exposure to French of about 60% of each day for about 5 months. This level of intensity is not as high as late French Immersion or early French Immersion, but it is considerably higher than Core French. Once the initial intense exposure period is over (at the end of Grade 5 in New Brunswick), students revert to a less intense and less frequent exposure situation.

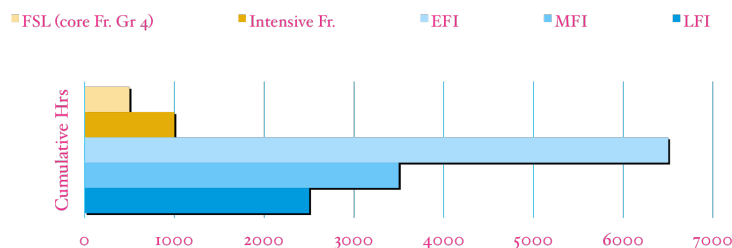
The following two graphs illustrate in a comparative way the intensity of various programs in the initial year as well as the total cumulative exposure to French in those programs.

A Comparison Based on Intensity at Entry
(in first year of program)



This first graph demonstrates the degree of intensity in the first year of each program. We can see that the three French Immersion variants (early – K or Gr.1 entry, middle – Gr.3 or 4 entry and late – Gr.6 or 7 entry) have between 80% and 90% of the time spent learning in the French language. Intensive French has 60% intensity, and Core French has 20% (if one assumes 50 minutes per day). However, exposure to French in Core French is often less than that -- in some cases only 120 mins per week or about 10%.

A Comparison Based on Extensiveness (Cumulative Hours by Graduation)



The extensiveness of the programs also varies greatly. We can see that while all three French Immersion variants are similar on intensity and frequency, Early French immersion has a large advantage in cumulative hours compared to either Middle or Late immersion. All three French Immersion variants have from three to six times more cumulative exposure than Intensive French and up to 10 times more cumulative hours of exposure than Core French.

Thus, while French Immersion programs benefit from all three pillars being strong and working together to support the language learning model, Core French and Intensive French each have temporal weaknesses. Core French is weakened by the lack of intensity and resulting low cumulative hours of exposure at graduation (extensiveness). Intensive French, while having a strong intensive pillar at the outset, is limited by less frequent exposure and considerably less intense exposure for the rest of the students' French second language learning journey.

These differences in intensity and cumulative hours of instruction contribute to vastly different levels of French proficiency. The New Brunswick Oral Proficiency Interview results over a period of many years indicate that students in the Early French Immersion program consistently outperform all other programs, and that French Immersion, in general, produces more proficient language users than Intensive French and Core French.

This has led some researchers to examine what might be done to improve French second language learning outside of the French Immersion context. Dr. Sharon Lapkin and Dr. Stephanie Arnott, two respected second language experts, have considered the issues of intensity and frequency. One critical question, when time is limited, is whether it is more advantageous to increase the intensity at the expense of frequency, or whether more frequent exposure is more beneficial. In a review of research, they discovered two studies that suggest that increased intensity may be more beneficial than increased frequency.

Lapkin and Arnott report that in one study (Marshall, 2011) it was found that 80 mins/day for half the school year was more beneficial than 40 mins per day for the full year. Another study (Lapkin, Harley, and Hart, 1995) found that two experimental

compact classes outperformed a comparison (40-minute) Grade 7 class on a French test administered at the end of their French course. Students in compact Core French liked the longer periods and thought they learned more effectively. It was also noted that instructional time was lost and fewer communicative activities were completed during the 40-minute periods.

Lapkin and Arnott (2019) cautioned that research on more intense, compact formats for Core French at the elementary level is limited and recommend that further experimentation should be undertaken in this area, “particularly given the wealth of research demonstrating the positive impact of intensive and immersive formats on both FSL teaching and learning” (p. 9).

Dr. Roy Lyster, a French Immersion researcher at McGill University, also noted that

The main difference between French immersion and core French programs is time, with the former benefitting from more time and the latter characterized, along with other such programs, by “limitations in quantity and quality of exposure” (Muñoz & Spada, 2019, p. 235). From a learning perspective, in addition to more time on task, the effectiveness of immersion programs is associated with their content-driven orientation, which provides a motivational basis for purposeful communication and a cognitive basis for language learning. (Lyster, 2019, p.12)

Clearly, time is a critical factor in second language learning, and pedagogical practices that maximize learning opportunities for students given the limitations of time are equally important.

In conclusion, it is important to recognize that intensity, frequency, and extensiveness are interrelated temporal characteristics of second language learning programs in school settings. Programs like French Immersion have a high degree of intensity at the outset and throughout the program, a high degree of frequency (daily contact with

the language), and a high cumulative level of exposure to the language by the end of schooling. These programs are positioned to produce the strongest results with regard to language proficiency. However, it is not always possible for each of these temporal pillars to be as strong as one would like. In these contexts, it is important to find the right balance between intensity and frequency in order to maximize students' language learning opportunities and their ultimate attainment in the second language. In deciding upon program design, sound empirical studies that examine the connection between temporal pillars on one hand, and motivational and teaching pillars on the other are needed. Such studies are in short supply, however. Any new models must be grounded in established theory and research, and accompanied by well-designed, thorough evaluative studies in order to determine their effectiveness in the short, medium and longer term.

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