



## REL Pacific Ask A REL Response

Literacy, English Learners

November 2018

### Question:

**How does proficiency in a student’s home language influence their proficiency of additional languages during schooling?**

### Response:

Following an established REL Pacific research protocol, we conducted a web-based search for resources related to the relationship between first language proficiency and second language proficiency. The sources included ERIC and other federally funded databases and organizations, research institutions, academic research databases, and general Internet search engines (please see Methods section for search terms and resource selection criteria). We focused our search in particular on studies in the Pacific and other indigenous contexts for greater relevancy to the Pacific region, however we did include studies with more generalizable findings.

References are listed in alphabetical order, not necessarily in order of relevance. Descriptions of the resources are quoted directly from the publication abstracts. We have not evaluated the quality of references and the resources provided in this response. We offer them only for your reference. Also, our search included the most commonly used research resources, but they are not comprehensive and other relevant references and resources may exist.

### Research References

Arellano, B., Liu, F., Stoker, G., & Slama, R. (2018). *Initial Spanish proficiency and English language development among Spanish-speaking English learner students in New Mexico* (REL 2018–286). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, and Regional Educational Laboratory Southwest. <https://eric.ed.gov/?id=ED580202>

*From the abstract:* “To what extent do Spanish-speaking English learner students develop English proficiency and grade-level readiness in English language arts and math from early

elementary school to upper elementary school? Is there a relationship between proficiency in a student's primary home language, Spanish, and the amount of time needed to attain fluency in the student's second language, English? And are there differences in these relationships across English learner student subgroups? These topics are of high priority to members of the New Mexico Achievement Gap Research Alliance. New Mexico has a long history of working to support the maintenance and development of students' biliteracy skills. Many members of the alliance provide districts with technical assistance related to English learner students, so answers to these questions may inform this technical assistance. This study, conducted by the Regional Educational Laboratory Southwest, sought to inform the New Mexico Achievement Gap Research Alliance about the path toward English proficiency and academic outcomes for Spanish-speaking English learner students who entered kindergarten with varying levels of Spanish proficiency. The study followed two cohorts of Spanish-speaking English learner students in four districts in New Mexico from kindergarten through grade 4 or 5. The 2010 cohort included students enrolled in kindergarten in 2009/10 who were followed through grade 5, and the 2011 cohort included students enrolled in kindergarten in 2010/11 who were followed through grade 4. The study examined cumulative rates of English learner students' progress toward reclassification as fluent English proficient. The study also examined students' demonstration of grade-level readiness on the New Mexico Partnership for Assessment of Readiness for College and Careers (NMPARCC) standardized academic assessments in English language arts and math in grades 4 and 5. All of the results were also observed through the lens of initial Spanish proficiency in kindergarten to understand differences among groups of English learner students. The main findings were: (1) More than 80 percent of English learner students in the 2010 cohort started kindergarten at the lowest English proficiency level, as did half of those in the 2011 cohort; (2) Nearly 83 percent of students in the 2010 cohort attained English proficiency by grade 5, and 59 percent of students in the 2011 cohort did so by grade 4; (3) Among English learner students with high initial Spanish proficiency, nearly all those in the 2010 cohort were reclassified as fluent English proficient by grade 5, and nearly three-quarters of those in the 2011 cohort were reclassified by grade 4; (4) Among English learner students with low or medium initial Spanish proficiency, roughly a quarter of the 2010 cohort were not reclassified as fluent English proficient by grade 5, and almost half the 2011 cohort were not reclassified by grade 4; (5) Of English learner students who were reclassified as fluent English proficient by grade 4 or 5, fewer than a quarter also demonstrated grade-level readiness in grade 4 or grade 5 English language arts or math on the NMPARCC assessment; (6) Regardless of initial Spanish proficiency, the rates of grade-level readiness were generally low on NMPARCC English language arts and math outcomes in grades 4 and 5. However, students with high initial Spanish proficiency were more likely to demonstrate grade-level readiness than were students in the other Spanish proficiency groups; and (7) Grade-level readiness in English language arts and math among students in the two cohorts who were reclassified as fluent English proficient in grades 4 and 5 was generally lower than statewide averages for all students in the same grades in New Mexico. Most students who were identified as English learner students in kindergarten required a minimum of three to four years of instruction after kindergarten to attain English proficiency. A large percentage of students were not reclassified as fluent English proficient before leaving elementary

school. Even when students were reclassified, this milestone did not always translate into grade-level readiness in English language arts and math. Among English learner students who were reclassified as fluent English proficient by grade 4 or 5, only a small percentage demonstrated grade-level readiness in grade 4 or grade 5 English language arts and math. The findings suggest that English learner students with low and medium initial Spanish proficiency will not fare as well in English language arts and math as students with high initial Spanish proficiency. A Spanish proficiency measure could be used as an early indicator to target students with low and medium Spanish proficiency in kindergarten for language and literacy interventions in early grades.”

Carlo, M. S., Barr, C. D., August, D., Calderón, M., & Artzi, L. (2014). Language of instruction as a moderator for transfer of reading comprehension skills among Spanish-speaking English language learners. *Bilingual Research Journal*, 37(3), 287–310.  
<https://eric.ed.gov/?id=EJ1047789>

*From the abstract:* “This three-year longitudinal study investigated the role of language of instruction in moderating the relationships between initial levels of English oral language proficiency and Spanish reading comprehension and growth in English reading comprehension. The study followed Spanish-speaking English language learners in English-only literacy instruction, an early-exit bilingual program, or a late-exit bilingual program, from third through fifth grade. Students in all groups experienced significant growth in English reading comprehension. For the English-only group, initial levels of Spanish reading comprehension were not related to growth in English reading comprehension. However, for students in the two bilingually instructed groups, those who began with stronger Spanish reading comprehension skills grew faster in English reading comprehension than students without initial strong Spanish reading comprehension skills.”

Dixon, L. Q., Zhao, J., Shin, J., Wu, S., Su, J., Burgess-Brigham, R., Gezer, M. U., & Snow, C. (2012). What we know about second language acquisition: A synthesis from four perspectives. *Review of Educational Research*, 82(1), 5–60. <https://eric.ed.gov/?id=EJ958037>

*From the abstract:* “Educational policies that impact second language (L2) learners—a rapidly-growing group—are often enacted without consulting relevant research. This review synthesized research regarding optimal conditions for L2 acquisition, facilitative L2 learner and teacher characteristics, and speed of L2 acquisition, from four bodies of work—foreign language education, child language research, sociocultural studies, and psycholinguistics—often overlooked by educators. Seventy-one peer-reviewed journal articles studying PK–12 L2 learners met inclusion criteria. Findings included: 1) Optimal conditions for L2 learners immersed in a majority–L2 society include strong home literacy practices, opportunities to use the L2 informally, well-implemented specially-designed L2 educational programs, and sufficient time devoted to L2 literacy instruction, whereas L2 learners with little L2 exposure require explicit instruction to master grammar; 2) L2 learners with strong L2 aptitude, motivation, and first language (L1) skills are more successful; 3) Effective L2 teachers demonstrate sufficient L2 proficiency, strong instructional skills, and proficiency in their students' L1; 4) L2 learners require 3–7 years to reach L2 proficiency, with younger learners

typically taking longer but more likely to achieve close-to-native results. These findings, even those most relevant to education, are not reflected in current U.S. policy. Additional research is needed on the characteristics of successful or unsuccessful L2 learners and L2 teachers. Such research should attend systematically to the differences between L2 learning in maximal versus minimal input settings; whereas the psycholinguistic challenges of L2 learning might be common across settings, the sociocultural and interactional challenges and opportunities differ in ways that can massively impact outcomes.”

Goodrich, J. M., Lonigan, C. J., & Farver, J. M. (2013). Do early literacy skills in children’s first language promote development of skills in their second language? An experimental evaluation of transfer. *Journal of Educational Psychology*, 105(2), 414–426.

<https://eric.ed.gov/?id=EJ1007950>

*From the abstract:* “The purpose of this study was to evaluate the cross-language transfer of the emergent literacy skills of preschoolers who were Spanish-speaking language-minority children in the context of an experimental intervention study. Ninety-four children were randomly assigned either to a control condition (HighScope Preschool Curriculum) or to receive small-group pull-out instruction (Literacy Express Preschool Curriculum) in English or initially in Spanish and transitioning to English. We examined whether children's initial skills in one language moderated the impact of the intervention on those same skills in the other language at post-test. Results demonstrated that for children in the English-only intervention condition, initial Spanish receptive vocabulary and elision skills moderated the impact of the intervention on English receptive vocabulary and elision skills at post-test, respectively. For children in the transitional intervention condition, initial English definitional vocabulary and elision skills moderated the impact of the intervention on Spanish definitional vocabulary and elision skills at post-test, respectively. Results for the vocabulary interactions supported the notion of transfer of specific linguistic information across languages, whereas results for the elision interaction for the English-only intervention group comparisons supported language-independent transfer. Results for the elision interaction for the transitional intervention group comparisons supported both language-independent and language-specific transfer. Implications for the theory of cross-language transfer of emergent literacy skills are discussed.”

Kar-man Shum, K., Suk-Han Ho, C., Siegel, L. S., & Kit-fong Au, T. (2016). First-language longitudinal predictors of second-language literacy in young L2 learners. *Reading Research Quarterly*, 51(3), 323–344. <https://doi.org/10.1002/rrq.139>

*From the abstract:* “Can young students' early reading abilities in their first language (L1) predict later literacy development in a second language (L2)? The cross-language relationships between Chinese (L1) and English (L2) among 87 Hong Kong students were explored in a longitudinal study. Chinese word-reading fluency, Chinese rapid digit naming, and Chinese rhyme awareness at age 7 (grade 1), with age and IQ taken into account, were significant concurrent and longitudinal predictors of English word reading, and text-level reading and writing skills across ages 7–10. These three Chinese measures together accounted for 16–28% of unique variance in the English literacy tasks across the three-year period. Students who showed word-reading difficulties in Chinese in grade 1 also performed

more poorly than average Chinese readers in English reading and related cognitive tasks later on, especially on phonological tasks. The results provided evidence for the cross-language transfer of cognitive-linguistic abilities between two distinctly different orthographies. L1 markers underlying reading difficulties in both L1 and L2 can serve as early indicators of possible reading problems that may arise later in L2. These findings have clinical, educational, and theoretical implications.”

Mancilla-Martinez, J. & Lesaux, N. K. (2017). Early indicators of later English reading comprehension among children from Spanish-speaking homes. *Scientific Studies of Reading, 21*(5), 428–448. <https://eric.ed.gov/?id=EJ1152112>

*From the abstract:* “In this longitudinal study, we examined the relationship between primary grade (K–2) Spanish and English language- and word-based skills and later English reading comprehension (RC) outcomes (Grades 5 and 8) among children (n = 148) from immigrant, Spanish-speaking, low-income homes in English instructional contexts since kindergarten entry. As expected, early skills, especially those in English, contributed to later RC outcomes. Most uniquely, we identified a developmental shift in the contribution of language- and word-based skills on students' RC outcomes. Specifically, word-based skills were consistently predictive of Grade 5 RC outcomes, whereas the contribution of language-based skills emerged for Grade 8 RC outcomes. Finally, we also found that the relationship between early skills and later RC outcomes varied depending on students' RC levels. These results underscore the increasingly important role that early language-based skills play for later English reading comprehension outcomes, and we discuss theoretical and practical implications of this work.”

Pham, G., Donovan, D., Dam, Q., & Contant, A. (2018). Learning words and definitions in two languages: What promotes cross-language transfer? *Language Learning, 68*(1), 206–233. <https://eric.ed.gov/?id=EJ1167933>

*From the abstract:* “This study used a brief vocabulary training paradigm to examine two factors for cross-language transfer: how similar the first language (L1) is to the second language (L2) and L1–L2 proficiency levels. Fifty-four sequential bilingual children (aged 6–8) with similar L2 English proficiency levels were assigned to three equal groups: a Vietnamese–English group with low L1 proficiency, a Spanish–English group with low L1 proficiency, and a Spanish-English group with high L1 proficiency. Individual training consisted of two mediated learning experiences conducted in the L1 targeting eight vocabulary items using narrative-based activities. Four of eight target words were cognates between Spanish and English. Pre- and post-testing measured definition quality in the L1 and L2. All groups showed improvement in the L1 following training, but only the Spanish–English group with high L1 proficiency improved in L2 English, revealing a degree of spontaneous cross-language transfer among children with high L1–L2 proficiency.”

Prevo, M. J. L., Malda, M., Mesman, J., & van IJzendoorn, M. H. (2016). Within- and cross-language relations between oral language proficiency and school outcomes in bilingual children with an immigrant background. *Review of Educational Research, 86*(1), 237–276. <https://eric.ed.gov/?id=EJ1090527>

*From the abstract:* “Sixteen meta-analyses were conducted to examine relations of typically developing bilingual immigrant-background children’s oral language proficiency in their first and second language with the school outcomes of early literacy ( $k = 41$ ), reading ( $k = 61$ ), spelling ( $k = 9$ ), mathematics ( $k = 9$ ), and academic achievement ( $k = 9$ ). Moderate to strong within-language relations were found for all school outcomes ( $0.22 < r < 0.43$ ), and cross-language relations for early literacy and reading ( $0.12 < r < 0.22$ ). Within-language relations were stronger than cross-language relations ( $0.14 < d < 0.35$ ). Only 6 out of 96 moderator effects tested were significant. Based on our findings, we propose a task-dependent bidirectional transfer hypothesis: The strength of cross-language transfer depends on the type of language proficiency task and the type of school outcome. Stimulating oral language proficiency in both languages can be a key factor in improving school outcomes of bilingual immigrant background children.”

Reese, L., Garnier, H., Gallimore, R., & Goldenberg, C. (2000). Longitudinal analysis of the antecedents of emergent Spanish literacy and middle-school English reading achievement of Spanish-speaking students. *American Educational Research Journal*, 37(3), 633–662. [https://www.jstor.org/stable/1163484?seq=1#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/1163484?seq=1#page_scan_tab_contents)

*From the abstract:* “Among students entering kindergarten speaking Spanish, those with greater emergent Spanish literacy development and oral English proficiency were better able to maintain grade level performance in Spanish reading, transition more quickly to English reading, and attain a higher level of English reading proficiency in middle school. Non-English speaking student success in learning to read in English does not rest exclusively on primary language input and development, nor is it solely the result of rapid acquisition of English. Both apparently contribute to students’ subsequent English reading achievement. Family factors predicting both early Spanish literacy and later English reading were parents’ socioeconomic status and family literacy practices, as well as grandparents’ educational level. Results suggest that early literacy experiences support subsequent literacy development, regardless of language; and time spent on literacy activity in the native language—whether it takes place at home or at school—is not time lost with respect to English reading acquisition, at least through middle school. The results also indicate the value of encouraging families to provide home literacy activities (in whatever languages they control) as well as formal preschool experiences.”

Rosenman, S. & Madelaine, A. (2012). Predicting literacy achievement in young English language learners: A question of language proficiency or of learning difficulty? *Australian Journal of Learning Difficulties*, 17(1), 17–34. <https://eric.ed.gov/?id=EJ966392>

*From the abstract:* “In this article empirical research regarding the best predictors of literacy achievement for English language learning students (ELLs) in English-only classrooms is reviewed. These students comprise an ever-increasing population in these settings, but there is considerable confusion in differentiating between ELLs who are low-achievement readers because of limited language proficiency and those who may have learning difficulties. Much research has highlighted the importance of phonological processes, particularly phonological awareness, on reading achievement for native English-speaking children and it seems that

researchers have relatively recently begun to examine whether or not the same might hold for ELL children. The findings regarding this under-researched population are discussed and implications and recommendations for future research and practice are proposed.”

Sparks, R. L., Patton, J., Ganschow, L., & Humbach, N. (2012). Do L1 reading achievement and L1 print exposure contribute to the prediction of L2 proficiency? *Language Learning*, 62(2), 473-505. <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-9922.2012.00694.x>

*From the abstract:* “The study examined whether individual differences in high school first language (L1) reading achievement and print exposure would account for unique variance in second language (L2) written (word decoding, spelling, writing, reading comprehension) and oral (listening/speaking) proficiency after adjusting for the effects of early L1 literacy and verbal skills, cognitive ability in L1, and L2 aptitude. Participants were administered measures of L1 word decoding, spelling, reading comprehension, phonological awareness, receptive vocabulary, listening comprehension, and cognitive ability in 1st through 5th grades; L2 aptitude in 9th grade; and L1 reading achievement, L1 print exposure, and L2 proficiency in 10th grade. The findings showed that L1 reading achievement in 10th grade made significant and unique contributions to L2 word decoding, L2 reading comprehension, L2 listening/speaking, and overall L2 proficiency after adjusting for the effects of L1 literacy and verbal skills, cognitive ability in L1, and L2 aptitude. Subsequent analyses showed that L1 print exposure variables made unique contributions to L2 reading comprehension, L2 decoding, L2 writing, L2 listening/speaking, and overall L2 proficiency even after adjusting for the effects of L1 literacy and verbal skills during elementary school, cognitive ability in L1, L2 aptitude, and 10th-grade reading achievement. The results suggest that stronger L1 reading skills are related to stronger L2 outcomes and that opportunity for and engagement in L1 literacy experiences may also be related to differences in L2 proficiency.”

## **Methods**

### **Keywords and Search Strings**

The following keywords and search strings were used to search the reference databases and other sources:

- "first language" and "cross-transfer" and "second language" and "proficiency"
- "second language learning" and "native language" and "cross-transfer"
- "predictor" and "reading achievement" and "elementary students" and “English language learners”
- "predictor" and "foreign countries" and "reading achievement" and "elementary students"
- "second language learners" and "longitudinal studies"
- "language proficiency" and "transfer" and "elementary school students" and "longitudinal studies"
- "Pacific region" and "language proficiency" and "cross-transfer" and "longitudinal studies"

### **Searched Databases and Resources**

ERIC, EBSCO databases, JSTOR database, Google Scholar

### **Reference Search and Selection Criteria**

REL Pacific searched ERIC and other academic journal databases for studies that were published in English-language peer-reviewed research journals within the last 20 years. REL Pacific prioritized documents that are accessible online, although not all sources may be publicly available. We also prioritized references that provide practical information based on peer-reviewed research for the education leader who requested this Ask A REL. Methodological priorities and considerations were given to randomized control trials where possible, followed by meta-analyses, literature reviews, and quasi-experiments. REL Pacific also prioritized studies that with target populations greater than 30 and were longitudinal in nature. As always, REL Pacific first considers studies conducted in the Pacific region or similar contexts, but also includes relevant research with generalizable findings.<sup>1</sup>

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<sup>1</sup> This memorandum is one in a series of quick-turnaround responses to specific questions posed by educational stakeholders in the Pacific Region (American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, Hawai'i, the Republic of the Marshall Islands, and the Republic of Palau), which is served by the Regional Educational Laboratory (REL Pacific) at McREL International. This memorandum was prepared by REL Pacific under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-IES-17-C-0010, administered by McREL International. Its content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.