Canada Today, January/February 1975



Catholic schools was expanded to include a half-day weekly of French instruction. The following year two new secondlanguage programmes were introduced into grade one. The first was a French immersion programme for the Englishspeaking pupils in which everything is taught in the second language (French) except religion. The second option was 75 minutes daily in which art, music and social studies were taught in the second language. Each year since, the programmes have been extended to a higher grade.

Extensive tests were made of the children's abilities in grade one each year. A report on the findings after the first two years found the results roughly the same each year. "These findings indicated that both immersion and 75 minute children progressed as expected, with greater progress in French by the immersion children, who also showed a reasonable amount of transfer from a French learning situation to an English testing situation. No significant detrimental effects of immersion were observed."

By the time test results were in for the first two grade-two classes in this programme, some differences in rates of achievement had begun to appear between the immersion and the 75 minute groups - though not dramatic ones. The group being taught in French for 75 minutes a day, says an evaluation report prepared for the Ottawa Roman Catholic Separate School Board, "performed significantly higher than the immersion group on word knowledge, word discrimination, reading and spelling subtests. However, there were no significant differences between the two groups on arithmetic concepts and problemsolving, arithmetic computations, or total arithmetic score." Comparing test scores, it adds, suggests that children in the 75 minute programme "have made very satisfactory progress in their academic achievement and that the immersion children continue to show considerable evidence of transfer from a French learning situation to an English testing situation."

The report says neither group indicates any abnormal learning or language disabilities and that both programmes seem to be beneficial to the pupils' English learning as well as their French. "The children in the revised second-language courses are more advanced in language skills not only in French, but, surprisingly, also in English."

In the secular schools system, the Ottawa Board of Education introduced an immersion language training programme starting with senior kindergarten (five-year-olds) in September 1970. Initial enrolment was 130 but had soon grown to more than 1000 pupils. As in the experiments already discussed, this programme has been expanded year-by-year to higher grades. The Board's report about tests carried out with grade-two pupils in the spring of 1973 said results were encouraging indeed.

"The pupils in the French immersion programme at the end of grade two:

- (a) although not at par with native Frenchspeaking peers, have achieved a level of proficiency in French far superior to their English-speaking peers who receive 20-40 minutes per day of French as a second language. They also perform surprisingly well on a test of French comprehension given to grade 8 and 9 students in a French immersion programme;
- (b) perform as well on tests of English language skills, with the possible exception of spelling, as grade two children attending the regular English programme;
- (c) have learned as much mathematics via French as their English peers who have been instructed in English, and can transfer this knowledge from French to English. Furthermore, they compare favourably with native French-speaking peers with respect to mathematic knowledge;
- (d) after three years of attending a French immersion programme, show no signs of any retardation in general mental or cognitive development relative to children in regular English programme."

The Edmonton studies were devised by Dr. Bruce Bain, professor of educational psychology at the University of Alberta. His report was published in 1974 and he delivered a paper about the work to the 18th International Congress of Applied Psychology in Montreal. One test was to measure differences of logical ability in actual problem-solving between bilinguals and unilinguals, and the other differences of ability to think out a situation. The first sought to answer the question:"Does access to and use of two languages systems result in differences in performance on a problemsolving task that demands logical operation?" The second test focussed on contemplation of emotional expressions. "Action is suspended in favour of inspection, judgment and analysis."

The pupils tested were all native-born Canadians, all from Edmonton and all as closely matched in school achievement and home background as possible.

On the results of the first test, Dr. Bain reports:

"In sum, the bilinguals tended to

discover the rules faster than the unilinguals, but the difference was only suggestive of a trend. The total time taken to discover and to transfer the rules was less for the bilinguals than for the unilinguals. The time required to transfer the rules was identical for both groups." The answer was "yes" the bilingual experience did result in differences of performance in logical problem-solving. "As far as this particular study is concerned, linguality does affect performance on problemsolving tasks. But the effect is differential, affecting more the grasping of rules than their transfer or generalisability The evidence suggests that bilinguals tend to discover rules a little more readily than unilinguals.... The bilingual tends to have some cognitive advantage over the unilingual in solving logical problems; although the advantage is not absolute."

Results of the second test were more decisive. The answer was "an unqualified 'yes' "- experience with bilingualism did result in differences in performance "on a test of sensibility to emotional expression.' The children were shown twenty-four portraits mounted on slides, as part of this test. Each portrait, painted by such masters as Rembrandt, expressed a dominant emotion previously classified as carefully and precisely as possible. "The bilinguals were more sensitive to the emotional expressions as displayed in the portraits than were the unilinguals." At a certain level, "the difference was significant." As far as this study was concerned, "linguality does affect sensitivity to emotional expression. Moreover the effect seems to be appreciable The bilinguals have a significant cognitive advantage over unilinguals in sensitivity to emotional expression."

The pupils for this test were selected from grades one and six. Half were French-English balanced bilinguals and the others were English unilinguals. "At both grade levels," Dr. Bain reported in Montreal, "the bilinguals made fewer classification errors than their unilingual counterparts. Each bilingual group performed one age norm ahead of their respective unilingual counterparts." He concluded that the test results show "the kind of language experience a child has affects the course of development of participative cognition, the effect being constant throughout." Clearly, he concluded, "being raised and schooled in a bilingual manner represents a unique form of child development."

An interesting footnote of Dr. Bain's studies is that the bilingual children he used were on average five or six months younger than the unilingual children they were being compared with.

"This sample cannot be considered conclusive in this regard," his Montreal paper says.

"However, it would be of major theoretical and pedagogical consequence if it were universally found that a bilingual upbringing results in a more rapid progression through operative stages and other kinds of development, compared to a unilingual upbringing."