



THE MULTIPLE BENEFITS OF SECOND-LANGUAGE LEARNING PERTINENT LITERATURE 2015-2025

Part I

- Benefits in General
- Brain Strength and Health
- Early L2L and Elementary L2L
- Academic Achievement (MS/HS)
- Impact of L2L on specific areas (Creativity, Math, Reading, SEL)

Part II

- Global Education
- Career and Technical Education (CTE)
- Career
- National Security and the Military
- Business and the Economy
- U.S. Language Deficit & Need



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The MULTIPLE BENEFITS of SECOND-LANGUAGE LEARNING (L2L)

PART I – Benefits related to:

- Benefits in General
- Brain Strength and Brain Health
- Early L2L and Elementary L2L
- Academic Achievement (MS/HS emphasis)
- Impact of L2L on specific areas (Creativity, Math, Reading, SEL)

Research into the positive effects of the study of a second language is extensive and dates back to at least as early as the early 1960s. For the purposes of this document, only the most pertinent articles published from 2015 to 2025 are included (with some exceptions because of their historic importance). Most editorial opinions or commentary have been excluded.

For general information, see:

- The Benefits of Learning Language. ACTFL
 - <https://www.actfl.org/advocacy-and-public-education/the-benefits-of-learning-languages>
- Advocacy Resources – Joint National Committee for Languages (JNCL-NCLIS) National Council for Languages and International Studies
 - <https://www.languagepolicy.org/advocacy-resources>

BENEFITS IN GENERAL

(Multiple categories in the article)

Need a New Hobby? Learning Another Language IS Like Fitness Training for your Brain. All the cognitive, emotional, and cultural benefits of picking up another language at any stage of life.

REAL SIMPLE. By [Angelika Pokovba](#) Fact checked by [Haley Mades](#) [Updated on January 26, 2024. (w/ citations)]
[The Cognitive Benefits of Learning a New Language](#)

The Cognitive Benefits of Multilingualism: What do languages do to your brain? October 23, 2024 (w/citations)
(Executive function, Creativity, Empathy, Brain flexibility and health)
<https://www.rarelanguage.com/blog/the-cognitive-benefits-of-multilingualism>

COGNITIVE BENEFITS OF LEARNING FOREIGN LANGUAGES

In Language and Culture, Language Learning, Polygot and Multilingual Matters. Includes references.
<https://polyglotdreams.com/cognitive-benefits-learning-foreign-languages/>

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BRAIN STRENGTH

Bilingualism and Brain Function: Exploring the Cognitive Effects of Speaking Multiple Languages Neurolinguistics. NeuroLaunch editorial team. Sep't. 30, 2024
<https://neurolaunch.com/how-does-bilingualism-affect-the-brain/>

The Brain Benefits of Learning a Second Language. Deane Alban. (w/ links to research)
<https://bebrainfit.com/benefits-learning-second-language/>

How learning a new language changes your brain
Carly Spence. Cambridge University Press- Blog (nice synthesis) April 2022
<https://www.cambridge.org/elt/blog/2022/04/29/learning-language-changes-your-brain/>

Cognitive Benefits of Language Learning: Broadening our perspectives
Final Report to the British Academy February 2019. Bencie Woll FBA, Faculty of Brain Sciences, University College London Li Wei, Institute of Education, University College London.
<https://www.thebritishacademy.ac.uk/documents/287/Cognitive-Benefits-Language-Learning-Final-Report.pdf>

The Benefits of a Bilingual Brain. Mia Nacamulli. <https://www.youtube.com/watch?v=MMmOLN5zBLY>

How a second language can boost the brain. Ramin Skibba. Knowable Magazine. November 2018
<https://knowablemagazine.org/article/mind/2018/how-second-language-can-boost-brain>

The Benefits of Multilingualism to the Personal and Professional Development of Residents of the US Judith F. Kroll, Paola E. Dussias First published: 18 May 2017 <https://onlinelibrary.wiley.com/doi/10.1111/flan.12271>

Abstract

In the past two decades, new research on multilingualism has changed our understanding of the consequences of learning and using two or more languages for cognition, for the brain, and for success and well-being across the entire lifespan. Far from the stereotype that exposure to multiple languages in infancy complicates language and cognitive development, the new findings suggest that individuals benefit from that exposure, with greater openness to other languages and to new learning itself. At the other end of the lifespan, in old age, the active use of two or more languages appears to provide protection against cognitive decline. That protection is seen in healthy aging and most dramatically in compensating for the symptoms of pathology in those who develop dementia or are recovering from stroke. In this article we briefly review the most exciting of these new research developments and consider their implications.



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BRAIN HEALTH

Learning a Second Language Boosts Cognitive Function. Technology Networks. October 2021

<https://www.technologynetworks.com/neuroscience/news/learning-a-second-language-boosts-cognitive-function-55109>

Up-date

<https://www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2020.00108/full>

Studying a Second Language Boosts Cognitive Function. Neuroscience News. October 2021

<https://neurosciencenews.com/language-learning-cognition-19537/>

The Effects of Second Language Acquisition on the Brain. Shehab Ali. June 2019

<https://medium.com/swlh/the-effects-of-second-language-acquisition-on-the-brain-c13778b45a>

Bilingualism And Brain Health: Learning A Second Language Boosts Cognitive Function, Even At Old Age

Medical Daily. Published Jul 15, 2015 12:53 PM EDT By [Lizette Borrelli](#)

Speaking More Than One Language Eases Stroke Recovery

by Christopher Wanjek Date: 19 November 2015 Time: 05:40 PM ET

<http://m.livescience.com/52860-bilingual-language-stroke-recovery.html>

Benefits of EARLY LANGUAGE LEARNING & ELEMENTARY L2L

Bilingual kids have multiple advantages, no matter what the languages are

Nov 7 2015 Teresa Parodi Lecturer of Theoretical and Applied Linguistics, University of Cambridge Updated July 2022

<http://qz.com/543919/the-incredible-ever-growing-multi-faceted-value-of-being-bilingual-in-our-global-economy/>

Advantages of a bilingual brain (+) Michigan State U. Extension-child and Family Development. Jan 28 2019

https://www.canr.msu.edu/news/advantages_of_a_bilingual_brain

Bilingualism in the Early Years: What the Science Says

National Library of Medicine. Krista Byers-Heinlein and Casey Lew-Williams 2018

<https://pmc.ncbi.nlm.nih.gov/articles/PMC6168212/>



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Children exposed to multiple languages may be better natural communicators

uchicagonews by Jann Ingmire May 11, 2015 The University of Chicago

<https://news.uchicago.edu/story/children-exposed-multiple-languages-may-be-better-natural-communicators>

The Exposure Advantage: Early Exposure to a Multilingual Environment Promotes Effective Communication

Psychological Science Samantha P. Fan, Zoe Liberman, [...], and Katherine D. Kinzler Vol 26, Issue 7 May, 2015

<https://journals.sagepub.com/doi/abs/10.1177/0956797615574699>

Abstract

Early language exposure is essential to developing a formal language system, but may not be sufficient for communicating effectively. To understand a speaker's intention, one must take the speaker's perspective. Multilingual exposure may promote effective communication by enhancing perspective taking. We tested children on a task that required perspective taking to interpret a speaker's intended meaning. Monolingual children failed to interpret the speaker's meaning dramatically more often than both bilingual children and children who were exposed to a multilingual environment but were not bilingual themselves. Children who were merely exposed to a second language performed as well as bilingual children, despite having lower executive-function scores. Thus, the communicative advantages demonstrated by the bilinguals may be social in origin, and not due to enhanced executive control. For millennia, multilingual exposure has been the norm. Our study shows that such an environment may facilitate the development of perspective-taking tools that are critical for effective communication.

ELEMENTARY L2L

The Benefits of Being Bilingual. US Dept of Education (PDF)

<https://www.ed.gov/media/document/bilingual-enpdf-43929.pdf>

The Importance of Foreign Language Education at the Elementary Level

A review of the literature. 2019 Dennys Canto, Northwestern College. (This Master's Theses provides a list of references of the Research.) https://nwcommons.nwciowa.edu/cgi/viewcontent.cgi?rticle=1161&context=education_masters

Research in this area dates back to the 1960s, and the information is as valid today as it was then. The following items are included because they are essential to understanding the value of L2L at the elementary level.

Research on FLES (Foreign Language in Elementary School) Programs

Annotated Bibliography by H. Curtain & C.A. Dahlberg

https://www.cal.org/earlylang/benefits/bibliography_fles.html



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FROM: Literature Review on the Impact of Second-Language Learning The Alberta Teachers' Association

<https://legacy.teachers.ab.ca/SiteCollectionDocuments/ATA/Publications/Specialist-Councils/SLIC-21%20Impact%20of%20Second%20Language%20Learning.pdf>

“The influence of learning a second language in primary school on developing first language literacy skills.”

Murphy, VA, E Macaro, S Alba and C Cipolla. 2014. 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.**

“The contribution of narrative morphosyntactic quality to reading comprehension in French immersion students.”

Hipfner-Boucher, K, K Lam and X Chen. 2014a. 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.**

ACADEMIC ACHIEVEMENT

(Emphasis on Middle and High School Impact)

Learning a Foreign Language supports Academic Achievement and Cognitive Development by Becton Loveless, Education Corner. 2024

<https://www.educationcorner.com/benefits-of-learning-a-foreign-language.html>

What the Research Shows. ACTFL

<https://www.actfl.org/assessment-research-and-development/what-the-research->



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Literature Review on the Impact of Second-Language Learning. The Alberta Teachers' Association, 2017.

<https://www.caslt.org/files/media/news/Lit-review-Impact-L2-Learning.pdf>

Provides a Research Summary and Bibliography for the impact of language study in these areas: Cognitive, Academic, Personal, Societal, Intercultural Competencies, Economic, Students with Exceptionalities and Additional Language Learners.

Literature Review on the Impact of Second-Language Learning. The Alberta Teachers' Association, Mary G. O'Brien & associates. March 2017. Reports on the Cognitive, Academic, Personal, Societal, and Economic Impacts, Intercultural Competencies and for students with exceptionalities. Bibliography for each section.

<https://legacy.teachers.ab.ca/SiteCollectionDocuments/ATA/Publications/Specialist-Councils/SLIC-21%20Impact%20of%20Second%20Language%20Learning.pdf>

Again, much of this valuable RESEARCH has been done since at least the 1970's. It is NOT outdated – these two sources contain a wealth of information.

The Effect of Second Language Learning on Test Scores, Intelligence and Achievement: An annotated bibliography. Elizabeth L. Webb, Georgia Department of Education

<https://wenku.baidu.com/view/dd7a7fc68bd63186bcebbcc6.html>

Regarding World Language Education - The Benefits of Second Language Study

NEA Research, December 2007 **Research Findings**

Second language study: ...benefits academic progress in other subjects, ...narrows achievement gaps, ...benefits basic skills development, benefits higher order, abstract and creative thinking, (early) enriches and enhances cognitive development, ...enhances a student's sense of achievement, ...helps students score higher on standardized tests, ...promotes cultural awareness and competency, improves chances of college acceptance, achievement and attainment, enhances career opportunities, benefits understanding and security in community and society. (Includes an extensive bibliography.) <https://portal.ct.gov/-/media/SDE/World-Languages/BenefitsofSecondLanguage.pdf>

L2L IMPACT ON SPECIFIC AREAS

Creativity, Math, Reading, SEL

CREATIVITY

Multilingualism, creativity, and problem-solving Ashley Chung-Fat-Yim, Matias Fernandez-Duque & Viorica Marian Northwestern University. 2024 <https://bilingualism.northwestern.edu/wp-content/uploads/2024/05/Ch1-hungFatYim-et-al-Creativity-and-Problem-Solving.pdf>

Chapter Overview

Multilingualism, creativity, and problem-solving Ashley Chung-Fat-Yim, Matias Fernandez-Duque & Viorica Marian Northwestern University The chapter considers how language sparks discovery and innovation by examining creativity and problem-solving through the unique vantage point of multilingualism. The chapter begins with an

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overview of how creativity and problem-solving are operationalized and measured, followed by a review of how multilingualism impacts the ability to innovate and solve problems. The relationship between multilingualism and creativity is modulated by proficiency and age of second language acquisition. Similarly, performance on problem-solving tasks depends on which language multilinguals use and on their proficiency level in each language. The final section discusses multilingualism, creativity, and problem-solving in real-world settings, as well as potential future directions, concluding with the suggestion that knowing multiple languages can lead to more creative outcomes and better problem-solving skills.

Multilingualism, multicultural experience, cognition, and creativity

Guillaume Fürst, François Grin. *Frontiers in Psychology*. November, 2023

<https://pmc.ncbi.nlm.nih.gov/articles/PMC10666761/>

Abstract

The once widely held notion that bilingualism is related to enhanced cognitive functions has recently been challenged, in particular among young adults, as opposed to children and older adults. This strand of research, however, is essentially focused on executive functions (e.g., attention, inhibition, and shifting). But there is another side to the bilingualism-cognition story. Indeed, growing evidence has shown that bilingualism, and by extension multilingualism, are associated with enhanced creativity. However, this relation is arguably quite complex, for several reasons. First, creativity is a fuzzy notion; it is usually conceptualized as a mix of cognitive, personality and motivational factors. Second, multilingual people generally have a richer multicultural experience than monolingual people. In addition, multicultural experience itself is also positively related to creativity. Hence, there are manifold relations between cognition, creativity, multilingualism, and multicultural experience. In this brief research report, using a latent variables model which replicates some of our recent findings, we show that both multilingualism and multicultural experience are positively associated with creativity, even when controlling for cognitive abilities (divergent thinking and intelligence). We discuss these results in a perspective that considers methodological challenges and factors that are relevant to goal-directed behavior.

Multilingualism and Creativity: a multivariate approach

Guillaume Fürst, François Grin. University of Geneva, Switzerland. 2018

Taylor and Francis Online

<https://www.tandfonline.com/doi/full/10.1080/01434632.2017.1389948>

ABSTRACT

This paper proposes a contribution to the investigation of the relation between multilingualism and creativity. Past evidence of a correlation between multilingualism and creativity is reviewed in a generalist perspective, that is, without focusing on a specific population such as migrants or highly proficient bilinguals. This review is also anchored in contemporary cognitive psychology and specialised research on creativity, allowing for a consideration of different levels and domains of creativity, as well as a distinction between creative potential and manifest creativity. On this basis, we test

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various hypotheses with a sample of 596 participants, using multiple regressions that incorporate several control variables. Key results show that L2 skills are systematically and positively related to virtually all indicators of creativity. Additional results reveal effects of other linguistic variables, along with effects of control variables related to cultural diversity (travelling and experience of living abroad), as well as interactions between linguistic and control variables. These results are contrasted with earlier findings and then discussed in terms of language policy implications and perspectives for future research.

Earlier Research – 2012

Book - Multilingualism and Creativity Anatoliy Kharkhurin

In this monograph, Anatoliy V. Kharkhurin presents the results of his empirical investigation into the impact of multilingual practice on an individual's creative potential. Until now, the relationship between these two activities has received little attention in the academic community. The book makes an attempt to resuscitate this theme and provides a solid theoretical framework supported by contemporary empirical research conducted in a variety of geographic, linguistic, and sociocultural locations. This study demonstrates that several factors - such as the multilinguals' age of language acquisition, proficiency in these languages and experience with cultural settings in which these languages were acquired - have a positive impact on selective attention and language mediated concept activation mechanisms. Together, these facilitate generative and innovative capacities of creative thinking. This book will be of great interest not only to scholars in the fields of multilingualism and creativity, but also to educators and all those interested in enhancing foreign language learning and fostering creativity.

MATH

Can learning a new language make you better at maths? A meta-analysis of foreign language learning and numeracy skills during early adolescence Alejandra Nucette, Takeshi Hamamura, Suze Leitao, and Britta Biedermann

Published online by Cambridge University Press: 16 December 2024

<https://www.cambridge.org/core/journals/bilingualism-language-and-cognition/article/can-learning-a-new-language-make-you-better-at-maths-a-metaanalysis-of-foreign-language-learning-and-numeracy-skills-during-early-adolescence/7B106A47420A0E4AA08A34E461FA2E14>

Abstract

This systematic review and meta-analysis explore the correlation between foreign language instruction and mathematical skills in young adolescents, highlighting the significance of high school mathematical education and the adaptability of the adolescent brain. Focused on students starting second language programs between ages 8 and 13, following PRISMA guidelines, this review included 25 studies (1978–2020) with 785,552 participants. Using a random-effects model, the overall effect size revealed a statistically significant relationship between our variables, indicating a



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threefold higher likelihood of passing or achieving higher grades in mathematical tests for language-learning students. Moderating variables analyses identified socioeconomic status (SES) and intervention length as influencers of observed heterogeneity, with SES being the primary factor. Sensitivity analyses, including adding potentially missing studies and removing outliers, confirmed the robustness of the overall effect. Nonetheless, additional research is needed to enhance global diversity and comprehensively understand the interplay between language learning and cognitive function.

Math skills support your ability to learn foreign languages. And vice versa?

Ivan Grant. (Opinion but w/ citations to Research) Jan 2023

<https://medium.com/@ivangrantphysics/math-skills-support-your-ability-to-learn-foreign-languages-and-vice-versa-b1e95d6e80f0>

How do Language Skills Impact Math Learning?

By [Lisa Beth Carey](#) and [Lisa A. Jacobson](#), PhD, Kennedy Kreiger.

January 23, 2020

<https://www.kennedykrieger.org/stories/linking-research-classrooms-blog/how-do-language-skills-impact-math-learning>

How Bilingualism Supports Math Skills in Children

June 11, 2018 [Bilingualism, Language Learning, Teaching and Learning](#) /by Tori Galatro. Online article contains links to Research.

How Bilingualism Supports Math Skills in Children

How A Second Language Trains Your Brain for Math

PACIFIC STANDARD [NATHAN COLLINS](#) UPDATED: JUN 14, 2017

ORIG: SEP 24, 2014

<https://psmag.com/social-justice/language-trains-brain-math-91289>

READING

Literacy in Language Learning. ACTFL

<https://www.actfl.org/educator-resources/guiding-principles-for-language-learning/literacy-language-learning>

Why Bilingual Students Have a Cognitive Advantage for Learning to Read

by Andy Minshew. Waterford.org (w citations to Research)

<https://www.waterford.org/blog/why-bilingual-students-have-a-cognitive-advantage-for-learning-to-read/>

Dual-language Programs Improve Reading Skills

Language Magazine. Nov 2015

<http://languagemagazine.com/?p=124779>



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Research into the effect of second-language learning began in the 1960's. The positive role that L2L plays in developing reading skills can be found in the research outlined in **Benefits** of EARLY LANGUAGE LEARNING/ELEMENTARY L2L and Academic Achievement **included in this document.**

SOCIAL-EMOTIONAL LEARNING (SEL)

HOW LANGUAGE LEARNING SUPPORTS CHILDREN'S EMOTIONAL AND SOCIAL DEVELOPMENT.

American Society for the Positive Care of Children.

Jun 5, 2025 | Lifestyle (**Nice summary**)

[HTTPS://AMERICANSPCC.ORG/HOW-LANGUAGE-LEARNING-SUPPORTS-CHILDRENS-EMOTIONAL-AND-SOCIAL-DEVELOPMENT/](https://AMERICANSPCC.ORG/HOW-LANGUAGE-LEARNING-SUPPORTS-CHILDRENS-EMOTIONAL-AND-SOCIAL-DEVELOPMENT/)

Social-Emotional Learning in the Context of Language Learning: Nurturing Confident, Empathetic Communicators.

LanguageKidsWorld. (**self-interest, but GOOD ideas**)

<https://languagekids.com/social-emotional-learning/>

Children exposed to other languages are better at understanding other people

By Kabir Chabbir and Kabir Cahbbir. Quartz. Updated July 20, 2022

[Children exposed to other languages are better at understanding other people](#)

How learning a new language makes you more tolerant.

World Economic Forum

<https://www.youtube.com/watch?v=lfexuSBeWbl>

How Learning a New language Improves Tolerance.

Amy Thompson. The Conversation. (w/ citations to Research)

<https://theconversation.com/how-learning-a-new-language-improves-tolerance-68472>

The Superior Social Skills of Bilinguals

The New York Times. By Katherine Kinzler. March 11, 2016

Opinion based on Research.

<https://www.nytimes.com/2016/03/13/opinion/sunday/the-superior-social-skills-of-bilinguals.html>

Empathy and Foreign Language Learning.

Jennifer Bown, Humanities Center Faculty Fellow, Brigham Young University.

<https://humanitiescenter.byu.edu/empathy-and-foreign-language-learning/>