

LITERATURE REVIEW

on the Impact of Second-Language Learning



The Alberta
Teachers' Association

Second Languages and
Intercultural Council

Canadian Association of
Second Language Teachers



Association canadienne des
professeurs de langues secondes



The Alberta Teachers' Association

This literature and research review was conducted to provide information to guide decisions on second language teaching and learning. Although direction was given to the researchers to establish parameters for the task, the content of this document reflects the writers' perspectives on topics and subjects reviewed and does not necessarily reflect the position of the Second Languages and Intercultural Council of the Alberta Teachers' Association or the Canadian Association of Second Language Teachers.

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Literature review on the impact of second-language learning

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Background

Imagine if someone told you that you could take one step that would enable you to travel more freely, get paid more, read some of the world's best literature, perform better in school, increase your focus, and enhance your understanding of other cultures. Such claims seem almost too good to be true. The fortunate news is that second-language learning is the one step that learners can take that will lead to these and other benefits.

The purpose of the current literature review is to investigate whether and how learning a second language affects language learners. It focuses on research in the following areas: cognition, academics, personal life, society at large, economics and intercultural understanding. In addition, special attention is paid to the extent to which students with exceptionalities and additional language learners are able to acquire additional languages. Learning languages takes time and effort, and the amount of time it takes depends on a number of factors. Some of these include the learning context, learning goals and the age of the learner, to name just a few. Most often learning a second language has a positive impact on the language learner. At times, however, learning languages may pose challenges. The research presented here focuses both on the benefits and the challenges associated with learning a second language.

The current review builds on *A Review of the Literature on Second Language Learning* carried out by a team of researchers from the Language Research Centre at the University of Calgary in 2004 and revised in 2006.¹ As such, the research summarized in this review was published after 2006. In addition, the current review focuses less on how languages are taught and more on the impact of second-language learning.

1 www.acpi.ca/documents/litreview.pdf

Executive Summary

COGNITIVE IMPACT

- Second-language learning in a school context has a positive impact on the development of general cognitive skills of learners.
- Learning a second language is helpful to learners' language development, which in turn may help learners to learn other languages more quickly.
- Speaking more than one language might enhance bilinguals' focus and ability to ignore irrelevant information.
- Bilinguals outperform monolinguals on many cognitive tasks including solving problems, multitasking, remembering longer lists of information and switching between tasks.
- Speaking more than one language helps to compensate for cognitive disadvantages that result from aging, epilepsy and low socioeconomic status.

ACADEMIC IMPACT

- Children who learn a second language show either comparable or enhanced first-language literacy.
- Second-language learners often show enhanced spelling ability as well as superior reading comprehension when they are compared to their monolingual peers.
- Children receiving second-language instruction often show higher achievement in a range of subject areas, including mathematics, science and language arts.
- Learning a second language enhances second-language learners' grammatical knowledge and awareness of speech sounds and sentence structures.

PERSONAL IMPACT

- Learning second (or multiple) languages leads to enhanced communicative abilities, including the use of verbal and non-verbal skills, perspective-taking skills, and interpersonal understanding.
- Learning a second language enhances creative ability by promoting unique problem solving, flexibility, and creative thinking.
- Learning a second language can contribute to increased connection to cultural identity and family history, and facilitate communication with relatives.

- Knowing a second language can act as a source of pride and self-esteem.
- Second-language learning strengthens tolerance of ambiguity and awareness of different cultural perspectives and practices.
- Study abroad and language exchange programs often lead to enhanced second-language abilities. They also motivate students to seek expanded job and travel opportunities, and they contribute to feelings of independence, maturity, patience, and flexibility.

SOCIETAL IMPACT

- Second-language learners demonstrate enhanced empathy, awareness of diversity, tolerance of difference and a greater sense of social justice.
- Learning second languages encourages learners to embrace scientific, social and environmental ideas originating from other parts of the world.
- Second-language learning promotes international dialogue, collaboration and engaged global citizenship.
- Second-language learning promotes the development of cultural identities and contributes to a deeper appreciation for the transmission of culture through language.

INTERCULTURAL COMPETENCIES

- Second-language learners demonstrate enhanced development of self-awareness as well as more positive attitudes and openness to other languages and their speakers and cultures.
- Second-language learners often show fewer cultural prejudices and negative stereotypes.
- Second-language learning has potential for fostering intercultural dialogue and easing antagonism between conflicting sides.

ECONOMIC IMPACT

- Employees who speak a second language often earn more than monolinguals.
- The ability to speak a second language often positively affects earnings both directly and indirectly through educational achievement, a wider range of opportunities for involvement in local and global markets, and by signalling enhanced communicative and cognitive abilities and skills to potential employers.
- Second-language skills afford individuals greater mobility in both local and international markets and allow them to serve a wider range of clientele.
- Second-language skills are often highly valued and expected by potential employers.
- Second-language skills have large-scale economic benefits, as they make businesses more competitive in the global economy and boost international trade.

STUDENTS WITH EXCEPTIONALITIES

- Students with various exceptionalities may benefit from learning a new language.
- Learning two languages may not necessarily cause additional delay in terms of language development for students with exceptionalities.
- The language-learning challenges faced by children with exceptionalities are often not significantly different from those of typically developing children.
- Interventions used to teach second languages to students with exceptionalities may also benefit typically developing children.

ADDITIONAL LANGUAGE LEARNERS

- Knowing two languages is more advantageous than knowing just one language when learning additional languages.
- There are academic and cognitive benefits including the development of academic and communication skills when learning more than two languages.
- Learning more than two languages often results in a greater sense of open-mindedness and empathy.
- Learning an additional language not only positively influences language learning in general, but it also helps students to develop multicultural awareness, positive attitudes toward communicating in their non-native languages and academic proficiency.
- Even though a child's first language may not be a societal language, children can successfully learn an additional language, such as French, while learning English as a second language simultaneously.

Cognitive Impact

- Second-language learning has a positive impact on memory, and bilinguals sometimes outperform monolinguals on memory tasks. Speaking more than one language also helps to compensate for cognitive disadvantages that result from aging, epilepsy and low socioeconomic status.
- Bilinguals show an advantage when they complete problem-solving tasks.
- Bilinguals show an advantage when they switch tasks.
- Learning a second language is helpful for children's language development.
- Learning a second language helps learners to focus on relevant information.

INTRODUCTION

Cognition is the unique ability of humans to think. It involves understanding, processing and producing complex ideas. Cognition can be divided into many different subsystems like memory, attention and reasoning. The more robust the subsystems are, the better the overall cognitive skills. Current research demonstrates that learning a second language is beneficial for developing various cognitive skills, and bilinguals often outperform monolinguals on cognitive tasks, including tasks assessing memory, level of attention and focus, and anticipation. For example, the stronger the cognitive system is, the easier it may be for a person to acquire and understand new knowledge and deal with new situations. Enhanced cognitive skills are therefore linked with many other benefits of second-language learning, which are addressed in other sections of this literature review.

Second language skills have also been shown to exhibit a positive impact on memory. It is important to understand that there are three different types of memory: long-term memory, short-term memory and working memory (Cowan 2008).

The following definitions will prove useful for a reading of this section:

- Long-term memory: the vast storage of general knowledge and events that a person has experienced in the past and that can be retrieved
- Metalinguistic awareness: knowledge of the rules of language and the ability to use them
- Short-term memory: storage of a limited amount of information that is only temporarily accessible; after a short time, the information will be forgotten
- Working memory: often seen as part of short-term memory, working memory is activated when information has to be remembered and manipulated for a very short time (eg, when solving a math problem without paper, when following a speaker's argument or when keeping track of ingredients while baking a cake)

RESEARCH SUMMARY

Second-language learning has a positive impact on memory, and bilinguals sometimes outperform monolinguals on memory tasks. Speaking more than one language also helps to compensate for cognitive disadvantages that result from aging, epilepsy and low socioeconomic status.

Blom, E, C Küntay, M Messer, J Verhagen and P Leseman. 2014. "The benefits of being bilingual: Working memory in bilingual Turkish–Dutch children." *Journal of Experimental Child Psychology* 128, 105–119.

- Previous studies have sometimes failed to find a more robust working memory capacity in bilingual children. It has been hypothesized that this might have been caused by the fact that bilingual children often came from lower socioeconomic classes, which in turn may affect some cognitive skills such as working memory. This study controlled for socioeconomic factors. This study tested 68 Turkish-Dutch bilingual children and 58 Dutch monolingual children (aged five to seven) on a working memory task that required the children to remember and recall numbers or position of dots presented on a screen. The results showed that bilinguals outperformed the monolinguals on these tasks. This study showed that **bilingualism may compensate for the effects of social background and it helps to enhance working memory.**

Morales, J, A Calvo and E Bialystok. 2013. "Working memory development in monolingual and bilingual children." *Journal of Experimental Child Psychology* 114, 187–202.

- This study tested children on a working memory task that required them to remember a number of pictures and then recall them in the correct order. Participants were 56 five-year-old children (29 monolinguals and 27 bilinguals) and 69 seven-year-old children (34 monolinguals and 35 bilinguals). The results showed that in general, the bilingual children were able to remember more pictures than the monolingual children. The five-year-old children remembered as many pictures as the seven-year-old children. These results suggest that **regardless of age, being bilingual can lead to enhanced working memory capacity in children, which means that they can remember and recall more information compared to monolinguals.**

Veenstra, A L, J D Riley, L E Barrett, M G Muhonen, M Zupanc, J E Romain, J J Lin and G Mucci. 2016. "The impact of bilingualism on working memory in pediatric epilepsy." *Epilepsy & Behavior* 55, 6–10.

- Children with epilepsy are at risk for cognitive dysfunctions, especially those related to executive functions such as attention control or working memory. This study tested 26 bilingual children and 26 monolingual children (aged 6–17 years), all of whom had epilepsy, on standardized working memory tasks. The results showed that bilingual participants

had a significantly greater working memory capacity than their monolingual peers. The results suggest that bilingualism might be a protective variable against working memory dysfunctions related to epilepsy. **Using two or more languages on a daily basis can therefore be beneficial for protecting working memory capacity among people who are at risk for cognitive dysfunctions.**

Wodniecka, Z, F I Craik, L Luo and E Bialystok. 2010. "Does bilingualism help memory? Competing effects of verbal ability and executive control." *International Journal of Bilingual Education and Bilingualism* 13(5), 575–595.

- This study tested a group of older bilinguals (aged 61 to 81 years old) on a battery of working and short-term memory tests. The results indicate that older bilinguals significantly outperformed monolinguals on some memory tasks. This advantage was found especially when the task became more difficult, that is, when the task required a participant to remember and recall a greater number of objects. This study also found the advantage for people who acquired a second language later in life. These results suggest that the age of second language acquisition is not crucial for enhancing certain cognitive skills. Instead, it is **the consistent usage of both languages on a daily basis, which will result in advantages including better working and short-term memory.** Moreover, the results of this study suggest that **bilingualism can prevent older adults from the degradation of memory capacity, which is often caused by aging.**

Bilinguals show an advantage when they complete problem-solving tasks.

Abutalebi, J, P A Della Rosa, D W Green, M Hernandez, P Scifo, R Keim, S F Cappa and A Costa. 2011. "Bilingualism tunes the anterior cingulate cortex for conflict monitoring." *Cerebral Cortex* 22(9), 2076–2086.

- The human brain consists of different regions and structures that control various cognitive skills. This study tested whether highly proficient bilinguals ($n = 17$, mean age 23) show different brain structures compared to monolinguals ($n = 14$, mean age 26). More important, the study investigated whether differences in certain brain structures might result in better performance on a cognitive task that tested how well the participants could suppress unimportant information and focus only on relevant information. The results showed that bilinguals are better at suppressing irrelevant information and focusing on a given task. This finding was supported by neurological evidence indicating that the bilinguals showed enhanced cognitive control. Such a cognitive advantage is crucial for performance in everyday situations when people are constantly being distracted. The results of the study indicate that **bilingualism helps people to disregard irrelevant information and focus only on a given task, which can lead to enhanced performance.**

Costa, A, M Hernández, J Costa-Faidella and N Sebastián-Gallés. 2009. "On the bilingual advantage in conflict processing: Now you see it, now you don't." *Cognition* 113(2), 135–149.

- Bilinguals have to switch between languages on a daily basis. Although such switching might sometimes be demanding, a review of recent research shows that it might also have a positive impact on the mind. This study tested 122 bilingual and 122 monolingual university students on a task that required them to react very quickly and make a decision as rapidly as possible. In an example like this (a) $\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow$ / (b) $\rightarrow \rightarrow \leftarrow \rightarrow \rightarrow$ participants were asked to decide as quickly as possible whether the middle arrow points in the same or opposite direction. The results showed that bilinguals are able to make such decisions much faster than monolinguals. The researchers hypothesize that **speaking more than one language can help individuals to develop a more robust mental monitoring system. This means that bilinguals react faster when an immediate reaction is required. Thus, they are expected to detect certain problems more quickly and solve them faster.**

Bilinguals show an advantage when they switch tasks.

Gold, B T, C Kim, N F Johnson, R J Kryscio and C D Smith. 2013. "Lifelong bilingualism maintains neural efficiency for cognitive control in aging." *Journal of Neuroscience* 33(2), 387–396.

- Although bilinguals might be able to switch between tasks more easily (eg, Prior and MacWhinney 2010), it has been shown that performance on many cognitive tasks declines with age. Therefore, this study tested whether older bilinguals ($n = 15$, mean age 64.1) will show fewer problems on switching between tasks than monolinguals ($n = 15$, mean age 63.3). In this study, participants were presented with two possible shapes (circle or square) in two colours (red and blue). In one type of task, participants were asked to make decisions about the shape or colour only. This task is normally not very difficult, because the participant can focus completely on only the one characteristic. However, the task was made cognitively demanding when the participants were asked to alternate between the decisions. Sometimes participants were asked to focus on the colour and sometimes on the shape. Such switching requires a lot of attention and focus. In this study, the **bilinguals demonstrated much faster reaction times compared to the monolinguals. It is therefore hypothesized that speaking or switching between two languages on a daily basis offers a cognitive advantage, even at later stages of life.**

Prior, A, and B MacWhinney. 2010. "A bilingual advantage in task switching." *Bilingualism: Language and Cognition* 13(2), 253–262.

- This study aimed to determine whether it is easier for bilinguals to switch between two different tasks. For example, if a person is supposed to switch between two tasks in order to solve them, he or she has to apply different sets of rules for each of them. Such switching is very mentally demanding. The results of this study suggest that bilingualism might reduce the problems related to such switching. A total of 88 undergraduate university students

(44 bilinguals and 44 monolinguals) participated in a task focused on measuring problems related to task switching. Results indicated that **bilinguals show significantly fewer problems when switching between tasks, which furthers the claim that they also are better at certain types of multitasking.**

Learning a second language is helpful for children's language development.

Bialystok, E, K F Peets and S Moreno. 2014. "Producing bilinguals through immersion education: Development of metalinguistic awareness." *Applied Psycholinguistics* 35(1), 177–191.

- It is hypothesized that metalinguistic awareness requires various cognitive abilities, and previous studies have demonstrated that bilinguals show higher levels of this skill. This study investigated when metalinguistic awareness develops in bilinguals. English-speaking children who learned French as a second language in a school context ($n = 68$) were compared to English-speaking children who had not learned French ($n = 56$). A one-hour test measuring children's metalinguistic knowledge was conducted in English. The result revealed that Grade 2 and Grade 5 students in a French immersion program performed better on understanding the grammatical rules of English (their first language), compared to children who did not learn French. These results suggest that **learning a second language helps children to better understand the grammar of their first language.** Moreover, this suggests that **enrolment in a French immersion program did not negatively affect children's first-language proficiency, in spite of the fact that they were receiving schooling in French.**

Hermanto, N, S Moreno and E Bialystok. 2012. "Linguistic and metalinguistic outcomes of intense immersion education: How bilingual?" *International Journal of Bilingual Education and Bilingualism* 15(2), 131–145.

- This study was designed to determine whether an intensive French-as-a-second-language program improves both linguistic knowledge of English and French for English-speaking children by comparing children in Grades 2 ($n = 50$) and 5 ($n = 33$) in the same school. By measuring vocabulary, sentence knowledge and verbal fluency in both English and French, the researchers found that children in Grade 5 outperformed children in Grade 2 on all measures, as expected. However, the additional three years of learning French did not change the relationship between English proficiency and French proficiency over three years. All participants performed better on English measures than on French measures, especially vocabulary. Cognitive skills were equally good for both languages. This may suggest that **learning a second language in a school context not only encourages the maintenance of the first-language skills that children already have, but also enables them to develop new cognitive skills.**

Ter Kuile, H, M Veldhuis, S C Van Veen and J M Wicherts. 2011. “Bilingual education, metalinguistic awareness, and the understanding of an unknown language.” *Bilingualism: Language and Cognition* 14(2), 233–242.

- The study examined whether a bilingual advantage in terms of metalinguistic knowledge can extend to learning a completely new language. Participants were Dutch-speaking students learning English as a second language ($n = 152$) and monolingual Dutch students ($n = 152$), aged 12 to 16 years. The authors designed an Indonesian language test consisting of a written story in Indonesian along with a test of knowledge of English and Dutch. The Indonesian text had a total of 180 words, among which 28 were given the corresponding Dutch translation. Students were asked to answer 15 questions about the text. The result showed that the bilingual Dutch-speaking English learners performed significantly better on learning Indonesian, compared to Dutch monolinguals. The results suggest that **second-language skills help learners to be equipped to learn unknown languages, due to a better understanding of how language works and language learning in general.**

Learning a second language helps learners to focus on relevant information.

Bonifacci, P, L Giombini, S Bellocchi and S Contento. 2011. “Speed of processing, anticipation, inhibition and working memory in bilinguals.” *Developmental Science* 14(2), 256–269.

- This study investigated whether bilingualism might have an impact on anticipatory skills, which enable us to predict and expect what will come next. For example, if someone starts a sentence “He was faced ...” a person listening to this sentence is likely to predict that the next element heard will be “with.” It was hypothesized that bilinguals might be better than monolinguals at predicting upcoming events (a skill sometimes referred to as probabilistic reasoning). A total of 68 participants (34 monolinguals and 34 bilinguals, divided into two age groups) completed a task that tests the ability to predict upcoming events. **The results demonstrated an enhanced ability to predict upcoming elements among bilinguals.** Such enhanced skill might be especially useful in everyday conversations. For example, if bilinguals are better able to predict how a certain question will end, it will give them more time to prepare an answer.

Soveri, A, M Laine, H Hämäläinen and K Hugdahl. 2011. “Bilingual advantage in attentional control: Evidence from the forced-attention dichotic listening paradigm.” *Bilingualism: Language and Cognition* 14(3), 371–378.

- This study investigated whether a bilingual advantage for regulating irrelevant information when listening to sounds can have a lifelong impact on bilinguals compared to Finnish monolinguals (aged 30 to 50 years or 60 to 74 years). Early simultaneous Finnish-Swedish bilinguals ($n = 33$) and Finnish monolinguals ($n = 32$) participated in the study. Participants were asked to attend to either meaningless consonant-vowel sounds (eg, /da/, /ka/, etc) from a left-ear or a right-ear headphone based on instructions, while two different sounds were simultaneously played via headphones. The results of the task showed that bilinguals outperformed monolinguals in terms

of directing attention to the correct consonant-vowel sounds, while suppressing irrelevant sounds. The results suggest that **long-term language learning experience can enhance some cognitive skills and allow second-language learners to better suppress irrelevant information than monolinguals.**

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Academic Impact

- Children who learn a second language show either comparable or enhanced first-language literacy.
- Second-language learners show some advantages over monolinguals in mathematics, such as better self-correction skills and enhanced mathematical concept learning.
- Receiving instruction in a second language often positively affects second-language learners' performance in core academic areas including mathematics, science and language arts.
- Second-language learners often show enhanced spelling ability as well as superior reading comprehension.

INTRODUCTION

A review of the recent literature demonstrates that the benefits of second-language learning extend beyond proficiency in a second language, namely, that learning a second language enhances learners' reading and writing abilities, mathematical skills and performance in other school-related subjects. Second-language learners may have an advantage over their monolingual peers in learning environments for a variety of reasons. First, learning a second language increases learners' awareness of sentence structure, sound systems and grammar. Second, this increased awareness extends to other areas, like math and science, particularly among learners who show advanced second-language proficiency.

Recent research shows that many second-language learners demonstrate advantages when they learn mathematics. For example, children learning a second language have performed better on learning mathematical concepts compared to their monolingual peers, and they are often better at ignoring irrelevant information. Studies have also shown that immersion program students have matched or better academic achievement compared to their monolingual peers.

Finally, the early stages of learning a second language build learners' auditory skills. This, in turn, enhances and strengthens their reading, writing and spelling comprehension. The benefits are further fostered in learning environments where teachers and parents demonstrate their support of bilingualism and multilingualism.

The following definitions will prove useful for a reading of this section:

- Auditory skills: skills related to hearing; this includes discriminating sounds and understanding the speech of others
- Heritage language: a language spoken in the home that is not a societally dominant language
- Literacy: skills related to reading and understanding written texts
- Proficiency: a learner's ability to use a second language in reading, writing, listening and/or speaking

RESEARCH SUMMARY

Children who learn a second language show either comparable or enhanced first-language literacy.

Hipfner-Boucher, K, K Lam and X Chen. 2014. “The effects of bilingual education on the English language and literacy outcomes of Chinese-speaking children.” *Written Language & Literacy* 17(1), 116–138.

- This study investigated the effects of bilingual education in Canada in terms of literacy development in a societal language, English and instructional languages, either French or Chinese. Three groups of Chinese-speaking Canadian-born students ($n = 75$) who enrolled in three different language programs participated in this study. Specifically, the first group consisted of children who enrolled in a French immersion program ($n = 22$, mean age 6 years 10 months) and had eight months of French instruction at the time of the study. The second group was enrolled in a Chinese-English paired bilingual program ($n = 20$, mean age 6 years 10 months). These children received 50 per cent Chinese instruction and 50 per cent English instruction. The last group was enrolled in an English-only program ($n = 33$, mean age 6 years 7 months). In addition, these children also attended publicly funded Chinese heritage language classes for an average of 2.5 hours a week. Language and literacy tests (ie, English vocabulary, reading English words and letters, understanding the structure of sounds and words in English, French and Chinese respectively) were administered individually. The results showed that bilingual children mostly outperformed an English-only group, and when they did not outperform, they performed at least as well as children enrolled in an English-only program. This study suggests that **bilingual education does not delay the development of English literacy skills; rather, knowing French word structure as well as Chinese sound structure can help children develop better English literacy skills.**

For a similar result, see K Lam, X Chen and J Cummins (2016), which showed that Chinese-speaking Canadian-born students enrolled in a Mandarin-English bilingual program ($n = 26$) outperformed Chinese-speaking children enrolled in an English-only program ($n = 43$) in terms of Chinese literacy. Moreover, findings indicated that children in a bilingual program developed comparable English literacy skills.

Murphy, VA, E Macaro, S Alba and C Cipolla. 2014. “The influence of learning a second language in primary school on developing first language literacy skills.” *Applied Psycholinguistics* 36(5), 1133–1153.

- This study investigated whether learning a second language facilitates first-language literacy. The study randomly assigned 150 primary school children between the ages of seven and nine to one of three groups: second-language Italian, second-language French, and control. Children in the second-language groups received 15 weeks of second-language instruction. The children in this study were native English speakers who had no or only very minor exposure to other

languages, so the researchers were able to easily observe whether second-language instruction contributed to first-language reading and spelling ability. The researchers administered language tests (focusing on reading and writing) to assess different aspects of the children's first-language (English) reading and spelling skills, and to identify whether and to what extent second-language instruction was both effective and interesting for the children. **Children in the second-language groups outperformed children in the control group, which suggests that learning a second language contributes to first-language literacy skills. The test results indicated that learning a second language can have a facilitative influence on some aspects of children's first-language reading skills. In addition, this study supports the view that second-language learning can be viewed as language awareness training. That is, second-language learners gain an appreciation for, and an understanding of, language as a system with a structure that can be manipulated.**

Second-language learners show some advantages over monolinguals in mathematics, such as better self-correction skills and enhanced mathematical concept learning.

Clarkson, P C. 2007. "Australian Vietnamese students learning mathematics: High ability bilinguals and their use of their languages." *Educational Studies in Mathematics* 64(2), 191–215.

- This study addressed the question of whether knowing two languages facilitates nine-year-old Vietnamese-English children's ($n = 85$) mathematics learning in school. These children had completed all their schooling in Australia, but their home language was Vietnamese. Based on their Vietnamese and English test results, students were sub-grouped into "high-high" in both languages, "low-low" in both languages or "high-low/low-high" groups. They performed three sets of mathematical tests and were asked whether they used Vietnamese or English when they solved problems. The results suggested that their academic performance on these mathematical tests was not different from their English-speaking monolingual peers. Moreover, if a child is competent in one language, she or he did not perform differently from a child who speaks two languages well. A small interview study showed that children who were competent in both languages but used Vietnamese when they solved the problems (total $n = 8$ but interviewed $n = 4$) were better at correcting their own errors compared to typical nine-year-old students in this study. This study suggests that **knowing two languages sometimes can help second-language learners to self-correct their own mathematical errors. Additionally, being proficient in one language can be sufficient to learn mathematics in a second language.**

Hemsley, G, A Holm and B Dodd. 2014. "Better in both? Bilingual intervention in an Australian school context." *Australian Journal of Education* 58(2), 139–152.

- This study investigated the role of language of instruction in an Australian school context. Specifically, the study examined whether an intervention group which consisted of Samoan-English Year 1 students ($n = 9$) who received mathematical instruction in two languages, Samoan and English, performed better on learning of mathematical terms, skills or concepts

than a control group which consisted of Samoan-English students ($n = 9$) who received the instruction only in English when everything, except for the language of instruction, was the same. For nine weeks, instead of having four classes in English, the intervention group received two mathematics lessons in Samoan while the other two classes were performed in English. Pre- and post-tests were conducted for all participants. The results of the tests showed that both groups performed better at post-tests. This partially indicated that students acquired mathematical skills by rote memorization. However, only the intervention group that received some instruction in their first language showed significant progress on mathematical concept learning (eg, comparison, grouping, classifying), while the control group showed limited progress in concept learning. Thus, the study suggests that **bilingual instruction led to more balanced learning in mathematics**.

Planas, N. 2014. "One speaker, two languages: Learning opportunities in the mathematics classroom." *Educational Studies in Mathematics* 87(1), 51–66.

- This five-year observational study with Spanish-Catalan children in Spain (aged 12–16) who were proficient in both languages addressed the question of whether knowing two languages can be beneficial for bilingual students to discuss mathematical problems with their peers, either Catalan- or Spanish-dominant children. The author videotaped and transcribed the small group work of nine students and their peers. The goal was to determine how they solve math problems and whether language issues can create more learning opportunities. The results showed that bilinguals created more learning opportunities by elaborating and inventing new terms. Specifically, bilinguals explained their mathematical analyses in more detail due to the lack of precise terminology, and this led children in the group to discuss their work in a more precise way. In a similar vein, bilinguals sometimes created new words by blending Spanish and Catalan words to describe their analyses, which also stimulated mathematical reasoning and discussion during group work. Thus the results of this study suggest that **advanced proficiency in the language of instruction is not always required in mathematical learning; rather, bilinguals bring various resources to the table that encourage more thorough discussion of the analyses**.

Receiving instruction in a second language often positively affects second-language learners' performance in core academic areas including mathematics, science and language arts.

Lazaruk, W. 2007. "Linguistic, academic, and cognitive benefits of French immersion." *Canadian Modern Language Review* 63(5), 605–627.

- This study reviewed recent research on the benefits of French immersion programs in Canada. The results of the review indicate that students enrolled in French immersion programs performed better at core subjects such as mathematics (ie, problem-solving arithmetic skills), history, science and English language arts (ie, reading and writing skills). The better academic

performance of these learners usually appeared in the later stages of learning, but their academic performance often matched or exceeded those of English-only program students. This review suggests that **even though French immersion students learn core academic subjects in a second language, French, their academic performance does not lag behind, and sometimes they outperform their English-only program peers.**

Padilla, A M, L Fan, X Xu and D Silva. 2013. "A Mandarin/English two-way immersion program: Language proficiency and academic achievement." *Foreign Language Annals* 46(4), 661–679.

- This five-year study investigated whether Mandarin-English immersion students' academic performance in Mandarin, English, writing, mathematics and science matched or exceeded that of their non-Mandarin-speaking, English-only, same-age peers ($n = 842$) attending the same school. Participants were Grades 2–5 learners ($n = 188$) who were enrolled in a Mandarin-English immersion program in a California public school. Immersion students in all grades were assessed on their speaking, listening, reading and writing skills in Mandarin. All students, including the control group, participated in the mandated California Standards Tests for English language arts, writing (Grade 4), math and science (Grade 5). Results showed that all Mandarin-immersion students acquired high-level performance in Mandarin. As for core academic subjects, non-immersion students in Grades 2 and 3 performed better in English and mathematics, while immersion students in the higher grades scored higher in these two core subjects. These results suggest that, in spite of lower performance in the early years, **older students enrolled in the Mandarin-English immersion program matched or outperformed their English-only program peers in academic achievement on core subjects such as mathematics, science, writing and English language arts.**

Vega, L D. 2014. *Effects of an elementary two way bilingual Spanish-English immersion school program on junior high and high school student achievement*. PhD dissertation, Colorado State University.

- This research explores the prolonged effects of a two-way bilingual immersion program compared to students who were enrolled in a standard monolingual elementary school program ($n = 349$) in United States. In this Spanish-English immersion program, students whose first language is either Spanish or English receive instruction in English and Spanish throughout elementary school. The goal of receiving instruction in two languages is to support students as they learn in both their first and their second languages. The control group was matched with the immersion program students in various factors such as primary language and socioeconomic status, and they were in the same school district. Findings suggest that **students enrolled in the immersion program outperformed students who were in a monolingual elementary school program in junior high in English, reading, writing and mathematics. Native Spanish speakers showed the greatest benefits in mathematics, and native English speakers benefitted more in reading.**

Second-language learners often show enhanced spelling ability as well as superior reading comprehension.

Gebauer, S K, A C Zaunbauer and J Möller. 2013. "Cross-language transfer in English immersion programs in Germany: Reading comprehension and reading fluency." *Contemporary Educational Psychology* 38(1), 64–74.

- This study investigated the relationship between a first language (ie, German) and a second language (ie, English) in terms of reading skills. Specifically, the study examined the effects of a partial English immersion program in Germany for five years. Grade 3 German students ($n = 220$) who were enrolled in a partial English immersion program participated in this study. Reading skills in German and English, namely, "how fast you can read a word or find word boundaries (ie, reading fluency)" and "how much you can understand by reading a passage (ie, reading comprehension)," were measured in Grade 3 and in Grade 4 respectively. The results revealed that English reading comprehension scores positively predicted German reading comprehension scores. In addition, German reading comprehension skills also positively influenced English reading comprehension scores. In general, reading comprehension influenced reading fluency. The impact of English reading comprehension on German reading fluency was greater than the influence of German on English. This study suggests that **a partial immersion program positively influences the development of reading skills in both languages for learners.**

Hipfner-Boucher, K, K Lam and X Chen. 2014a. "The contribution of narrative morphosyntactic quality to reading comprehension in French immersion students." *Applied Psycholinguistics* 36(6), 1375–1391.

- This study looked at the relationship between second language oral narrative production and comprehension and second-language reading comprehension in a sample of 81 Grade 1 students enrolled in a Canadian French immersion program. The researchers measured the students' French vocabulary, word reading, understanding personal narratives and reading comprehension through questionnaires. **The results suggest that even in the earliest stages of second-language literacy acquisition, auditory skills in a second language contribute to reading comprehension results.**

Hussien, A M. 2014. "The effect of learning English (L2) on learning of Arabic literacy (L1) in the primary school." *International Education Studies* 7(3), 88–98.

- This study examined the influence of English learning on Arabic spelling and reading in 45 Arabic-speaking English learners in Grade 4 compared to Arabic monolingual Grade 4 students ($n = 38$) in a public school in Egypt. The Arabic-English bilingual program was designed to teach English as well as use English in teaching science and mathematics. The researcher developed and administered spelling and oral reading accuracy tests in Arabic. Results showed that learners in the bilingual program outperformed their monolingual peers in both Arabic spelling and read-out-loud Arabic reading accuracy. The study suggests that **learning a second language positively influences the development of learners' first-language spelling and reading skills, as a result of an enhanced understanding of language structures.**

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Personal Impact

- Learning second (or multiple) languages has a positive impact on communicative abilities, including the use of verbal and nonverbal skills, perspective-taking skills and interpersonal understanding.
- Learning a second language enhances creative ability by promoting unique problem solving, flexibility and creative thinking.
- Second-language learning strengthens tolerance of ambiguity and awareness of different cultural perspectives and practices.
- Research suggests that learning a second language contributes to an increased connection to cultural and/or ethnic identity and facilitates communication, particularly for language learners with a family connection to the language.
- Second-language learning promotes the development of cultural identities and contributes to a deeper appreciation for the transmission of culture through language.
- Study abroad and language exchange programs have the potential to enhance second-language learning and offer many nonlinguistic benefits including expanded educational and employment opportunities, greater desire to travel and to seek other cultural experiences, a stronger sense of self, and a willingness to try new things.

INTRODUCTION

In recent years, researchers investigating the benefits of second-language learning have begun to shift their focus to include aspects of personal and social development. Second-language learning is, after all, situated in a social context—a learner’s connection to a second language is influenced by the extent to which he or she identifies with a group or culture, and it is shaped by his or her interaction with teachers, other adults, peers and family members.

The personal benefits of second-language learning range from an enhanced ability to communicate and use verbal and nonverbal cues, heightened sensitivity toward other speakers’ intentions, and superior creativity when second-language learners are compared to monolinguals. Moreover, many of these benefits are demonstrated in learners with only limited exposure to a second language, and they can be apparent in second-language learners as young as preschool age. Findings also point toward a positive impact of second-language learning on how learners view themselves and others, and their identity development. Second-language learning contributes to the creation of multiple identities, which is particularly important for heritage language learners, who strengthen ties to their family and ethnic heritage. Second-language learning among heritage language learners can aid in revitalizing minority languages.

Second-language learners also tend to be more tolerant of ambiguity, and they have shown greater awareness of and openness toward differing values, beliefs, cultural perspectives and languages. Research has demonstrated that opportunities to study abroad and participate in cultural exchanges have a lasting positive effect on second-language learners' sense of self.

The following definitions will prove useful for a reading of this section:

- Ambiguity tolerance: the ability of an individual or group to accept and endure information about situations when confronted by unfamiliar, complex or incongruent cues (Dewaele and Wei 2013)
- Heritage language: a language spoken in the home that is not a societally dominant language
- Identity: how a person understands his or her relationship to the world, how that relationship is constructed and how the person understands possibilities for the future (Du 2015)
- Minority language: societally nondominant language

RESEARCH SUMMARY

Learning second (or multiple) languages has a positive impact on communicative abilities, including the use of verbal and non-verbal skills, perspective taking skills and interpersonal understanding

Fan, S P, Z Liberman, B Keysar and K D Kinzler. 2015. "The exposure advantage: Early exposure to a multilingual environment promotes effective communication." *Psychological Science* 26(7), 1090–1097.

- This study investigated the effect of exposure to multiple languages during childhood on perspective taking. Seventy-two children (aged four to six years) participated in this study and were categorized equally into three groups based on parental reports: monolingual (they heard and spoke only English); exposure (primarily English speakers but regular, limited exposure to a second language); and bilingual (exposed to both English and a second language and were able to speak and understand both). Participants were presented with a social communication task that required taking the perspective of a speaking partner. Results showed both bilinguals and those who were exposed to a multilingual environment were better able than monolinguals to interpret the speaker's meaning. In addition, children who were merely exposed to a second language performed as well as bilinguals. As such, these communicative advantages demonstrated by bilinguals occur even with limited exposure to a second language. The researchers conclude that **a multilingual environment can facilitate the development of perspective-taking skills and interpersonal understanding that are critical for effective communication.**

Siegal, M, I Iozzi and L Surian. 2009. "Bilingualism and conversational understanding in young children." *Cognition* 110, 115–122.

- This study sought to determine whether bilingualism presents an advantage for children's conversational understanding. A total of 163 children aged three to six years (103 monolinguals and 60 bilinguals) participated in two experiments. All participants completed a Conversational Violations Test, which was used to determine their ability to identify communicatively inappropriate responses. Children were shown a DVD in which three doll speakers had 25 short conversational exchanges. In each exchange, one speaker asks a question, and the other two speakers give an answer (one of which violates conversational norms). Participants were asked to point out the doll that said something "silly" or "rude." Bilinguals were better able than monolinguals to detect violations of conversational norms. The authors suggest that **bilingual skills entail an enhanced ability to appreciate effective communicative responses.**

Yow, Q W, and E M Markman. 2011a. "Bilingualism and children's use of paralinguistic cues to interpret emotion in speech." *Bilingualism: Language and Cognition* 14(4), 562–569.

- The researchers who carried out this study suggest that bilingual children may be better able to use cues like tone of voice when interpreting a speaker's emotions. This is because they have a greater need to attend to speakers' communicative requirements. Sixteen monolingual and 16 bilingual four-year-olds from a preschool in the US participated in this study. They were presented with computer-filtered speech stimuli containing no words that described happy and sad situations in either happy or sad tone of voice. Findings showed that monolingual and bilingual children were equally capable of identifying emotion from filtered speech stimuli, but bilingual children were better able than monolingual children to use tone of voice when judging emotion in natural speech. The researchers conclude that **bilingual children develop an adult-like ability to recognize tone of voice in order to overcome their reliance on content, and they have a heightened sensitivity to a speaker's communicative intent.**

———. 2011b. "Young bilingual children's heightened sensitivity to referential cues." *Journal of Cognition and Development* 12(1), 12–31.

- In a series of three experiments, the researchers explored monolingual and bilingual preschoolers' use of gestures such as pointing and gaze direction to figure out a speaker's intent. In the first study they found that three- and four-year-old bilingual children were better able to use referential gestures to locate a hidden toy. In the second study they found that by five years of age, monolingual children had mastered this task. The third study showed that this bilingual advantage can be found in children as young as two years of age. Overall, **children growing up in a dual-language environment may be better able to determine what the speaker is trying to say and respond appropriately, which may heighten their sensitivity to and use of gestures like pointing and eye gaze.**

———. 2015. “A bilingual advantage in how children integrate multiple cues to understand a speaker’s referential intent.” *Bilingualism: Language and Cognition* 18, 391–399.

- This goal of this study was to determine whether bilingual children are better able to use contextual information and a speaking partner’s gestures (such as pointing, tone of voice or shared eye gaze) to infer the meaning of an utterance. Thirty-two three-year-old children participated in this study: 16 monolinguals and 16 bilinguals. The participants completed a task in which they were presented with two familiar toys (a teddy bear and a toy car) and eight novel objects in a compartmentalized box while sitting across from an experimenter. Both toys were visible to the children, but the experimenter could see only one. The experimenter commented generally on the toy she could see and fixed her gaze on the object. The children were asked to identify the toy they thought the experimenter could not see. Results showed that the bilingual preschoolers were better able use the experimenter’s verbal cues and eye gaze to determine which toys were visible or not visible. The authors conclude that **as a result of regularly facing more complex communicative exchanges, bilingual children develop a greater capacity to monitor the communicative context, paying attention to verbal and nonverbal cues, and utilizing these cues to better understand the speaker’s communicative intent.**

Learning a second language enhances creative ability by promoting unique problem solving, flexibility, and creative thinking.

Kharkhurin, A. 2010. “Bilingual verbal and nonverbal creative behaviour.” *International Journal of Bilingualism* 14(2), 211–226.

- This study investigated whether bilingualism has a measurable contribution to verbal and nonverbal creative performance. A total of 150 students at an American college participated in this study: 103 were bilingual in English and Russian, and 47 spoke English only. All participants completed a test of creativity known as the Abbreviated Torrance Test for Adults, which consists of three written exercises aimed at examining an individual’s ability to create solutions to unique problems, while encouraging them to use their imagination. Their responses were then rated for verbal and nonverbal creativity. Results indicated a bilingual advantage in nonverbal creativity and a monolingual advantage in verbal creativity. The author suggests that while monolinguals may have greater linguistic ability due to having more first-language vocabulary, the **bilingual advantage in nonverbal creativity may be the result of two factors.** First, **bilinguals must remain open to creative or unique solutions in multilingual communication situations** (where the same basic idea can be expressed differently in different languages). Second, **their experience with different linguistic and cultural frameworks allows them to perceive the world from a wide range of perspectives, which may promote novel and creative ways of problem solving.**

Lee, H, and K Kim. 2011. "Can speaking more languages enhance your creativity? Relationship between bilingualism and creative potential among Korean American students with multicultural link." *Personality and Individual Differences* 50, 1186–1190.

- This study examined the relationship between individuals' creativity and their degree of bilingualism. A total of 116 Korean-American students attending the Atlanta Korean American School (US) participated in this study. The researchers first determined the students' level of bilingualism based on a self-rating test (a questionnaire that covers the participants' ability to listen, speak, read and write in English and Korean) and a word association test. Participants then completed the Torrance Test of Creative Thinking, which consists of three paper-and-pencil exercises aimed at examining an individual's creative potential and problem solving. Results indicated that **bilingualism and creativity are positively correlated, regardless of gender or age. The authors conclude that both the multicultural experiences and the cognitive benefits of speaking two languages can account for bilinguals' greater degree of creativity.**

Leiken, M. 2012. "The effect of bilingualism on creativity: Developmental and educational perspectives." *International Journal of Bilingualism* 17(4), 431–447.

- This study examined the effect of bilingualism on creativity in nonmathematical and mathematical problem solving among bilingual and monolingual preschoolers. A total of 37 children enrolled in preschools in the northern region of Israel took part in this study. They formed three groups: 13 bilingual children from a bilingual (Hebrew-Russian) kindergarten, 10 bilingual children from a monolingual (Hebrew) kindergarten, and 14 monolingual children from a monolingual (Hebrew) kindergarten. All the participants performed a task on general creativity and a test of mathematical creativity. Results indicate that **early bilinguals and those who have a bilingual education (ie, second-language learners) demonstrate both general and mathematical creativity.** They also show an advantage over monolinguals. The researchers conclude by stating that **early bilingualism seems to affect flexibility in problem solving and promotes a more robust development of creative thinking.**

Second-language learning strengthens tolerance of ambiguity and awareness of different cultural perspectives and practices.

Dewaele, J, and L Wei. 2013. "Is multilingualism linked to a higher tolerance of ambiguity?" *Bilingualism: Language and Cognition* 16(1), 231–240.

- This study investigated the link between multilingualism and the personality trait tolerance of ambiguity. A total of 2,158 adult monolinguals, bilinguals and multilinguals across 204 nationalities participated in this study. Participants completed the Tolerance for Ambiguity Scale, a questionnaire designed to determine an individual's position on four distinct dimensions of tolerance of ambiguity: valuing diverse others, change, challenging perspectives and unfamiliarity. Findings showed that **multilinguals scored significantly higher on tolerance of ambiguity than monolinguals and bilinguals. Furthermore, higher scores were associated with high levels of**

both oral and written proficiency in up to six languages. A stay or study abroad of more than three months was also related to greater ambiguity tolerance. This suggests that continued exposure to a different language and cultural environment boosts tolerance of ambiguity. In sum, **the knowledge of multiple languages and cultures allows people to become more aware and tolerant of differing values, beliefs, perspectives and communicative practices.**

van Compernelle, R A. 2016. “Are multilingualism, tolerance of ambiguity and attitudes toward linguistic variation related?” *International Journal of Multilingualism* 13(1), 61–73.

- This study investigates the link between multilingualism, tolerance of ambiguity and attitudes toward linguistic variation. A total of 379 mono-, bi- and multilingual adults across 45 nationalities participated in this study, with the majority of the participants from the US. Participants completed an online questionnaire, which was organized into three sections: personal background and linguistic profile, a survey of tolerance of ambiguity and a survey of openness to linguistic variation. Findings showed that **high levels of proficiency in multiple languages, residence abroad and high education levels are related to higher levels of tolerance of ambiguity and positive attitudes toward linguistic variation.** The author conclude by stating that **second (or multiple) language learning requires individuals to confront ambiguity in patterns of language and social meaning, thereby contributing to greater openness to variation in language, and greater tolerance of ambiguity in general.**

Research suggests that learning a second language contributes to an increased connection to cultural and/or ethnic identity and facilitates communication, particularly for language learners with a family connection to the language.

Comanaru, R, and K A Noels. 2009. “Self-determination, motivation and the learning of Chinese as a heritage language.” *The Canadian Modern Language Review* 66(1), 131–158.

- These researchers examined the motivational profiles of 145 Chinese second-language learners. A total of 145 university-level students enrolled in Chinese courses participated in this study and were categorized as either heritage learners (raised in a home where a non-English language is spoken and can speak or at least understand the language) or nonheritage learners. Data were collected using a self-report questionnaire, which measured motivational orientation (why participants were learning Chinese), psychological dimensions of their language learning (autonomy, competence and relatedness), engagement in learning and their community engagement. Findings showed that the more learners felt they were learning Chinese because it was personally meaningful and fun, the greater their engagement in the learning process. This intrinsic orientation was related to participants’ feelings of connection with the Chinese community and their Chinese identity. Heritage language learners in particular felt that they were learning Chinese because it was a central to who they were. **Overall, second-language learning can contribute to increased connection to family history and helps shape cultural identities, particularly for individuals with family ties to a second language or culture at home.**

Francis, B, L Archer and A Mau. 2009. "Language as capital, or language as identity? Chinese complementary school pupils' perspectives on the purposes and benefits of complementary schools." *British Educational Research Journal* 35(4), 519–538.

- This study focused on the perspective of students enrolled in Chinese complementary schools in Britain, which may also be known as "community schools" or "supplementary schools," and are designed for language teaching outside of mainstream schooling. The researchers were primarily interested in the pupils' views of the purpose and benefits of these schools. The research was conducted across six Chinese schools in London, Manchester, Liverpool and Birmingham. There was a total of 60 participants: 36 girls and 24 boys aged 11–13 years. Data were collected through interviews, which were created to explore the participants' experiences of complementary schooling, the impact of these experiences on their identity, and their perspective on the purpose and benefit of complementary schools. Findings revealed that **by learning a second (heritage) language, students felt they facilitated communication with their relatives at home, perpetuated the Chinese language and continued their interaction with their family's "mother country," its popular culture, and communication across generations.**

Guardado, M. 2010. "Heritage language development: Preserving a mythic past or envisioning the future of Canadian identity?" *Journal of Language, Identity & Education* 9(5), 329–346.

- This study investigated three middle-class Hispanic Canadian families' perspectives on language, culture and identity. It is part of a larger study (Guardado 2008) that examined the language socialization ideologies and practices found in Canadian Hispanic families in Vancouver. The current analysis drew on data collected from three families who participated in the larger study and had lived in Canada between 4 and 14 years. Interviews were carried out over 18 months. Analysis of the interviews showed Spanish language maintenance was a vital source of cultural identity for the families and their children, and that second-language learning afforded a rich view of the world. In effect, **heritage language learning can act as a tool for socializing younger generations to a broader cultural outlook, while creating multiple identities at home and as a part of Canadian society.**

Lee, J S, and E Jeong. 2013. "Korean-English dual language immersion: Perspectives of students, parents and teachers." *Language, Culture and Curriculum* 26(1), 89–107.

- This study explores the experience of Korean-American students in a dual language (Korean-English) program, in which both languages are integrated into a single classroom. The researchers were interested in the perceived benefits and challenges of learning a second language in a dual language immersion program. Participants were 26 Grade 1 students enrolled in a dual language program at a public elementary school in southern California (US). Data were collected through home and school observations as well as interviews with six of the students, their parents and their teachers. **Findings showed that all respondents recognized the potential of second-language learning to foster respect for different languages and cultures and reinforce ethnic identity and heritage culture for the students. Furthermore, both parents and teachers noted that second-language learning could lead to better family communication and future career opportunities.**

Usborne E, J Caouette, Q Qumaaluk and D M Taylor. 2009. "Bilingual education in an Aboriginal context: Examining the transfer of language skills from Inuktitut to English or French." *International Journal of Bilingual Education and Bilingualism* 12(6), 667–684.

- This longitudinal study examined the language skills of 110 Inuit students participating in an Inuktitut English/French program in a remote Inuit community in Nunavik, Quebec. Of particular interest were the students' skills in their Indigenous and second languages after their transition to a mainstream language classroom, and the transfer of language abilities between languages. Participants were 61 male students and 49 female students, all of whom spoke Inuktitut as a first language at home. Data were collected over a 12-year period (from 1995–2007), with initial testing at the Grade 3 level. Each language assessment included 14 tests used to measure general language competencies and specific language skills. Findings showed that baseline heritage language skills were predictive of later success in both the first and the second language (French or English), providing evidence that first-language skills can transfer to second-language learning and that supporting heritage language learning is essential for the success of Aboriginal students. More important, the authors state that **bilingual programs can be a way in which children can prepare for success in mainstream society while retaining ties to their home culture and contributing to the recovery of minority languages.**

Second-language learning promotes the development of cultural identities and contributes to a deeper appreciation for the transmission of culture through language.

Fielding, R, and L Harbon. 2013. "Examining bilingual and bicultural identity in young students." *Foreign Language Annals* 46(4), 527–544.

- This study examined the development of bilingual and bicultural identity in students from monolingual, bilingual and multilingual homes who attended a bilingual program in a primary school in Australia. The primary focus of this study was the bilingual students' perception of their languages, their cultures and their school environment. A total of 23 participants aged 10–12 years old (Grades 5 and 6) enrolled in a bilingual English/French K–6 program took part in this study. All 23 students completed a questionnaire about their perceptions of language use, language attitudes and bilingualism. Nine students also completed interviews. **Findings revealed that nearly all students enjoyed speaking two languages (82.6 per cent), that speaking two languages made them feel "special" or "different" from monolinguals, strengthened their connection to family, and acted as a source of pride and self-esteem. Students also reported that they considered themselves bilingual when they had similar levels of competence in both languages, and they indicated a connection to both cultures, regardless of their level of language proficiency.**

Kibler, A, A Salerno and C Hardigree. 2014. “More than being in a class’: Adolescents’ ethnolinguistic insights in a two-way dual-language program.” *Language and Education* 28(3), 251–275.

- This study explores the way in which dual-language programs offer students insights into themselves, language, the language learning process and others, a process which the authors view as particularly important for adolescents as they are undergoing important changes in identity, intellectual growth and peer relationship-building at this age. Twenty students in Grades 9–12 who were enrolled in an extracurricular Spanish/English program in a public school in the US participated in this study. Using interviews, observational field notes, audio recordings and academic transcripts, the researchers examined the students’ cultural and linguistic identities, their understanding and awareness of language learning, and their appreciation of their own and others’ ethnolinguistic resources. **Results showed that learning a second language afforded opportunities for collaboration and social bonding between students and allowed students to share cultural knowledge with one another. Students also pointed to a deep appreciation for the difficulties facing all language learners and an understanding of the way in which individuals directly embody both language and culture.**

Lopez, M M. 2011. “Children’s language ideologies in a first-grade dual-language class.” *Journal of Early Childhood Literacy* 12(2), 176–201.

- This study examines the language ideologies of young children in a Spanish/English dual language program in the US. These language ideologies include beliefs about when a certain language should be used, which language is more prestigious and which speakers of a certain language have more influence than others. A total of 21 Grade 1 students enrolled in a Spanish/English language program at a public primary school took part in this study. Ten of the participants predominantly spoke English, eight predominantly spoke Spanish, and three were bilingual. Data were collected through school observation, audio recordings and writing samples, for a period of 10 months. Results showed that although the students were beginning to understand issues of language and society, their language ideologies were unstable and not always positive. Despite concluding that it is difficult to predict the students’ future language ideologies, **the researcher found that the students saw a need in their own families for second-language learning, as it allowed them to act as language “brokers” and cultural intermediaries.**

Study abroad and language exchange programs have the potential to enhance second-language learning and offer many nonlinguistic benefits including expanded educational and employment opportunities, greater desire to travel and to seek other cultural experiences, a stronger sense of self and a willingness to try new things.

Mady, C. 2011. “The results of short-term bilingual exchanges keep on ticking: Long-term impacts of brief bilingual exchanges.” *Foreign Language Annals* 44(4), 712–726.

- This study explored the long-term impacts of brief language (English/French) exchanges on second-language learners in Canada. These bilingual exchanges, in which an individual

travels to a country in which the target (second) language is spoken, commonly range in time between two weeks and one school term in length. A total of 238 participants took part in this study; the majority were 20 years old and predominantly spoke English (141 anglophone and 97 francophone). All participants had previously completed a bilingual exchange that had been subsidized by the Society for Educational Visits and Exchanges in Canada (SEVEC). Data were collected using a questionnaire and interviews. **Findings indicated that beyond increased proficiency and confidence in their second-language abilities, participants indicated that they sought and found more bilingual jobs, had expanded educational opportunities, used their second language at work, travelled to regions where the second language is dominant, and sought other cultural experiences, such as exposure to music and movies.**

Du, H. 2015. "American college students studying abroad in China: Language, identity, and self-presentation." *Foreign Language Annals* 48(2), 250–266.

- This study examined the interaction between 29 American exchange students' language skills, their identity and the way in which they presented themselves to others. Participants were 29 students aged 19–22 enrolled in a Chinese/English study abroad program in a major city in southeastern China. During the program, the researcher conducted four 30-minute interviews with each of the participants, for a total of 116 interviews. Other sources of data included participant observations, nonparticipant observations and extensive field notes. **The results of this study showed that despite feelings of "otherness" and being "foreign," the students were able to make critical discoveries about their identity, develop a more sophisticated global perspective and validate their sense of self. The majority of students reported that they felt more independent, mature, confident, patient, tolerant, flexible, adventurous and willing to try different things.**

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Societal Impact

- Language learners show an enhanced understanding of diversity in their communities and the larger world.
- Speakers of more than one language demonstrate enhanced empathy and may be inclined toward social justice.
- Second-language learners tend to be active and engaged global citizens.
- Second-language learners demonstrate an awareness of innovative scientific, social and environmental ideas that come from other parts of the world.

INTRODUCTION

Second-language learning offers a potentially intense cultural experience that may confer positive effects at a societal level. A review of the relevant research suggests that learning a second language encourages cosmopolitanism, a global sense of place, the recognition of others, and openness toward diverse cultural experiences. Research shows that teaching a wide variety of languages, including endangered languages, may contribute to increased respect of other people's language rights and greater social justice.

In addition, second-language learning provides students with the additional benefit of a culturally enriched school curriculum, which includes lessons in social studies, arts and humanities. This, in turn, offers insights into unique cultures and enhances students' personal, professional and civic lives and the societies in which they live. Research has also shown that service learning empowers learners with a sense of civic duty, promotes respect for linguistic, cultural and racial diversity within society, and develops in young citizens' responsibility toward new members of society.

The following definitions may prove useful when reading this section:

- Cosmopolitanism: an ideology that human beings belong to one community
- Intercultural/global citizenship: the possession of the knowledge and ability to identify cultural differences, the interest to interact with people from cultures outside of one's own, and the use of linguistic and cultural skills to communicate in the most effective manner in different contexts (Semaan and Yamazaki 2015)

- Intercultural competence: a person's ability to (a) interact with people with different ways of thinking, believing and behaving; (b) bring the culture of origin and the "other" culture into relation with each other; and (c) deal effectively with intercultural misunderstanding and conflict situations
- Service learning: a learning experience that involves the combination of community service and second-language acquisition
- Target language: the language that is being learned

RESEARCH SUMMARY

Language learners show an enhanced understanding of diversity in their communities and the larger world.

Dagenais, D, N Walsh, F Armand and E Maraillet. 2008. "Collaboration and co-construction of knowledge during language awareness activities in Canadian elementary school." *Language Awareness* 17(2), 139–155.

- This small-scale case study investigated the effectiveness of implementing language awareness activities (ie, activities aimed at developing the understanding and appreciation of linguistic diversity) with students in two elementary schools: an early French immersion program in Vancouver (Grades 5–6) and a special class aimed at welcoming newly arrived immigrants (Grades 5–6) at a francophone school in Montreal, where 80 per cent of the students had a mother tongue other than French and English. The students **shared their knowledge of their family languages, and they learned and compared vocabulary in several languages. Collaboration between students and their teachers encouraged discussions about the relative equality of diverse languages and their speakers and increased the students' intercultural understanding of language diversity and equity among members of all communities.**

Forsman, L. 2010. "On the changing role of English language education: Promoting respect for difference in the language classroom." *Intercultural Education* 21(6), 505–518.

- The aim of this project was to promote students' ability to move away from cultural norms and develop respect for difference and diversity. The study was conducted with a class of 17 Grade 7 students (aged 13) studying English as a second language in a Swedish school in Finland. The learning process lasted three years and integrated various elements of language and culture, such as insightful cartoons and culturally rich reading. Data consisted of information from both questionnaires and interviews, the last of which were collected when the students were in Grade 9 (aged 15). Results indicated that **the majority of students had begun to relativize aspects of their way of life that they had previously taken for granted, and they realized how their own traditional behaviours may seem strange to others. In general, this understanding of cultural differences allows students to more easily accept the behaviour of others and respect diversity.**

Little, D. 2012. "The European Language Portfolio in whole-school use." *Innovation in Language Learning and Teaching* 6(3), 275–285.

- This study describes a project that was carried out across 10 countries (Albania, Austria, Czech Republic, Greece, Hungary, Iceland, Lithuania, Norway, Romania and the Russian Federation) by the European Centre for Modern Languages in Dublin, Ireland. The European Language Portfolio posed three challenges to the participants in terms of second-language learning: the development of learner autonomy, intercultural awareness/competence and plurilingualism. The project was launched with a workshop, after which the participants had to plan and put into practice their own projects in a second language, satisfying the challenges of the European Language Portfolio. The case study reports revealed that **language activities created within the participants' projects had a positive impact on language learners' self-reliability, understanding of diversity and the awareness of similarities and differences among cultures.**

Parys, J. 2015. Service learning and LEAP: Increasing respect for diversity through campus-community collaboration in advanced Spanish courses. *Journal of Community Engagement & Scholarship* 8(1), 106–114.

- This study reports on an advanced Spanish grammar course combined with a service-learning component at the University of Wisconsin-Whitewater (US). The goal of the project was to promote respect for linguistic, cultural and racial diversity, one of the learning outcomes of the Liberal Education and America's Promise (LEAP) initiative. During the semester, the students ($n = 70$) completed a minimum of 15 hours of community service of their choice such as teaching a basic Spanish course at a local elementary school or providing free medical service to a Spanish-speaking population at a local health clinic. The findings from the students' essays, presentations and discussions revealed that **the students developed admiration and respect for the people they met and the cultural traditions that they shared. They started to feel that it is the responsibility of all citizens to take the steps necessary to integrate immigrants to the society and the people in it. Those who worked with children felt responsible for teaching Spanish language skills to members of the next generation and for imparting an appreciation and respect for cultural diversity.**

Speakers of more than one language demonstrate enhanced empathy and may be inclined toward social justice.

Crosbie, V. 2014. "Capabilities for intercultural dialogue." *Language and Intercultural Communication* 14(1), 91–107.

- The goal of this study is to explore ways in which the language classroom can contribute to the formation of learners' cosmopolitan identities and intercultural understanding for democratic citizenship. The author conducted a case study over the course of a semester at Dublin City University, UK, with 29 international students of English, aged 19 to 21, from

diverse national backgrounds. These students participated in a course developing a critical awareness of global social and political processes as well as social justice. Through the analysis of focus group data, participant observation and questionnaires, the researcher found that **cooperation and co-mingling of people from different cultures in a language classroom leads to intercultural understanding and a greater sense of social justice. Evidence from the study indicates that cosmopolitan citizenship learning has a valued place in the second-language multicultural classroom in which intercultural dialogue is fostered.**

Goulah, J. 2007. "Cultural transformative learning and a planetary literacy in the foreign language classroom." *Journal of Transformative Education* 5(2), 163–176.

- This study reports on a Japanese language course combined with transformative learning, which is defined as "cultivation in students of a holistic sense of cultural and planetary interconnectedness" (p 163) toward mutual understanding and global peace. This study was conducted in a lower middle-class/working-class western New York public high school with a group of six students between the ages of 14 and 17, who watched a Japanese anime film that highlighted the issues of power, gender, identity and human interaction with nature. The results indicate that **students demonstrated an understanding of the concept of culture through comparisons of the cultures studied and their own, revealed a critical empathy toward humans, nature and the world community, and viewed themselves as individuals who play a role in transforming the current planetary state to one of peaceful eco-human equilibrium. The study also revealed that the second-language classroom is conducive to transformative learning not only in adults, but also in working-class adolescents.**

Second-language learners tend to be active and engaged global citizens.

Caldwell, W. 2007. "Taking Spanish outside the box: A model for integrating service learning into foreign language study." *Foreign Language Annals* 40(3), 463–471.

- This study examines the integration of service learning, an organized activity aimed at satisfying local community needs, into a college-level Spanish conversation course in the US. The students ($n = 5$) collaborated with their professor in the preparation of the children's (aged 5–11) Spanish story reading program at the local library during Hispanic Heritage Month. **During the preparation, the university students showed signs of increased levels of creativity and commitment to civic engagement** (eg, they sewed puppets for the main characters of the story and offered transportation to the venue to those who needed assistance). Story-time observation, student journals about their experience and the postservice questionnaires demonstrated that **language education coupled with service learning empowered the university students with a sense of civic duty and global responsibility, while advancing their proficiency in the target language.**

Semaan, G, and K Yamazaki. 2015. "The relationship between global competence and language learning motivation: An empirical study in critical language classrooms." *Foreign Language Annals* 48(3), 511–520.

- This study examines the relationship between global competence, or global citizenship, and the motivation to learn non-Western European languages, which tend to be less commonly taught in US schools. The findings of a survey collected from 137 participants who were studying Arabic, Chinese, Japanese, Korean or Persian at two American universities indicate that **the greater a student's motivation was to learn the second language, the greater the likelihood that a student viewed him- or herself as being globally competent. The students considered language to be a stepping stone to another, greater goal: engaging with members of the target communities in positive and meaningful ways.**

Sung, C C M. 2016. "ESL university students' perceptions of their global identities in English as a lingua franca communication: A case study at an international university in Hong Kong." *The Asia-Pacific Education Researcher* 25(2), 305–314.

- This study investigated seven students' perceptions of their global identities in intercultural communication. All students were learning English as a second language at an international university in Hong Kong. Data were collected via in-depth interviews and journal entries. Findings revealed that **the students identified themselves with a wider global community, beyond their local and/or national identities. They were also capable of relating themselves to people of different cultural backgrounds as a result of sharing opinions on a number of cultural and global issues, including global warming, human rights and democracy. Participants also displayed open-minded and tolerant attitudes toward linguistic diversity in the global use of English.**

Second-language learners demonstrate an awareness of innovative scientific, social and environmental ideas that come from other parts of the world.

Melin, C. 2013. "Climate change: A 'green' approach to teaching contemporary Germany." *Die Unterrichtspraxis/Teaching German* 46(2), 185–199.

- This experimental project involved the construction of a new language course at the University of Minnesota, which was intended to provide a productive setting for simultaneous work on second-language skills and environmental thinking. The course, titled "Contemporary Germany: Food, Energy, Politics," was aimed at a broad audience of German majors, minors, and non-majors, and organized around nonfiction texts, literary excerpts, and publically available multi-media resources on the topic of sustainable development and economic development without depletion of natural resources in the US and Germany. The findings of the project demonstrated that **many students had become more aware of current German debates and global sustainability issues and were motivated to lead a more ecological lifestyle. Second-language learning empowered students to connect with a**

broader international community, learn about other countries' environmental practices, express their opinions on the issue and agree about potential solutions, which are some of the principles of democratic civil discourse.

Ter Horst, E E, and J M Pearce. 2010. "Foreign languages and sustainability: Addressing the connections, communities, and comparisons standards in higher education." *Foreign Language Annals* 43(3), 365–383.

- Two professors from Queen's University (Canada) and University of Clarion (US) led this project, which combined instruction in German as a second language and the study of environmental issues. A total of 12 American English-speaking students and one German exchange student participated in the project. All participants learned about ecological development by expanding their knowledge of environmental terms and problems, comparing environmental practices across countries and holding debates about relevant issues. Further, they added to the German-language content on the website Appropedia.org, a site devoted to global economic development without the depletion of natural resources. Data were collected in the form of academic achievement, surveys and discussions with students. Results showed **that familiarity with other cultures and knowledge of a second language provided significant educational opportunities for students to address environmental and social issues. Learning a second language also allowed the students to make connections between disciplines and countries, which is essential for international collaboration.**

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Intercultural Competencies

- Second-language learners who learn about the target culture demonstrate more positive attitudes toward the language, its speakers and its culture. They also demonstrate sensitivity to other cultures.
- Learning languages may lead to the reduction of cultural prejudices and stereotypes, and it encourages learners to develop respect for other cultures.
- Language learning leads to an enhanced critical awareness of self and others.
- The intercultural dialogue that occurs in second-language learning situations may help to ease antagonism between conflicting sides.

INTRODUCTION

Recent research has shown that intercultural competencies cannot automatically be acquired through living abroad or classroom language instruction and need to be taught explicitly. Language classrooms are some of the most suitable settings for developing intercultural competencies, as they provide opportunities for culturally rich instruction that includes critical reading, discussions of social issues and online intercultural exchanges. The results of a host of studies indicate that second-language learners who learn about the target culture and/or interact with native speakers of the target language are both more motivated to learn about the target language and its culture and have more positive attitudes toward speakers of the language. In addition to this, students who engage with aspects of the target culture in their second-language classes also show a reduction in negative stereotypes and an increase in critical awareness and understanding of self and other. Finally, learning about other cultures may encourage second-language learners to be more open to negotiation and to respecting the opinions of others.

The following definitions will prove useful for a reading of this section:

- Intercultural/global citizenship: the possession of the knowledge and ability to identify cultural differences, the interest to interact with people from cultures outside of one's own, and the use of linguistic and cultural skills to communicate in the most effective manner in different contexts (Semaan and Yamazaki 2015)
- Intercultural competence: a person's ability to (a) interact with people with different ways of thinking, believing and behaving; (b) bring the culture of origin and the "other" culture into relation with each other; and (c) deal effectively with intercultural misunderstanding and conflict situations
- Self: one's own individual being that is distinguished from others and that can be reflected upon
- Other: an individual who is separate from the self

RESEARCH SUMMARY

Second-language learners who learn about the target culture demonstrate more positive attitudes toward the language, its speakers and its culture. They also demonstrate sensitivity to other cultures.

Acheson, K, M Nelson and K Luna. 2015. "Measuring the impact of instruction in intercultural communication on secondary Spanish learners' attitudes and motivation." *Foreign Language Annals* 48(2), 203–217.

- A two-year curricular experiment was undertaken in two public high schools in Georgia (US). A total of 391 participants were divided into two groups: a control group with no special interventions and a treatment group that engaged in two types of interventions: (a) culturally rich Spanish language instruction; and (b) interviews with members of the Spanish-speaking community. Comparisons of pre- and post-test scores showed that the treatment group **showed a statistically significant increase in motivation to learn a second language and positive attitudes toward both European Spanish speakers and American Hispanics.**

Ahnagari, S, and J Zamanian. 2014. "Intercultural communicative competence in foreign language classroom." *International Journal of Academic Research in Business and Social Sciences* 4(11), 9–16.

- This study presents an analysis of the impact of intercultural learning on the cultural viewpoints and the overall language proficiency of ESL learners in Iran. The study was carried out in two classes at the Iran Language Institute with 48 intermediate English language learners, whose first language was Persian. The classes were further randomly assigned to one experimental group and one control group, each with 24 participants. The experimental group received some information about the target culture while reading a text. The results of a questionnaire at the end of the study indicated that the participants in the experimental group **had more positive attitudes toward communication and interaction with native speakers and toward development of their overall language proficiency than the control group.**

Moloney, R. 2009. "Forty per cent French: Intercultural competence and identity in an Australian language classroom." *Intercultural Education* 20(1), 71–81.

- This study investigated elementary school language learners' cultural memberships and identity as a fundamental aspect of intercultural competence. The focus group consisted of 49 Australian upper elementary school students learning German, French and Japanese as second languages. All participants took part in individual and group discussions that were centred on their preferred language activities, attitudes toward target language identification, perceptions of their teacher, understanding of connections between culture and language, and pictures

of the target language culture. **Students reported positive attitudes to the target language culture and its practices, and they identified with the target language culture. A total of 65 per cent of the students (32 of 49) were able to reflect personally on their ability to move between languages and cultures. Students' knowledge of cultural information appears to stem from their second-language learning and plays an important part in the development of learners' intercultural skills.**

Peiser, G. 2015. "Overcoming barriers: Engaging younger students in an online intercultural exchange." *Intercultural Education* 26(5), 361–376.

- In this small-scale project, an online school exchange was set up between two classes of 12- and 13-year-old British English students learning German as a second language and German students learning English. The three main activities of the exchange involved introductory questions between the partner groups, videos or texts, and group discussions. The findings showed that **second-language learning combined with an online exchange has great potential to promote intercultural understanding among younger learners, as it fosters the development of curiosity and openness to another culture.** Comparing the outcomes of this project in secondary education to similar projects at the university/college level, the researcher found that **young people learned more than older students about cultural similarities than differences and were less likely to engage in cultural misunderstandings. Overall, students developed friendly relationships and an openness toward people from a different culture.**

Learning languages may lead to the reduction of cultural prejudices and stereotypes, and it encourages learners to develop respect for other cultures.

Chen, J J, and S C Yang. 2016. "Promoting cross-cultural understanding and language use in research-oriented Internet-mediated intercultural exchange." *Computer Assisted Language Learning* 29(2), 262–288.

- This case study investigated a project for the development of language skills and intercultural communicative competence in 30 Taiwanese Grade 7 (aged 12) ESL learners, who were connected with teenage participants (aged 12–15) from five different countries (Canada, Lebanon, the Netherlands, Ghana and Taiwan). Two in-class interaction tools (a Wiki platform and a Moodle) were used. The students completed several writing tasks, including self-introductions, summaries and reflections, collaborated in cultural research and held class discussions using English as a common language. **The findings of group discussions and surveys showed that the participants became both more proficient language learners and that their cultural knowledge and positive attitudes to cultures other than their own increased. The learners also changed their cultural stereotypes, discarded prejudices and started to view others from a different perspective.**

Mendez Garcia, M C. 2013. "The intercultural turn brought about by the implementation of CLIL programmes in Spanish monolingual areas: A case study of Andalusian primary and secondary schools." *The Language Learning Journal* 41(3), 268–283.

- Content and Language Integrated Learning (CLIL) involves the use of several languages for instruction in different subject areas and is similar to bilingual and immersion education. This study investigates CLIL's use in two Andalusian (Spain) primary and secondary schools (with students aged 6–16). It is assumed that learning a subject area through the target language will increase both learners' communicative competence and their awareness of language and culture. The program involved 15 language assistants and teachers, whose responses indicate that the program **favours understanding and access to wider knowledge of the cultures related to the target language, encourages attitudes such as respect toward otherness, develops critical cultural awareness, and, finally, fosters empathy through the exploration of stereotypes and clichés.**

Language learning leads to an enhanced critical awareness of self and others.

Elola, I, and A Oskoz. 2008. "Blogging: Fostering intercultural competence development in foreign language and study abroad contexts." *Foreign Language Annals* 41(3), 454–477.

- This study examined how intercultural competence developed in study abroad and at-home students (in Spain and the United States, respectively) who used blogs to share information over the course of a semester. The courses under study were two third-semester intermediate Spanish classes at two US universities, with a total of 38 students. At-home students discussed a cultural topic with their instructor, did more research on it and contacted their study abroad counterparts about their findings. The students who were studying abroad reflected on their observations and engaged in a dialogue with them. The blogs and two questionnaires were analyzed, and the results showed that (a) **both study abroad and foreign language learners demonstrated instances of intercultural competence, with each group reflecting upon the unique characteristics of its context; and (b) blog interactions had a positive effect on the development of both groups' intercultural awareness and provided room for critical discoveries about oneself and others.**

Liddicoat, A J. 2014. "Pragmatics and intercultural mediation in intercultural language learning." *Intercultural Pragmatics* 11(2), 259–277.

- In this study, the researcher investigated the role that pragmatics (ie, the use of language in context) plays in language learners' practices of negotiating between their own cultural understandings and those of the target culture. Two data sets were used: one-on-one interviews with Australian students studying French and Japanese that focused on aspects of language learning and their perceptions of their own learning; and recordings of interactions of a small group doing a reading and comprehension task. The results showed that **learners interpreted cultural behaviours through processes involving comparisons and noticing differences**

with others through interaction, thus developing the knowledge of the target culture and the understanding of difference. Another important finding is that language learning itself provides excellent opportunities for interaction between language and culture and can lead to intercultural awareness.

The intercultural dialogue that occurs in second-language learning situations may help to ease antagonism between conflicting sides.

Escudero, M D P. 2013. "Teaching intercultural awareness in the English as a foreign language classroom: A case study using critical reading." *Intercultural Education* 24(3), 251–263.

- This study used critical reading activities in a second language (English) to teach intercultural awareness to a group of 17 Mexican college ESL students. Of primary interest were changes in the participants' understandings of American culture and society, which was initially viewed by young Mexicans as imperialistic, racist and extreme-right. Students read and discussed texts in class that both (a) showed the ideological diversity of American discourses on race and undocumented Mexican immigration; and (b) promoted reflection on the sources of the learners' own ideological positions. Analyses of classroom discussions and students' written work suggest that the intervention had an impact on the students' representations of US culture. **While more students became aware of the racist aspects in the US society, more of them also became aware of attitudes that favour diversity. The results indicate that a language classroom provides a favourable environment for increasing students' awareness of the multiple ideological positions existing in a cultural context.**

Porto, M. 2014. "Intercultural citizenship education in an EFL online project in Argentina." *Language and Intercultural Communication* 14(2), 245–261.

- This study examined an online intercultural citizenship exchange between students in an EFL undergraduate classroom in Argentina ($n = 50$, aged 18–22) and those in a first-year Spanish Honours second-language course at the University of East Anglia ($n = 30$, aged 18–21). The project focused on the Malvinas/Falklands war fought between Argentina and the UK in 1982. Students in both groups researched the conflict, reflected through whole class debates on the past and present English and Argentinean attitudes toward it, created posters and PowerPoint presentations about the war, engaged in online communication with their counterparts, and interviewed two war veterans via Skype. The findings showed that the students **gained awareness of their own values, presuppositions, prejudices and stereotypes, and gained a critical and reflective view upon them. This project also resulted in the creation of advertisements for the reconciliation of the Argentine and British nations: it challenged the "common sense" of each national group within the international project, and it developed a new way of thinking and acting.**

Schuetze, U. 2008. "Exchanging second language messages online: Developing an intercultural communicative competence?" *Foreign Language Annals* 41(4), 660–673.

- This article reports on an online second-language course set up between Canadian students (University of British Columbia) studying German as a second language, and German students (University of Kiel) studying English. The goal was to determine whether this project would lead to the development of intercultural communicative competence. All course material—short videos, pictures, audio recordings and newspaper articles—was uploaded on webpages and grouped around the following themes: identity, nature and multiculturalism. Each theme had two topics, one in German and one in English, and the language of communication was either German or English, depending on the language of the material. Students from both universities were put into groups of two and were told to exchange at least five e-mail messages each for each topic. The analysis shows that students **engaged in an online intercultural dialogue and developed intercultural communicative competence**. This type of exchange, which could be used in a range of language courses, **provides an opportunity to educate students on the dynamics of dialogues and collaboration**.

Schrenker, T. 2012. "Intercultural competence and cultural learning through teleportation." *CALICO Journal* 29(3), 449–470.

- This six-week tele-collaborative project took place between 16 American students enrolled in a second-semester German class at an American university and 16 German students enrolled in an advanced English course at a high school in Germany. Students wrote two e-mails a week to partners in the other country in which they discussed various cultural topics. The findings revealed that the American students **exhibited an attitude of openness and curiosity toward the target culture, an awareness of possible difference in opinions, an ability to negotiate between conflicting interpretations and an enhanced understanding of cultural and political issues, all of which are characteristics of intercultural competence**.

Yang, Y F. 2013. "Exploring students' language awareness through intercultural communication in computer-supported collaborative learning." *Educational Technology & Society* 16(2), 325–342.

- This study relied on a computer-supported collaborative learning community to engage teachers and students from different domains and countries (China, Denmark, Indonesia, Malaysia, the Netherlands, Thailand and Vietnam) in intercultural communication. Participants were 208 students, including 83 international students from one of the eight vocational and technological universities. The students participated in online collaborative activities such as role plays and group discussions of various topics in the contexts of vocational, business, technical, travel and medical English. The results revealed that **the project promoted the development of students' language awareness and intercultural competence, as students from different backgrounds shared common understandings during their intercultural communication, and offered suggestions about how to solve various social and cultural problems**.

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Economic Impact

- Employees who speak a second language often earn more than monolinguals.
- Second language skills allow for greater mobility in local and international markets.
- Second language skills play an important role in promoting international trade, thus making businesses more competitive in global markets.

INTRODUCTION

Within the field of economics of language, second-language skills can be viewed as a form of human capital. The economic benefits of speaking a second language can include higher earnings, greater job opportunities, larger social or professional networks, and increased international trade, to name just a few. For example, learning French as a second language in Canada enables students to communicate with a wide variety of people, both nationally and internationally, and it gives them access to a greater range of jobs upon graduation than their monolingual counterparts (Lazaruk 2007).

Second-language skills offer benefits not only to individuals, but also to employers, businesses, industries, cities and entire nations. In general, studies suggest that second-language skills result in higher wages (both directly and indirectly), provide greater access to local and global markets, and are greatly valued by potential employers. Furthermore, studies point to the importance of second-language proficiency and literacy in foreign trade, as these skills facilitate communication between nations by mitigating the effect of linguistic barriers and widening the scope of import and export networks. It would seem that the multilingual world is, in fact, more prosperous than one operating through a single language only.

The following definitions will prove useful for a reading of this section:

- Economics of language: a relatively new field of study that uses the methodology and tools of economics to discover the economic effects of speaking multiple languages at both individual and societal levels
- Gravity model: a statistical model that estimates the amount of bilateral trade between two countries (Selmier and Oh 2012)
- Human capital: a resource in which people invest their time and money in the hopes of receiving the benefits
- International trade: the import and export of goods into and out of a domestic territory of a country (OECD 2007)

- Linguistic diversity: the existence of variation within speech communities and across speech communities (Evans and Levinson 2009)
- Returns: additional earnings obtained by speakers of a second language (Christofides and Swidinsky 2010)

RESEARCH SUMMARY

Employees who speak a second language often earn more than monolinguals.

Agirdag, O. 2014a. “The literal cost of language assimilation for the children of immigration: The effects of bilingualism on labor market outcomes.” In *The Bilingual Advantage: Language, Literacy, and the Labor Market*, ed R M Callahan and P C Gándara, 160–181. Clevedon, UK: Multilingual Matters.

- According to Agirdag (2014), linguistic capital (the value of being able to speak a certain language) depends on a language’s worth in the greater social context, with minority languages often functioning as capital in “sub-markets” of the economy. This study investigated the long-term effects of being proficient in a minority language for children of immigrants to the United States and whether students’ bilingual proficiencies have an impact on their future employment status and earnings. The earnings and employment status (full-time, part-time and unemployment) of a total of 4,374 bilingual children of immigrants were analyzed using data from two longitudinal studies. Findings revealed that of three groups, (1) limited bilingual, (2) balanced bilingual and (3) English dominant, balanced bilinguals were significantly more likely to be full-time employed than those in the other groups. Balanced bilinguals had a mean value of \$3,292 (US) more income at the beginning of their careers and received a larger average annual income. In conclusion, **bilinguals showed a clear earnings advantage, and the author notes that this can be due to the indirect effect of language skills on earnings through educational attainment.**

———. 2014b. “The long-term effects of bilingualism on children of immigration: Student bilingualism and future earnings.” *International Journal of Bilingual Education and Bilingualism* 17(4), 449–464.

- This study focused on the long-term effects of bilingualism for students whose parents were immigrants to the US. The central research question was whether students’ bilingual proficiency, or their ability to speak two languages, had an impact on their future earnings in the US. Two national longitudinal surveys provided the data for this study; over 29,000 eighth- and ninth-grade students participated in the initial data collection. At an average age of 25 years old, students completed a follow-up survey, which focused on employment status and wage. Findings showed that those students who were equally proficient in two languages (known as balanced bilinguals)

earned significantly more as adults at the beginning of their careers than those who had limited skills in a second language or were dominantly proficient in English. Balanced bilingualism had an additional indirect effect on earnings through academic attainment. This paper supports the claim that **competencies in a minority language may function as economic capital by giving bilinguals access to both the English monolingual market and minority language subfields, and by directly and indirectly contributing to a higher wage.**

Cappellari, L, and A Di Paolo. 2015. “Bilingual schooling and earnings: Evidence from a language-in-education reform.” A working paper prepared for the Reference Network for Research in Applied Economics (Xarxa de Referencia en Economia Aplicada, XREAP).

- In this study, researchers estimated the labour market value of Spanish and Catalan bilingual education in Catalonia. Using data from two national surveys in 2006 and 2011, the researchers compared the earnings of nearly 8,000 Catalans who were exposed to compulsory bilingual education, partial bilingual education or monolingual education during childhood. They found a sizeable positive effect of bilingual education on earnings; relative to no exposure, one year of bilingual education is associated with a wage advantage of roughly 1 per cent, while five years of bilingual schooling is associated with an 18 per cent increase in earnings. This return increased with the amount of schooling received in both languages. The researchers conclude that **bilingual education results in an increased quality of education in Catalonia** and that **bilingualism has direct positive effects on skill formation**. In sum, **bilingualism at school supports educational success and may result in higher wage returns.**

Coomer, N. 2011. “Returns to bilingualism in the nursing labor market—Demand or ability?” *The Journal of Socio-Economics* 40, 274–284.

- This paper examined whether nurses in the US who speak a second language earn more than their monolingual counterparts. The researcher assumes that positive returns of bilingualism are due to two factors. First, the returns could be a response to an increased demand for bilingual workers (as the national population diversifies, workers with language skills may provide additional services to firms). Second, the returns could be a manifestation of “innate ability,” where bilingualism acts as a signal of skills that would have been otherwise unobserved by the employer, such as better communication with patients. Using data from the 2000 and 2004 National Sample Survey of Registered Nurses (NSSRN), the researcher finds that bilingual nurses do, in fact, receive higher returns, with proficiency in a second language associated with a 4 per cent increase in wage (roughly \$1,800 per year). The researcher concludes by stating that the wage premium of bilingual nurses is likely a result of **bilingualism acting as a signal of higher ability and skills, thereby making an individual more attractive and competitive in the labour market.**

Christofides, L, and R Swidinsky. 2010. "The economic returns to the knowledge and use of a second official language: English in Quebec and French in the rest-of-Canada." *Canadian Public Policy/Analyse de Politiques* 36(2), 137–158.

- This study focused on the economic incentives in Canada for learning a second official language. The researchers' primary objective was to estimate and compare the additional earnings (also known as returns), obtained by francophones in Quebec and anglophones in the rest of Canada who learn and use a second official language. Data from the 2001 Census Public Use Microdata File showed that bilinguals in both Quebec and the rest of Canada earn more than their monolingual counterparts. The researchers state that this may be the result of language *knowledge* (which signals unobservable market characteristics such as ability, cognition, perseverance and quality of education), rather than actual language *use*. They also find that students and employers are likely to focus on the economic value of additional language skills. In conclusion, **bilingualism in Canada seems to contribute to higher wage returns, which could be the result of language skills being perceived as indicative of cognitive ability.**

Christofides, L, and R Swidinsky. 2006. "Language in the public service." *Industrial Relations: A Journal of Economy and Society* 45(3), 326–347.

- This study investigated the pattern of earnings by sector of employment (public, private) and bilingualism status (bilingual, monolingual) in Canada, and considers how the relative earnings of these groups changed over time. Using data from the census years 1986, 1991, 1996, the researchers collected information on annual earnings, official language proficiency, native language, education and other personal characteristics for over 350,000 full-time employed Canadian-born individuals between 15 and 64 years of age. The findings confirm an earnings advantage for bilinguals, an advantage that is higher in the public sector than the private sector, and higher for men than women. The authors maintain that this premium may reflect an increased demand for bilingual language skills caused by federal language legislation. In general, this study found that **bilinguals in Canada received higher wages than monolinguals, and that having a greater number of bilinguals (through core French and French immersion programs for anglophones and English instruction for francophones) is important for the Canadian labour market.**

Rumbaut, R. 2014. "English plus: Exploring the socioeconomic benefits of bilingualism in Southern California." In *The Bilingual Advantage: Language, Literacy, and the Labor Market*, ed R Callahan and P Gándara. Clevedon, UK: Multilingual Matters.

- The purpose of this study was to determine the potential socioeconomic benefits of bilingualism (or "English plus" a second language) compared to English monolingualism in Southern California, given the extreme cultural and linguistic diversity of immigrants in this area. Two major national surveys of adult children of immigrants provided the data set for this study. With a sample of 6,135 young adults in their 20s and 30s, the researcher examined the effect of bilingualism on three outcomes: dropping out of high school, occupational status and earnings. Results showed that bilingualism has a strong, positive association with occupational status and annual earnings. **Fluent bilingualism was associated with an annual gain of \$2,827, and**

moderate bilingualism with an annual gain of \$2,325. Even limited bilingualism shows a statistically significant annual earnings advantage. In conclusion, despite strong pressures toward English monolingualism from newer generations of Americans, **bilingualism is associated with educational, occupational and economic attainment.**

Shin, H, and R Alba. 2009. “The economic value of bilingualism for Asians and Hispanics.” *Sociological Forum* 24(2), 254–275.

- Using 2000 Census data, this study examined how bilingualism affects the wages of Asian and Hispanic workers in the United States. The study sample was limited to three major Hispanic groups (Mexicans, Cubans and Dominicans), and three Asian ethnic groups (Chinese, Filipinos and Korean). After examining earnings in relation to language skill for 2,500 adults from across the six linguistic groups, the researchers found no evidence that bilingual workers have higher wages than their English monolingual counterparts. Though the net effects of being bilingual are not large (a 4–6 per cent reduction in annual wage), they are contrary to what the researchers call a “general belief” in the competitive advantage of bilingualism in the labour market. In conclusion, **although bilingualism may provide an economic advantage under specific circumstances (increased opportunity to serve both ethnic and mainstream clients), it is important to note that not all languages are valued equally in local and international markets, and that bilingualism may even carry an economic penalty.**

Williams, D. 2011. “Multiple language usage and earnings in Western Europe.” *International Journal of Manpower* 32(4), 372–393.

- This paper estimates the effect that using a second or third language at work has on earnings for a sample of workers who partook in an international survey that spanned 14 countries in Western Europe (Germany, Denmark, the Netherlands, Belgium, Luxembourg, France, UK, Ireland, Italy, Greece, Spain, Portugal, Austria and Finland). The sample included over 70,000 individuals between 25 and 64 years of age. The results indicate that **the use of a second language in the workplace give rise to an increase in earnings by 3–5 per cent across all 14 countries, with even greater returns in some.** The estimated returns are correlated with the extent of tourism in the country, but not other measures of trade. The researcher indicate that the highest usage of a second language occurs in the professional and managerial occupations in most countries, and that **returns may be higher to workers if there is a greater linguistic distance between languages, as a return to the difficulty in acquiring the language.**

It may be that an increase in wages has to do with the languages that a bilingual worker speaks. Given English’s global dominance, there may be greater value placed on English language skills than other second languages. For further information on the relationship between English as a Second Language (ESL) and economic returns, see Boyd and Cao (2009), Casale and Posel (2011), Chiswick (2008), Chiswick and Miller (2010), Henry (2012), Klein (2007) and Lauring and Selmer (2012).

Second language skills allow for greater mobility in local and international markets.

Harrison, G. 2013. “‘Oh, you’ve got such a strong accent’: Language identity intersecting with professional identity in the human services in Australia.” *International Migration* 51(5), 192–204.

- This study examines how language acts as a form of cultural capital, a symbolic form of capital that includes knowledge, values and other lifestyle factors acquired in the course of socialization. Eighteen bilingual health care workers in Queensland, Australia, participated in semi-structured interviews in this study. Respondents stated that speaking a second language had value in both local and international markets, allowed them to work in a “mainstream” job market rather than an ethnic enclave, and gave them the opportunity to serve a larger, more diverse group of clientele. Some languages, however, hold greater global import than others; English in particular is accorded higher value as a result of American-led global capitalism. Overall, **bilingualism affords greater mobility within local and international job markets and the opportunity to serve more diverse clientele, but it is important to note that not all languages hold the same economic value.**

For a brief overview of labour market outcomes for language minority populations in the US, see Gándara (2015).

Lehtonen, T, and S Karjalainen. 2008. “University graduates’ workplace language needs as perceived by employers.” *System* 36, 492–503.

- The focus of this study is on the language needs of university graduates from the perspective of their potential employers. Interview data were gathered from 15 Finnish employers in Finland who best represented the sectors that employ university graduates. According to the employers, there is a general need for multilingualism in the workplace, and these skills are often expected or regarded as self-evident. Furthermore, employers view bilingualism as related to good communication and presentation skills and the ability to interact and adapt to various cultural settings. Last, even limited second-language skills are seen as socially beneficial, in that they foster cultural understanding and help establish contacts and networks. Overall, **second-language skills are highly valued by future employers and act as a very useful tool, given how important successful communication is in today’s plurilingual workplace.**

Second language skills play an important role in promoting international trade, thus making businesses more competitive in global markets.

Bel Habib, I. 2011. “Multilingual skills provide export benefits and better access to new emerging markets.” *Sens Public*.

- This study examined the effects of linguistic skills on the export performance of German, French and Swedish small- and medium-sized enterprises. The researcher states that such companies must increasingly use the language of the country to which they export in order to be more competitive in emerging markets, and that many business deals are lost as a result of a lack of skills in local languages. The researcher compared statistical data from several national and international surveys, which included information on each country’s multilingual inhabitants, the proportion of companies using knowledge of second languages as a part of their business strategy, and the total number of countries to which each country exported goods, among many other variables. Results show that Swedish, French and German small- and medium-sized enterprises all use multilingualism as a tool for exporting goods, and that multilingualism and economic competitiveness are closely linked. In fact, 11 per cent of the firms surveyed report that they miss out on contracts as a result of a lack of second-language skills in their office staff. Although this study was conducted in a European context, results indicate that **higher second-language skills result in better access to emerging markets, afford a larger number of export countries, and provide a higher number of foreign-billed customers. Even the creation of a multilingual website can help firms reach a global audience.**

Conteh, C, and J Fortilus. 2014. “Cultural and linguistic diversity and regional economic development in Canada.” Paper prepared for the International Political Science Association Conference, Montreal, July 20–24.

- This research addresses the connection between the linguistic diversity of Canadian cities and their economic resilience and adaptability in the global economy. The authors contend that cities with more than one internationally-spoken language are better positioned to serve as major hubs of global services, production and exchange. In Canada linguistic diversity is seen primarily as a function of the country’s commitment to bilingualism in French and English. By conducting interviews and analyzing the content of key policy documents in two Canadian cities (Moncton, New Brunswick and Ottawa, Ontario), the researchers argue that linguistic diversity is a vital component of Canada’s economic adaptability and resilience. As Canada’s volume of commercial trade with French-speaking countries has increased significantly in recent years, knowledge of French as a second language has become a useful tool for diversification of trade and increased opportunities for commercial exchanges. Overall, **bilingualism and multilingualism are assets that present cities as attractive and competitive regions for businesses and afford greater access to global markets.**

Fidrmuc, J, and J Fidrmuc. 2016. "Foreign languages and trade: evidence from a natural experiment." *Empirical Economics* 50(1), 31–49.

- This article investigates the economic returns on proficiency in second languages at a national level. The authors maintain that if enough people in two countries speak the same language, they will be able to communicate with one another more easily, which fosters cheaper and more intensive trade between these countries. Using a gravity model of international trade (and a survey data set on the knowledge of languages in 29 member and candidate countries of the EU), the researchers examine the effect of second-language knowledge on trade flows in Europe. Findings show that **the greater the density of linguistic skills in a country, the greater the trade intensity. Furthermore, the ability to communicate in a particular language can affect trade flows between two countries, irrespective of whether it is a second language or a shared official language.** The authors conclude by stating that although second-language learning is not a costless investment, **language education offers benefits above and beyond trade effects, such as those in the labour market, science and education and the social sphere.**

Melitz, J. 2008. "Language and foreign trade." *European Economic Review* 52, 667–699.

- This study focuses on the effects of both direct communication and translation on trade between countries with speakers of common languages. The researcher utilizes gravity models of international trade and two sources of linguistic data for his analysis: a) the Central Intelligence Agency *World Factbook*, for information about official languages and literacy rates, and b) a searchable online database of language resources (Grimes 2000). Twenty-nine languages were included in the analysis. Findings suggest that **a common language promotes international trade through both direct communication and translation services.** Furthermore, major European languages (including English) are found to be more important than other languages in promoting trade on a global scale. Last, **both second-language literacy and linguistic diversity play a role in increasing foreign trade by enhancing the possibility of nonverbal communication (reading and writing), and by removing linguistic barriers between countries.**

For an overview of the economics of multilingualism see Grin (2006) and Grin, Sfreddo and Vaillancourt (2010).

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Students with Exceptionalities

- Exposure to a second language does not always cause additional delay for students with exceptionalities
- Students with exceptionalities face second-language learning challenges, but these are not always greater than those of typically developing children.
- Certain types of interventions may help both typically developing children and students with exceptionalities in language classrooms.

INTRODUCTION

We know that students have various learning needs. In this section, we concentrate on two main issues: (a) the extent to which children with communication and reading difficulties are able to learn a second language, and (b) the effects of second-language learning on these children. The research suggests that children with autism spectrum disorder or reading disabilities who are learning a second language need different communicative and learning tools than children with autism spectrum disorder or reading disabilities who speak only one language (ie, monolinguals). Moreover, some studies have suggested that children with reading disabilities require more time to acquire a second language.

A review of the current literature supports the view that students with exceptionalities can benefit from enrolling in language programs (Genesee 2007). In fact, research shows that learning a second language does not always involve greater learning difficulty for children with exceptionalities. Furthermore, second-language learning does not cause additional language learning delay to children's first-language development, and the challenges experienced by children with exceptionalities are not always greater than those of typically developing children.

The following definitions will prove useful for a reading of this section:

- Autism spectrum disorder: a neurodevelopmental syndrome often associated with a number of atypical developmental behaviours, including communication difficulties (Lord et al 2000)
- Reading disabilities (including dyslexia, a neurodevelopmental syndrome): reading problems such as difficulty reading words or paragraphs, spelling, writing or speaking (Stein and Talcott 1999)
- Specific language impairment: "a significant deficit in language ability that cannot be attributed to hearing loss, low nonverbal intelligence, or neurological damage" (Leonard 2014, 3)

RESEARCH SUMMARY

Exposure to a second language does not always cause additional delay for students with exceptionalities.

Gutiérrez-Clellen, V F, G Simon-Cereijido and C Wagner. 2008. "Bilingual children with language impairment: A comparison with monolinguals and second-language learners." *Applied Psycholinguistics* 29(1), 3–19.

- This study examined whether children with language impairment have more difficulty learning English verb endings (eg, *he sees* vs *I see*) when they speak two languages, Spanish and English ($n = 11$), compared to children who can speak only one language, English ($n = 13$). The authors also measured the performance of three groups of typically developing children (ie, a monolingual group, a bilingual group and an English language learner group) to determine whether children with language impairment were different from them ($n = 47$). All children (4.5–6.5 years old) were asked to describe the content of the same picture book. Results showed that children with language impairment did not differ in their use of English verb endings, regardless of whether they were monolingual or bilingual. Children with language impairment who speak two languages performed similarly to English language learners. Children with language impairment who speak only one language performed slightly less well than English language learners. This research suggests that **children with language impairment are not always developmentally delayed compared to typically developing children. In particular, they sometimes have similar language learning issues as typically developing children.**

Hambly, C, and E Fombonne. 2012. "The impact of bilingual environments on language development in children with autism spectrum disorders." *Journal of Autism and Developmental Disorders* 42(7), 1342–1352.

- This study investigated the impact of exposure to two languages, either before 12 months of age (ie, simultaneous bilinguals) or after (ie, sequential bilinguals), compared to exposure to one language for preschoolers (mean age: 56 months, ranging from 36 months to 78 months) diagnosed with autism spectrum disorder ($n = 75$). The current study examined a bilingual effect by comparing bilingual children ($n = 45$) with autism spectrum disorder to monolinguals with autism spectrum disorder ($n = 30$) in Quebec ($n = 71$) and Ontario ($n = 4$), respectively. This study used various language assessment tools, interviews and a questionnaire to determine whether bilinguals showed additional delay in language development compared to their monolingual peers. Results indicated that there was no difference between the groups in terms of language proficiency in their dominant language or in a second language. In short, **there was no linguistic developmental delay found in bilingually exposed children with autism spectrum disorder. The study suggests that bilingualism does not necessarily bring an additional delay in language development.**

Students with exceptionalities face second-language learning challenges, but these are not always greater than those of typically developing children.

Palladino, P, I Bellagamba, M Ferrari and C Cornoldi. 2013. "Italian children with dyslexia are also poor in reading English words, but accurate in reading English pseudowords." *Dyslexia* 19(3), 165–177.

- This study investigated whether Italian-speaking children with dyslexia have difficulty learning or reading words in a second language (ie, English), as has been previously assumed. Italian-speaking Grade 5 students with dyslexia ($n = 23$) and typically-developing Italian children ($n = 23$), matched for age, gender, IQ and schooling, participated in tests involving reading highly familiar 208 English words (eg, bargain, breakable) and 106 English nonwords (eg, pressy, driner, bristert) aloud. The familiarity of English words was decided based on words in English textbooks available for Italian children. Findings revealed that students with reading disabilities had difficulty reading English words but were accurate in reading English nonwords. Both groups also experienced similar processing difficulties. In general, **children with dyslexia seem to assimilate English pronunciation rules; thus, children with dyslexia are not always poor at learning a second language, and their difficulties sometimes are similar to that of children without dyslexia.**

Swanson, H L, M J Orosco and C M Lussier. 2012. "Cognition and literacy in English language learners at risk for reading disabilities." *Journal of Educational Psychology* 104(2), 302–320.

- This study investigated which factors hinder second-language learning among English language learners at risk for developing reading disabilities. Successful second-language learning was operationalized as comprehension and word identification. Based on the results of various cognitive and language pre-tests (eg, working memory test or word identification test), Spanish-speaking students learning English in Grades 1, 2 and 3 ($n = 383$) in the US were divided into groups: "at risk for developing reading disabilities" and "not at-risk for developing reading disabilities". The majority of participants (ie, 97 per cent) participated in the federally funded free/reduced meal programs. Results showed that there was no difference in the cognitive skills relevant to language learning (eg, working memory and sound processing) between the lower proficiency and higher proficiency English language learners at risk for reading disabilities. Moreover, typically developing English language learners showed similar learning difficulties for tasks such as English sound processing or English naming speed as children at risk for developing reading disabilities. The findings of this study suggest that **for some cognitive and linguistic knowledge, both typically developing children and children at risk for developing reading disabilities have similar language learning difficulties.**

Certain types of interventions may help both typically developing children and students with exceptionalities in language classrooms.

Calhoon, M B, S Al Otaiba, D Cihak, A King and A Avalos. 2007. "Effects of a peer-mediated program on reading skill acquisition for two-way bilingual first-grade classrooms." *Learning Disability Quarterly* 30(3), 169–184.

- This study investigated the effectiveness of a peer-tutored reading program in a Spanish-English bilingual immersion program for children in Grade 1 ($n = 76$) considered to be socioeconomically disadvantaged. A 30-hour peer-assisted reading program was implemented for four weeks under a teacher's supervision. During these sessions, children switched roles between a coach and a student when, for example, sharing stories. Results indicated that the peer-tutored program showed a positive effect on literacy and language sound discrimination skills. The same research team (Calhoon et al 2006) showed that the same reading program was also beneficial in terms of nonsense word fluency and sound discrimination skills for typically developing Spanish-English speaking Grade 1 students ($n = 78$). Given the importance of reading skills for both language and academic success, the study suggests that **a peer-tutored reading program could be beneficial to young children when it accompanies an intensive reading program.**

Linan-Thompson, S, S Vaughn, K Prater and P T Cirino. 2006. "The response to intervention of English language learners at risk for reading problems." *Journal of Learning Disabilities* 39(5), 390–398.

- This longitudinal study examined the effectiveness of reading interventions in a first language (Spanish) and a second language (English) for Spanish-speaking English language learners who were identified as at risk for reading problems in Grade 1 ($n = 53$). Grade 1 students were screened based on the cut-off points (ie, the bottom 25th percentile) of two language/reading tests in Spanish and English. They were divided into an English-intervention group ($n = 22$) and a Spanish-intervention group ($n = 31$). Intervention groups received supplemental reading intervention daily for 50 minutes in small groups for seven months. A control group who was at risk for reading problems ($n = 35$) also participated in the study without additional reading intervention. Participants' pre-test scores were not different from each other. Tests of reading words and passages were used to measure students' reading skills at the end of Grades 1 and 2. The results showed that the majority of students in the intervention groups obtained the age-appropriate reading skills at the end of Grade 1 and maintained this status at the end of Grade 2, while 30–40 per cent of the control group students did not meet this criterion at the end of Grade 1. The study suggests that **early comprehensive reading intervention helps children with reading problems to catch up with their peers without requiring special education.**

Pfenninger, S E. 2014. "Taking L3 learning by the horns: Benefits of computer-mediated intervention for dyslexic school children." *Innovation in Language Learning and Teaching* 10(3), 220–237.

- This study investigated the effectiveness of reading software for dyslexic Swiss German children ($n = 10$) learning Standard German as a second language and English as a third language in terms of their motivation and third language proficiency. All children ($n = 40$) were matched for age (mean age: 9.7), gender (male), grade level (year 3), socioeconomic background (middle class), school, cognitive ability and their familiarity with computers. Ten participants were assigned to each of the following groups: dyslexic participants receiving special training, normal readers matched on training situation, controls matched on reading ability and controls matched on grade level. Children in the training condition had 20-minute reading software sessions five times a week, over a three-month period. The results of a post-test and a motivation questionnaire indicated that regardless of reading abilities, reading software training positively influenced the students' motivation to learn additional languages. Furthermore, the increase of motivation scales was related to the increase of children's English proficiency. Within the dyslexia groups, children in the training condition performed better at the post-test compared to the control group. **These findings suggest that the same reading software program can be beneficial for both typically developing children as well as dyslexic children in terms of third language learning and stronger motivation for learning language.**

Restrepo, M A, G P Morgan and M S Thompson. 2013. "The efficacy of a vocabulary intervention for dual-language learners with language impairment." *Journal of Speech, Language, and Hearing Research* 56(2), 748–765.

- This study examined whether learning bilingual vocabulary (ie, English and Spanish) is more beneficial for Spanish-speaking preschoolers with language impairment compared to other types of instruction (eg, learning English vocabulary only) for these children ($n = 202$, mean age: 53.5 months). The children were from either a Head Start program or preschools for children with exceptionalities in the United States. Typically developing children without any additional instruction ($n = 54$, mean age: 54.5 months) also participated in the study as a control group. Each group received relevant instruction on vocabulary and underwent a number of tests regarding their Spanish and English vocabulary knowledge. Findings showed that teaching both Spanish and English (ie, the second language) vocabulary was effective for bilingual children with language impairment in terms of Spanish vocabulary gain. In conclusion, **preschoolers with and without language impairment may benefit from learning vocabulary in two languages.**

Two studies in particular, Chiang and Liu (2011) and Kingsdorf (2014), have shown that students with exceptionalities who are learning second languages may benefit from the use of specifically targeted interventions.

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Additional Language Learners

- Knowing two languages is advantageous when learning an additional language.
- A number of personal benefits including the development of positive personality traits, enhanced communication skills, and a greater sense of open-mindedness and empathy often result from the learning of more than two languages.
- There are academic and cognitive benefits including the development of academic skills and the enhancement of communication cues when learning more than two languages.
- Children can simultaneously learn a societally dominant language, for example, English, as well as a third language such as French, without much difficulty.

INTRODUCTION

Recent research in second-language learning has focused on whether knowing two languages positively affects learning an additional language. The two languages, in general, involve one's mother tongue, or a first language, and English. The present review demonstrates that learning multiple languages is both possible and beneficial in terms of developing a positive view toward one's own communication and academic skills. Studies have also shown that knowing two languages in general is advantageous when learning a new language. Speakers of more than two languages generally demonstrate a number of positive personality traits including open-mindedness and empathy. To successfully learn an additional language, several factors are known to be involved: earlier exposure to the target language, strong motivation to be integrated into a society or a group, and existing knowledge about language. Even though these factors are considered to be important when learning an additional language, it does not mean that they are a prerequisite. Rather, learning two additional languages does not necessarily hinder children from learning both languages successfully even when they learn them simultaneously.

The following definitions may be useful for a reading of this section:

- Academic proficiency: "the specialized domains required for performing academic tasks" (Haim 2015, 699)
- Incipient bilingual: a language learner who is in the process of learning a second language, but not yet using it outside the classroom
- Multilingualism: language learning resulting in proficiency in more than two languages
- Third Culture Kid: a child who grows up in a culture that is different from that of his or her parents

RESEARCH SUMMARY

Knowing two languages is advantageous when learning an additional language.

Abu-Rabia, S, and E Sanitsky. 2010. Advantages of bilinguals over monolinguals in learning a third language. *Bilingual Research Journal* 33(2), 173–199.

- This study examined whether Russian-Hebrew speaking Grade 6 children ($n = 40$) perform better at learning a new language, English, compared to their monolingual Hebrew speaking peers ($n = 42$). The researchers administered a wide range of language tests (eg, vocabulary, reading), general intelligence tests (eg, IQ, reading strategies), and questionnaires to measure students' language performance. The result showed that Russian-Hebrew speaking children performed better at learning English (eg, understanding of the English sound and structure systems). Moreover, they performed just as well in Hebrew as monolingual Hebrew speaking children. The results suggest that **knowing multiple languages and their spelling systems is helpful when learning additional languages.**

Antoniou, M, E Liang, M Ettlinger and P C Wong. 2015. "The bilingual advantage in phonetic learning." *Bilingualism: Language and Cognition* 18(4), 683–695.

- In a series of experiments in which participants learned artificial languages, three groups of adult learners participated in the study: native English speakers ($n = 36$), Mandarin-English bilinguals ($n = 35$) and Korean-English bilinguals ($n = 21$). In the first experiment, the first two groups matched a spoken word of either English-like or Mandarin-like artificial languages to a picture. The result showed that bilinguals were more accurate in distinguishing new sounds of unknown languages. To determine whether this advantage is a general bilingual advantage or another factor was involved, the second experiment with the Korean-English bilinguals was conducted. This time, the general bilingual advantage was found. In addition, only the Korean bilinguals learned Korean-like sound systems better than the other groups. The results suggest that **a person who can speak two languages may be better at learning the sound system of a new language** compared to one who can speak only one language. Additionally, **if a target language is similar to that of one's first language in terms of the sound system of language, he or she also learns a new language more easily compared to monolinguals.**

Haenni Hoti, A U, S Heinzmann, M Müller, M Oliveira, W Wicki and E Werlen. 2011.

"Introducing a second foreign language in Swiss primary schools: The effect of L2 listening and reading skills on L3 acquisition." *International Journal of Multilingualism* 8(2), 98–116.

- This three-year longitudinal study investigating German-speaking Grade 5 students ($n = 928$) attempted to determine whether learning a second language (ie, English) is advantageous when learning a third language (ie, French). The study compared two groups of students, namely, French learners ($n = 376$) and English-French learners ($n = 552$) to see whether previous knowledge of a second language positively affected their learning a third language. By conducting various listening and reading tests in all three languages over time, the study found that English

instruction helped children (ie, English-French learners) to perform better on reading and listening skills in French compared to children who do not have second-language learning experiences (ie, French learners). The results of this study show that **learning multiple languages in a school context is beneficial when learning an additional language later on.**

A number of personal benefits including the development of positive personality traits, enhanced communication skills, and a greater sense of open-mindedness and empathy often result from the learning of more than two languages.

Dewaele, J M, and J P van Oudenhoven. 2009. “The effect of multilingualism/multiculturalism on personality: No gain without pain for third culture kids?” *International Journal of Multilingualism* 6(4), 443–459.

- This study examined the link between multilingualism and the personality profiles of 79 teenagers, half of whom were born abroad and moved to London during childhood (ie, third culture kids). The first group of participants consisted of 41 third culture kids who had learned English upon moving to London, while the second group of participants included 38 locally born, British teenagers. All participants were Grade 9 students (aged 13–15) at a Roman Catholic school who had formal instruction in English and either Spanish or French. Twenty-seven participants were classified as monolingual or incipient bilinguals, and 53 participants were classified as functional multilinguals, with knowledge of more than two languages. Data were collected using the Multicultural Personality Questionnaire, a 91-item questionnaire designed to measure five dimensions of personality: cultural empathy, open mindedness, social initiative, emotional stability and flexibility. Findings showed that multilingualism (knowledge of a second language or more languages beyond the first language) was significantly related to personality profile, with **participants who spoke more than one language scoring higher on open mindedness and cultural empathy**, and lower on emotional stability than monolinguals. **In general, being in contact with different languages and cultures strengthens open-mindedness and cultural empathy.**²

Dewaele, J M. 2010. “Multilingualism and affordances: Variation in self-perceived communicative competence and communicative anxiety in French L1, L2, L3 and L4.” *IRAL-International Review of Applied Linguistics in Language Teaching* 48(2–3), 105–129.

- A web-based survey was conducted to determine whether structural similarities among languages that learners know help adult language learners of French ($n = 794$) to (a) positively perceive their ability to communicate with various speakers including strangers in French or (b) help them to communicate in diverse contexts as well as (c) aid them to lower their anxiety in communication. In particular, this study investigated a relationship between self-rated communication ability/anxiety and similarities of known languages (eg, French is more similar to Spanish compared to Chinese).

² For further information, see Dewaele (2010), Dewaele, Petrides and Furnham (2008), Dewaele and Stavans (2012), Dewaele and Wei (2012) and Korzilius, van Hooft, Planken and Hendrix (2011). For conflicting findings, see Dewaele (2007).

The survey involved adults who speak French as a first language (to compare with language learners), a second language ($n = 303$), a third language ($n = 324$) or a fourth language ($n = 167$). The results showed that if a person speaks French as a first language or if a person is relatively not good at French, language similarities do not affect their subjective communication ability and do not lower one's anxiety. This indicated that French learners at an intermediate proficiency level used their previous knowledge about language when using and learning French, and this was effective. Thus the author concluded that **structural as well as possibly cultural similarities between languages help French learners at an intermediate level** (but not at advanced or beginner level) **to positively perceive their communication skills and lower their anxiety when communicating with others.**

There are academic and cognitive benefits including the development of academic skills and the enhancement of communication cues when learning more than two languages.

Haim, O. 2015. "Investigating transfer of academic proficiency among trilingual immigrant students: A holistic tri-directional approach." *The Modern Language Journal* 99(4), 696–717.

- This research investigated which factors can predict the academic proficiency of Russian-speaking Hebrew-English learners ($n = 274$) in Grade 11 in Israel. Students completed reading comprehension and writing tests in Russian, Hebrew and English. They also filled out a questionnaire. The results indicated that among other factors, third language writing ability and studying the first language at school were significant predictors of academic proficiency in their second language (ie, Hebrew), while second-language writing ability predicted the academic proficiency of their third language, English. This study suggests that **studying one's first language as well as learning two additional languages** (as a society-dominant language, Hebrew, and a global language, English) **all positively affect academic proficiency.**

Le Pichon Vorstman, E, H De Swart, V Ceginskas and H Van Den Bergh. 2009. "Language learning experience in school context and metacognitive awareness of multilingual children." *International Journal of Multilingualism* 6(3), 258–280.

- This study attempted to determine how language learning experience in a preschool context in the United States influenced children's ability to use contextual cues to understand language. Specifically, they examined whether preschoolers ($n = 54$, aged between 4.5 and 6.5) apply additional knowledge about language when they encounter a difficult situation in terms of communication and whether children learning a new language in a formal context ($n = 31$) outperformed bilinguals who learned two languages before the age of four ($n = 23$) in terms of communication. In this study, children watched two video clips (ie, one with the sound of an unknown language and the other without sound) and were asked to answer questions about the video clips with an experimenter. The results showed that **preschoolers in a French program were more aware of contextual cues** such that they tended not to abandon conversations compared to bilinguals who acquired languages at home. The study suggests that **formal schooling could influence children's ability to develop multiple communication cues.**

Children can simultaneously learn a societally dominant language, for example, English, as well as a third language such as French, without much difficulty.

Bérubé, D, and S H Marinova-Todd. 2014. “The effect of sociolinguistic factors and English language proficiency on the development of French as a third language.” *International Journal of Bilingual Education and Bilingualism* 17(4), 465–483.

- This study addressed the questions of what kinds of language-related, socioeconomic and personal factors (eg, motivation) influence the learning of a third language, French, among children whose first language is not supported at school. This research also investigated whether children in Grade 6 ($n = 55$) can successfully learn two additional languages, namely, English, a society-dominant language, and French, as a third language, in an early French immersion program in Canada. At the end of Grade 6, students took various language tests in English and French, and the students and their parents completed questionnaires. Among various potentially influential factors, the results showed that the amount of reading in the third language French (but not the number of books at a household) was an important factor when learning French successfully. English reading and speaking skills were also important factors for learning French. This study suggests that **children whose first language is not supported at school can continue to develop both English as well as French proficiency in an early French immersion program where only 30 per cent of instruction is in English.**

Mady, C. 2007. “The suitability of core French for recently arrived adolescent immigrants to Canada.” *Canadian Journal of Applied Linguistics/Revue Canadienne de Linguistique Appliquée* 10(2), 177–196.

- This study investigated whether English language learners in Grade 9 who recently immigrated to Canada ($n = 51$) could successfully learn French or were better at learning French compared to their peers. The peers in the study were Canadian English-speaking children who had learned French for 6 years (ie, 625 hours of instruction) at school ($n = 44$) and Canadian-born students who can speak multiple languages with the same level of French instruction ($n = 40$). All students in this study enrolled in a secondary core French course in Ontario. Grade 9 English language learners took an introductory French class for a semester consisting of 110 hours of French instruction. The author conducted a French proficiency test developed for evaluating Grade 8 students. The results showed that English language learners outperformed the other groups in reading, listening and part of writing tests after one semester of French instruction. In addition, English language learners performed just as well in other French tests such as dictation and speaking. The author attributed this result to (a) their higher frequent use of first language, (b) literacy in first language and (c) strong motivation to learn French. The results of this study imply that **motivated recently immigrated English language learners can learn French as a third language while learning English.**

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LITERATURE REVIEW

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