What is this research about?
With the number of students enrolled in French immersion (FI) classes on the rise in the province of Ontario, understanding how these students process two languages simultaneously may be of increasing interest to parents and educators alike.

This study investigated the extent to which FI students whose first language is English identify and process words in both English and French during reading. Specifically the researchers explored whether students simultaneously learning two languages that share the same alphabet mentally store and retrieve words through a language specific system—French only or English only, or whether students possess a larger lexicon where their knowledge of both French and English words is invoked during the reading process.

What did the researchers do?
The researchers administered a speaking test to three groups of Grade 3 students; French Immersion students (84 girls, 62 boys) in three Ontario cities including London, Hamilton and Kingston and in Moncton, New Brunswick, English speaking monolingual children (40 girls, 27 boys) from the three Ontario cities, and French monolinguals (19 girls, 12 boys) from Moncton.

What you need to know:
This study examined whether English speaking French Immersion students use their knowledge of both languages when reading words in either language. In comparing students’ error rate in reading lists of words that are common to both languages with their performance in reading words that only exist in either French or English, the researchers draw conclusions about the FI students’ recognition and processing systems.

All children were tested in a quiet room in the schools by a trained research
The test was comprised of one of two lists of 60 age-appropriate words, an English list and a French list. Each list included:

- 10 cognates (words that have similar origins and meanings for both languages, i.e. letter/lettre, class/classe, table/table) and their control matching cognates (words that start with the same phoneme as the cognate and are approximately the same length, but are specific to one language, i.e. letter/little, classe/cloche, table/tree),
- 10 homographs (words that are written the same way in both languages but have different meanings, i.e. pour/pour, fin/fin and main/main) along with their control matching word specific to one language (main/mois, main/mean),
- And 10 words homophones (words that have similar pronunciations but have different meanings, i.e., nous/new, chaud/show) along with their matching control words specific to a single language (nous/nuit, show/ship).

74 French Immersion students and all of the French monolinguals completed the French version. This allowed the researchers to draw conclusions about the impact of knowing both languages when reading the word list, compared with monolingual students reading in their mother tongue.

Words were presented on a computer, one at a time, and students were asked to read the word aloud into a microphone as accurately and as quickly as they could. The researchers made note of the pronunciation errors, analyzed the error data (accuracy) and presented their findings.

What did the researchers find?
Overall, the researchers found that the mental processes used for word recognition are activated across languages and that bilingual students use phonological knowledge from both languages simultaneously. A specific breakdown of the findings based on word groups are presented below.

Cognates
FI students on the French version of the naming test made fewer errors on cognates (7.2%) than on French control words (19.3%) whereas the monolingual (French only) students made a similar
amount of errors on both word types (2.9% and 3.9% respectively).

*Homographs*

FI students on the French version of the naming test made more errors on interlingual homographs (20.6%) than on their matching control words (12.6%). This held true for the English naming test with 16.6% of errors for interlingual homographs and 9.2% for the matching control words. There was no significant difference for monolingual French students with error rates of 2.6% for interlingual homographs and 1.0% for control words. This was a similar pattern for monolingual English students with error rates of 6.7% and 5.1% interlingual homographs to matching control words.

*Homophones*

On the French naming test, FI students made fewer errors (12.6%) on interlingual homophones (words that are pronounced the same way in both languages) than on the matched control group of French only words (21.9%) whereas there was very little difference for monolingual French students with error rates of 0.3% and 0.6% respectively.

For the English naming test, FI students made more errors (7.3%) on interlingual homophones than on the English only control words (5.5%). As with the French version of the naming test for monolingual French students, the English version showed very little difference in the rate of error for monolingual English students with 1.3% and 1.8% (interlingual homophones to control words respectively).

The authors conclude that this research is important for the development of bilingual word recognition models in bilingual education.

**How can you use this research?**

Teachers and administrators of French Immersion schools may wish to:

- Consult the broader field of literature pertaining to phonology and language acquisition in bilingual education;
- Engage staff in a discussion about the reading lists and materials that are used with FI students to identify words that are cognates, interlingual homographs and homophones;
- Consider the implications of this research on the selection of school-based or district reading assessments.
Original Article:

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About this summary
The Ontario Education Research Exchange (OERE) is a project of the Knowledge Network for Applied Education Research, an Ontario network promoting the use of research in education. The OERE’s clear language summaries of academic research aim to support this mandate.

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