

Title: Summary of research and resources on dual immersion programs in public elementary schools

Date: September 2016

Request: Could you provide information on the dual immersion programs in public elementary schools?

Response:

REL Southeast produced a memo on this topic in 2013 (http://rel-se.fsu.edu/ask-a-rels/Ask%20a%20REL_ELL_reading%20curricula.pdf). Building on this document, we have prepared an updated memo with references published since then, as well as other resources on dual immersion programs in public elementary schools. Citations include a link to a free online version, when available. All citations are accompanied by an abstract, excerpt, or summary written by the author or publisher of the document. We also include relevant organizations.

We have not done a methodological evaluation of these resources, but rather provide them for your information only.

References

Alvear, S. (2015). *Learning more than language: An examination of student achievement in English Immersion and bilingual programs* (conference paper). Washington, DC: American Sociological Association. Retrieved on September 1, 2016, from <https://scholarship.rice.edu/bitstream/handle/1911/87694/ALVEAR-DOCUMENT-2015.pdf?sequence=1>

Abstract: Although previous research suggests that native language instruction does not interfere with English acquisition and may even benefit English acquisition, there is a lack of consensus over which school based programmatic approach is most beneficial in terms of academic achievement in both Spanish and English. Using a longitudinal dataset from a large urban school district in Texas, I employed multilevel models to examine Spanish and English reading outcomes among Latino English Language Learners in elementary school. Few studies of language acquisition programs have (1) contextualized English language acquisition programs within sociological segmented assimilation theory; (2) examined the full span of English acquisition programs (English immersion, transitional bilingual, one way developmental, and two way bilingual immersion); (3) used longitudinal data; and (4) adjusted for relevant covariates and student clustering within schools, which risks crediting bilingual programs with outcomes that are actually attributable to other factors. This study addresses all of these shortcomings and finds that transitional and two way dual immersion program students have comparable Spanish and English language reading outcomes in elementary school. Transitional students generally outperform one way students in English reading; one way students also demonstrate significantly lower Spanish reading growth. Depending

on length of program exposure, English immersion students' English reading performance is on par with or significantly worse than transitional program students, with the exception of immersion students who reach English proficiency by the end of kindergarten.

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

Abstract: This study examined metalinguistic awareness in children who were becoming bilingual in an immersion education program. The purpose was to determine at what point in emerging bilingualism the previously reported metalinguistic advantages appear and what types of metalinguistic tasks reveal these developmental differences. Participants were 124 children in second and fifth grades who were enrolled in either a French immersion or a regular English program. All children were from monolingual English-speaking homes and attended local public schools in middle socioeconomic neighborhoods. Measures included morphological awareness, syntactic awareness, and verbal fluency, with all testing in English. These tasks differed in their need for executive control, a cognitive ability that is enhanced in bilingual children. Overall, the metalinguistic advantages reported in earlier research emerged gradually, with advantages for tasks requiring more executive control (grammaticality judgment) appearing later and some tasks improving but not exceeding performance of monolinguals (verbal fluency) even by fifth grade. These findings demonstrate the gradual emergence of changes in metalinguistic concepts associated with bilingualism over a period of about 5 years. Performance on English-language proficiency tasks was maintained by French immersion children throughout in spite of schooling being conducted in French.

Marian, V., Shook, A., & Schroeder, S. R. (2013). Bilingual two-way immersion programs benefit academic achievement. *Bilingual Research Journal*, 36(2), 167–186. Retrieved on September 1, 2016, from <http://comm.soc.northwestern.edu/bilingualism-psycholinguistics/files/MarianetalImmersionEducation.pdf>

Abstract: The effects of bilingual education on reading and math achievement were examined by comparing test scores across different elementary school programs. Results revealed that bilingual Two-Way Immersion (TWI) programs benefited both minority-language and majority-language students. Minority-language students in TWI programs outperformed their peers in Transitional Programs of Instruction, while majority-language students in Two-Way Immersion outperformed their peers in Mainstream monolingual classrooms. Bilingual Two-Way Immersion programs may enhance reading and math skills in both minority-language and majority-language elementary school children.

Maxwell, L. A. (2015). Successes spur push for dual-language classes. *Education Digest*, 80(6), 19–24. (REL West note: The full-text of the original article is not free to the public. A similar article written by the same author can be retrieved from <http://www.edweek.org/ew/articles/2014/10/15/08dual.h34.html>)

Abstract: The article discusses the academic achievements and statewide initiative for the promotion of dual language classes in North Carolina. Topics include the mathematics achievement of students at Collinswood Language Academy in Charlotte, the benefits obtained by African-American and English-language learners, and the struggle to search for qualified teachers for the program. It adds the views of Helga Fasciano of North Carolina Department of Public Instruction on the dual-language immersion.

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

Abstract: A Mandarin/English two-way immersion elementary program is described from its inception and implementation through the fifth grade, the culminating year of the program. All students in all grades were assessed on their oral/listening, reading, and writing performance in Mandarin using program-created assessment measures. Fifth-grade students also took the Mandarin STAMP 4Se test online to assess their oral and literacy performance. In addition, all second- through fifth-grade students participated in the mandated California Standards Tests for English language arts, writing (fourth grade), math, and science (fifth grade). Results showed that across grades, Mandarin immersion students acquired high-level performance in oral/listening, reading, and writing in Mandarin. A comparison of Mandarin heritage students with non-heritage students in the immersion program initially favored heritage students in the acquisition of Mandarin; however, this advantage was not statistically significant in the later grades. On the mandated California standardized tests, the non-immersion students from the same school in the second and third grades had higher scores on the English language arts and math test, but in the upper grades, Mandarin immersion students scored higher than their non-immersion peers in these two subject areas.

Steele, J. L., Slater, R., Li, J., Zamarro, G., & Miller, T. (2015). *Costs and effects of dual-language immersion in the Portland public school*. Evanston, IL: Society for Research on Educational Effectiveness. Retrieved on September 1, 2016, from <http://files.eric.ed.gov/fulltext/ED562111.pdf>

Abstract: Though it is estimated that about half of the world's population is bilingual, the estimate for the United States is well below 20% (Grosjean, 2010). Amid growing recognition of the need for second language skills to facilitate international commerce and national security and to enhance learning opportunities for non-native speakers of English, many U.S. public, charter, and private schools have developed dual-language immersion (DLI) programs. The goal of these programs is to help the growing number of language minority students learn English and achieve academically, while giving language majority students the opportunity to develop proficiency in another language. Though numerous studies have established a positive relationship between dual-language education and student achievement, important questions about the relationship between the two remain. The research questions addressed in the paper are as follows: (1) What is the causal effect of dual-language immersion education on student achievement in mathematics and reading in grades 3 through 8, on student attendance in grades K through 8, and on initial English language learners' exit from ELL status in grades 1 through 8? (2) Does this effect differ for English language learners versus native speakers of English or by instructional model (90 versus 50 percent of time in the partner language)? (3) What does it cost to implement dual-language immersion programs relative to non-immersion programs? What are the components of these costs, and do they vary by instructional model? Findings to date suggest that immersion may improve student achievement in reading (in English) without diminishing other performance.

Tedick, D. J., & Wesely, P. M. (2015). A review of research on content-based foreign/second language education in US K-12 contexts. *Language, Culture & Curriculum*, 28(1), 25–40.

Abstract: This review of the extant research literature focuses on research about content-based language instruction (CBI) programs in K-12 foreign/second language education in the USA. The review emphasizes studies on one-way language immersion (OWI) and two-way language immersion (TWI) programs, which are school-based and subject matter-driven. OWI primarily targets majority-language students and TWI a combined student population of minority- and majority-language learners. Reference to the few studies on non-immersion CBI programs in the USA is also included. This article presents a review of the research in relationship to four broad themes: student outcomes, classroom language use and development, the hidden curriculum, and teacher preparation and practice. The research review is followed by a discussion of the research

methodologies and theoretical frameworks used in these studies and concluding sections that set suggestions for paths for future inquiry in four areas: student diversity, the role of English in classrooms, teacher development, and achievement research.

Tran, N. A., Martinez-Cruz, A., Behseta, S., Ellis, M., & Contreras, J. (2015). The effects of Spanish English dual language immersion on student achievement in science and mathematics. *JEP: Ejournal of Education Policy*, 57–77. Retrieved on September 1, 2016, from <http://wol.iza.org/articles/impact-of-bilingual-education-on-student-achievement.pdf>

Abstract: In this study, we present quantitative findings on the effects of English-Spanish dual language immersion on student achievement in science and mathematics in grades 3, 4, and 5. The research aims to present empirical evidence documenting the impact of dual language immersion, reveal analytical techniques utilizing nonparametric measure of similar and comparative analysis, and discuss the benefits and common misconceptions associated with dual language immersion as well as implications for serving disadvantaged students and their success in STEM education.

Umansky, I. M., & Reardon, S. F. (2014). Reclassification patterns among Latino English learner students in bilingual, dual immersion, and English immersion classrooms. *American Educational Research Journal*, 51(5), 879–912.

Abstract: Schools are under increasing pressure to reclassify their English learner (EL) students to “fluent English proficient” status as quickly as possible. This article examines timing to reclassification among Latino ELs in four distinct linguistic instructional environments: English immersion, transitional bilingual, maintenance bilingual, and dual immersion. Using hazard analysis and 12 years of data from a large school district, the study investigates whether reclassification timing, patterns, or barriers differ by linguistic program. We find that Latino EL students enrolled in two-language programs are reclassified at a slower pace in elementary school but have higher overall reclassification, English proficiency, and academic threshold passage by the end of high school. We discuss the implications of these findings for accountability policies and educational opportunities in EL programs.

Valentino, R. A., & Reardon, S. F. (2015). Effectiveness of four instructional programs designed to serve English learners. *Educational Evaluation & Policy Analysis*, 37(4), 612–637.

Abstract: This article investigates the differences in academic achievement trajectories from elementary through middle school among English Learner (EL) students in four different instructional programs: English Immersion (EI), Transitional Bilingual (TB), Developmental Bilingual (DB), and Dual Immersion (DI). Comparing students with the same parental preferences but who attend different programs, we find that the English Language Arts (ELA) test scores of ELs in all bilingual programs grow at least as fast as, if not faster than, those in EI. The same is generally true of math, with the exception of DB programs, where average student scores grow more slowly than those of students in EI. Furthermore, Latino ELs perform better longitudinally in both subjects when in bilingual programs than their Chinese EL counterparts. We find no differences in program effectiveness by ELs’ initial English proficiency.

Relevant organizations to consult

The American Council on the Teaching of Foreign Languages (ACTFL)

<https://www.actfl.org/about-the-american-council-the-teaching-foreign-languages>

From the website: The American Council on the Teaching of Foreign Languages (ACTFL) is dedicated to the improvement and expansion of the teaching and learning of all languages at all levels of instruction. ACTFL is an individual membership organization of more than 12,500

language educators and administrators from elementary through graduate education, as well as government and industry. Since its founding (in 1967), ACTFL has become synonymous with innovation, quality, and reliability in meeting the changing needs of language educators and their students. From the development of Proficiency Guidelines, to its leadership role in the creation of national standards, ACTFL focuses on issues that are critical to the growth of both the profession and the individual teacher.

Center for Applied Linguistics (CAL), Bilingual and Dual Language Education

<http://www.cal.org/areas-of-impact/english-learners/bilingual-and-dual-language-education>

From the website: The Center for Applied Linguistics (CAL) is a private, non-profit organization founded in 1959. Headquartered in Washington DC, CAL has earned an international reputation for its contributions to the fields of bilingual and dual language education, English as a second language, world languages education, language policy, assessment, immigrant and refugee integration, literacy, dialect studies, and the education of linguistically and culturally diverse adults and children.

National Association for Bilingual Education (NABE)

<http://www.nabe.org/AboutNABE>

From the website: Since 1975, the National Association for Bilingual Education (NABE) has been a non-profit membership organization that works to advocate for educational equity and excellence for bilingual/multilingual students in a global society. NABE's priorities include: Improving instructional practices for linguistically and culturally diverse children; providing bilingual educators with more high-quality professional development opportunities; securing adequate funding for the programs serving limited-English-proficient students; and keeping the rights of language-minority Americans clearly in focus as states and communities move forward with educational reforms.

National Clearinghouse for English Language Acquisition (NCELA)

<http://ncela.ed.gov/about>

From the website: Authorized under Title III of the No Child Left Behind Act of 2001 (NCLB), the National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs (NCELA) supports the U.S. Department of Education's Office of English Language Acquisition, Language Enhancement, and Academic Achievement for Limited English Proficient Students (OELA) in its mission to respond to Title III educational needs, and implement NCLB as it applies to English learners (ELs). Since October 2013, NCELA has been operated by Leed Management Consulting, Inc., under contract from the U.S. Department of Education.

Portland Public Schools (PPS), Department of Dual Language

<http://www.pps.net/immersion>

From the website: Portland Public Schools (PPS) has completed a three year federally funded research project titled "The Effect of Dual Language Immersion (DLI) on Student Achievement in PPS." This project was carried out in collaboration with the Rand Corporation and American Councils. The researchers' findings show a significant positive effect in reading and a higher rate of reclassification for ELLs. This work has and will continue to serve as feedback for PPS DLI administrators and teachers as we work to constantly improve instruction and program implementation in DLI.

U.S. Department of Education, Office of English Language Acquisition

<http://www2.ed.gov/about/offices/list/oela/index.html>

From the website: The U.S. Department of Education's Office of English Language Acquisition (OELA) provides national leadership to help ensure that English Learners and immigrant students attain English proficiency and achieve academic success. In addition to preserving heritage languages and cultures, OELA is committed to prompting opportunities for biliteracy or multiliteracy skills for all students. OELA accomplishes this in the following ways: Providing national leadership by informing policy decisions; Administering discretionary grant programs to prepare professionals for teaching and supporting English Learners; Investing in research and evaluation studies that have practical applications for preparing English Learners to meet college and career learning standards; Disseminating information about educational research, practices, and policies for English Learners through our National Clearinghouse for English Language Acquisition (NCELA).

Methods

Keywords and Search Strings Used in the Search

("Dual immersion" OR "two way immersion") AND ("effectiveness" OR "success" OR "student achievement") AND ("public schools" OR "K-12 schools" OR "elementary")

Search of Databases

EBSCO Host, ERIC, PsychInfo, PsychArticle, Google, and Google Scholar

Criteria for Inclusion

When REL West staff review resources, they consider—among other things—four factors:

- **Date of the Publication:** The most current information is included, except in the case of nationally known seminal resources.
- **Source and Funder of the Report/Study/Brief/Article:** Priority is given to IES, nationally funded, and certain other vetted sources known for strict attention to research protocols.
- **Methodology:** Sources include randomized controlled trial studies, surveys, self-assessments, literature reviews, and policy briefs. Priority for inclusion generally is given to randomized controlled trial study findings, but the reader should note at least the following factors when basing decisions on these resources: numbers of participants (Just a few? Thousands?); selection (Did the participants volunteer for the study or were they chosen?); representation (Were findings generalized from a homogeneous or a diverse pool of participants? Was the study sample representative of the population as a whole?).
- **Existing Knowledge Base:** Although we strive to include vetted resources, there are times when the research base is limited or nonexistent. In these cases, we have included the best resources we could find, which may include newspaper articles, interviews with content specialists, organization websites, and other sources.

This memorandum is one in a series of quick-turnaround responses to specific questions posed by educators and policymakers in the West Region (Arizona, California, Nevada, Utah), which is served by the Regional Educational Laboratory West (REL West) at WestEd. This memorandum was prepared by REL West under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-IES-12-C-0002, administered by WestEd. 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.