



THE SCIENCE OF READING IN DUAL LANGUAGE IMMERSION CLASSROOMS

THE OFFICE OF BILINGUAL EDUCATION AND WORLD LANGUAGES
BRIEF 4



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The Science of Teaching Biliteracy in Dual Language Immersion Programs

Biliteracy is a More Complex Form of Literacy than Monoliteracy!

All children deserve biliteracy programs that are comprehensive, integrated, multidimensional and research based.

Biliteracy Development in Dual Language Immersion Programs: A Definition

The term dual language immersion (DLI) refers to any program that provides literacy and content instruction to all students through two languages and that promotes bilingualism and biliteracy, grade-level academic achievement, and sociocultural competence. The Guiding Principles of DLI are represented in the illustration of the three pillars below:



More specifically:

1. **Bilingualism and Biliteracy** refers to programs in which students develop proficiency in language and literacy in both languages, which helps them think, understand concepts, and communicate effectively.
2. **High Academic Achievement** means that students achieve academic success in all subject areas including but not limited to language learning.
3. **Socio-Cultural Competence** refers to having students develop an understanding and appreciation of multiple cultures which is important for personal development, social integration, and global citizenship.

Bilingual Education Program Models

In New York State, there are three main types of Bilingual Education programs in which biliteracy might be a component for K-12 students (see the [EML Tip Sheet](#) for guidance on bilingual classrooms in prekindergarten). These programs differ primarily in the population participating in the program, and secondarily in the time allotments for the development of the target language(s)/literacies in the program:

- Transitional Bilingual Education (TBE)
- One-Way Dual Language Immersion (DLI)
- Two-Way Dual Language Immersion (DLI)

DLI programs are designed for children who are English Language Learners (ELLs), for Multilingual Learners (MLs) including students who were once ELLs but have exited out ELL status, students who were never ELLs but are heritage speakers of a language other than English, and also for children who are monolingual English speakers learning a new world language. The contents of this BRIEF relate to all program types noted above but are specifically focused on children who are current or previous ELLs.

The Differences between Effective Dual Language Immersion Programs and Monolingual English Literacy Programs

Many effective elements of implementing Science of Reading practices in DLI programs are quite different from monolingual English-speaking classes. These differences are illustrated in the table below.

Essential Components for Literacy Instruction for Monolingual English Literacy Programs and for DLI Programs for ELLs and MLs

Monolingual English Components			
Oral Language / Oracy	Reading Foundational Skills*	Writing	Social Justice Teaching
Additional Components for Non-English Language and English as a New Language			
English Language Development	Metalinguistic Development	Cross-Language Connections	

*Reading Foundational Skills include phonological awareness, phonics, vocabulary, fluency, comprehension, and oral language.

The above table illustrates that programs which implement Science of Reading pedagogy for monolingual English-speaking students have basically three components (oracy, foundational skills, and writing) with the component of foundational skills comprising six sub-components (phonological awareness, phonics, vocabulary, fluency and comprehension). The components constitute Science of Reading mandates currently being implemented in various ways in 40 states in the US. While important and essential, research on ELLs and MLs has clearly established that these components are insufficient for children who are adding English to their native languages and literacies. Moreover, methodology and approaches for teaching biliteracy are not the same across languages. The last row of the table indicates the additional components that need to be added to a literacy program for it to merit the label biliteracy and for it to align with the Guiding Principles of DLI.



Essential Components for Literacy Instruction

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These approaches for teaching biliteracy include oracy, foundational skills, and writing, but with the added consideration that these need to be done in two languages and the strategies and methods need to be modified for students in their target language. In addition, it is critical that foundational skills in non-English languages be taught using methods that are authentic to the languages being taught and are not simple methods of translation of English. Moreover, the components of metalinguistic development, cross-language connections and teaching for social justice must be added in dual language programs to align with all three principles of dual language education.

English Language Development	Metalinguistic Development	Cross-Language Connections
refers to instruction that emphasizes English language acquisition.	refers to the ability to understand and analyze language structure including phonology, morphology, syntax, semantics, and pragmatics. In short, metalinguistic development is the knowledge of how language works. DLI programs students need to develop metalinguistic awareness within each language and across both languages.	are the act of comparing and contrasting the similarities and differences between languages.

Metalinguistic development and cross-language connections help students strengthen their skills in both languages.

Teaching for social justice involves teaching students about making positive change in the world by connecting with them, discussing real-world problems and multiple perspectives. It involves teaching students about equity and advocacy related to creating a more just world, and it aligns with the NYS Culturally Responsive-Sustaining Education Framework's principle of delivering Inclusive Curriculum and Assessment.

The components shared above for the DLI programs are not optional or, "nice, but not necessary add-ons," rather, they are essential research-based and tested components of effective biliteracy in dual language programs.



The Challenge of Time

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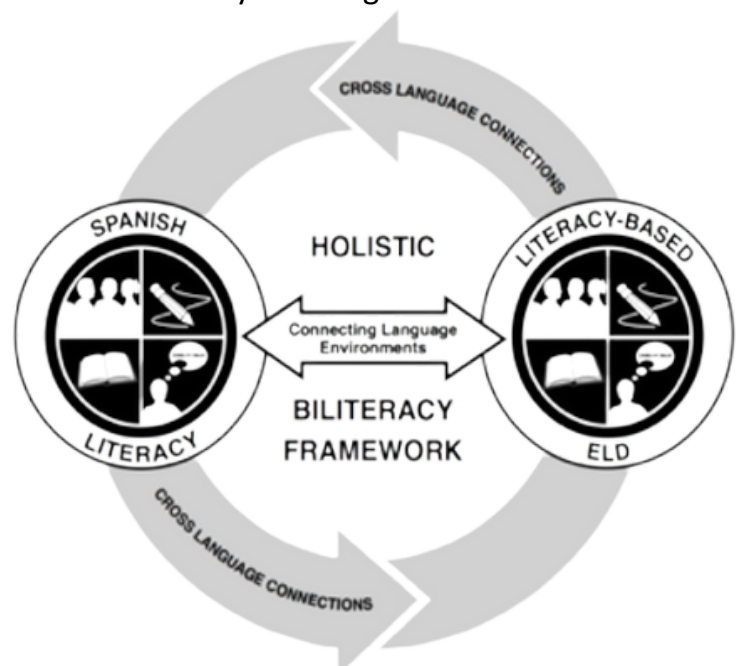


Another factor that differentiates DLI and other bilingual programs is the challenge of time. Monolingual literacy blocks are generally planned for about 90 minutes per day in elementary classrooms. In order to address the additional components described above, DLI teachers are asked to incorporate twice as many components in instruction as Monolingual English teachers (as previously mentioned). This challenge can be met, but it requires integration and coordination across languages.

In the DLI classroom, all components are important, and each supports the others. It is the coherence and alignment of the approach, the cross-grade level continuity and coherence, and the development of biliteracy, bilingualism, and socio-cultural competence, including teaching for identity development and social justice, that set DLI programs apart and make the difference for ELLs and MLs.

One model that demonstrates a Comprehensive Biliteracy Framework (Escamilla et.al., 2014) that illustrates how integration can occur in DLI programs is presented below. The side-by-side circles represent the Spanish and English literacy components of oracy (the talking heads), reading (the book), writing (the pencil), and metalinguistic development (the idea bubble). The Spanish and English circles are encircled by arrows representing cross-language connections and the arrows in the center represent connecting language environments. This visual represents the ways in which literacy teaching can be integrated and connected.

Within this framework, foundational skill teaching is also integrated in each language and taught using methodology that is authentic to each language encouraging cross language integration and discouraging duplication. Research in teaching foundational skills in Spanish has indicated that due to its transparent orthography, there is no need to spend as much time teaching decoding skills as is likely needed in English because English has an opaque orthography. Moreover, Spanish reading pedagogy focuses on comprehension, not decoding.



The teaching of biliteracy is more efficient when we do not duplicate the teaching of skills in two languages but rather teach children to understand similarities and differences across languages.

For example, if the consonant “f” in Spanish is being taught, it is the same phoneme in Spanish and English and need not reteach the letter sound in English if the children have learned it in Spanish. When teaching the grapheme that represents the letter “f,” children learning Spanish only need only to be taught that the grapheme “f” represents only one letter (example f as in the word foco). However, in English, it is important to teach that the sound “f” can be represented by several graphemes. For example, f as fat (same phoneme as Spanish), but also ff as in the word cliff, gh as in the word enough, ph as in the word phone, ft as in the word often, and lf as in the word half. In this example, it is not necessary to reteach the phoneme or grapheme “f” again as it is the same in Spanish and English, but time must be devoted to teaching the additional phoneme to grapheme ways that “f” is applied in English. Teaching students to compare and contrast across languages avoids duplication.

The following illustrates the example outlined above and illustrates how to reduce cross-language duplication in teaching phoneme/grapheme similarities and differences across Spanish and English:

Phoneme	Spanish Grapheme	English Graphemes
“f”	F como foco	F like fat Ff like cliff Ph like phone Gh like enough Lf like half Of like often

Connecting language environments is also a way to make teaching in two languages more integrated and coordinated as well as to ensure that we are given equal attention to both languages. Connecting language environments also allows for translanguaging.

For example, language environments can be connected by theme, by genre, by literacy objective, and bilingual books. The objectives should be complementary and not duplicative. See example below.

Connected by: Genre of Biography

The books below represent how a genre unit can be taught in two languages by focusing on four different biliteracy objectives without duplication and connecting the language environments through the genre of biography.

In Spanish, the teacher has chosen a biography of Sonia Sotomayor. The text is culturally responsive and can be used to demonstrate how to overcome racism, which is teaching for social justice.



Connected by: Genre of Biography

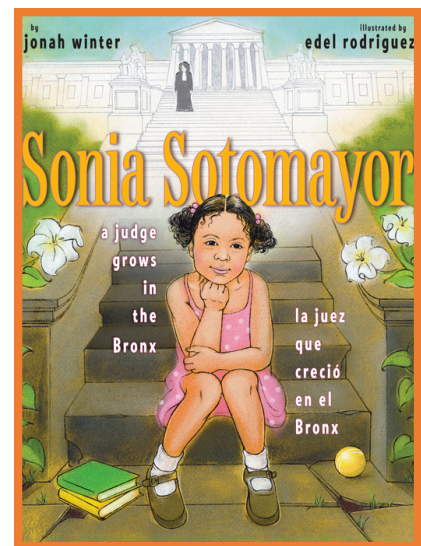
In Spanish, the teacher has chosen a biography of Sonia Sotomayor. The text is culturally responsive and can be used to demonstrate how to overcome racism, which is teaching for social justice.

El objetivo de lectura en español

Identificar la estructura de una biografía y recontar los eventos de la vida usando esta estructura.

El objetivo de escritura

Escribir una biografía acerca de un miembro de tu familia o un(a) amigo(a)



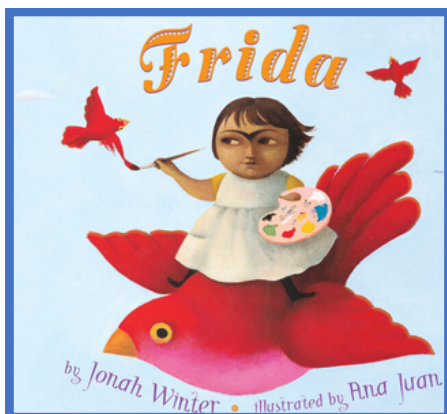
In English, the teacher has chosen the biography of Frida Kahlo.

The English Reading Objective

To retell the biography of Frida chronologically highlighting key details.

The Writing Objective

To participate in shared writing to produce a class biography about Frida.





Reflect and Apply

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- How is teaching literacy in a DLI classroom similar and different from the Science of Reading for monolingual English programs?
- What strategies (other than those listed above) could be employed to ensure that your comprehensive literacy biliteracy program can be implemented in the time frame allotted in your school for literacy teaching?
- Why is it important that the Science of Reading instructional practices be aligned with the pillars of effective DLI instruction?
- Identify the specific ways that your curricular approach reflects a coordinated, and integrated teaching of biliteracy. What are your areas of strength and where do you need to develop deeper connections?
- What types of professional learning opportunity sessions are needed to insure complete implementation of DLI programs and who needs to attend these sessions?



Key References & Resources

- August, D. & Shanahan, T. (Eds.) (2006). Developing literacy in second-language learners: Report of the national literacy panel on language minority children and youth. Lawrence Erlbaum Associates.
- Butvilofsky, S., Escamilla, K., & Hopewell, S. (2023). Biliterate writing from the start. Brookes Pub. Co.
- Escamilla, K., Hopewell, S., Butvilofsky, S., Sparrow, W., Soltero-González, L., Ruiz-Figueroa, O., & Escamilla, M. (2014). Biliteracy from the start: Literacy squared in action. Caslon Publishing.
- Escamilla, K., Olsen, L., & Slavick, J. (2022). Toward comprehensive literacy policy and instruction for English learner/emerging bilingual students. National Committee on Effective Literacy. Retrieved from https://multilingualliteracy.org/wp-content/uploads/2022/04/21018-NCEL-Effective-Literacy-White-Paper-FINAL_v2.0.pdf
- Howard, E. R., Lindholm-Leary, K. J., Rogers, D., Olague, N., Medina, J., Kennedy, B., Sugarman, J., & Christian, D. (2018). Guiding Principles for Dual Language Education (3rd ed.). Center for Applied Linguistics.
- Literacy Squared. (2020) Approaches to Phonics Webinar Series. Retrieved from <https://literacysquared.org/resources/>
- Medina, J. The C6 Biliteracy Framework: Lesson Planning Through a Critical Consciousness Lens. Ellevation. Retrieved from <https://ellevationeducation.com/blog/biliteracy-framework-lesson-planning>
- National Academies of Sciences, Engineering, and Medicine. (2017). Promoting the educational success of children and youth learning English: Promising futures. The National Academies Press. <https://doi.org/10.17226/24677>

National Committee for Effective Literacy & The Reading League. (2023, September) Joint statement: Understanding the difference: The Science of Reading and implementation for English learners/emergent bilinguals (ELs/EBs). Retrieved from https://multilingualliteracy.org/wp-content/uploads/2023/10/Joint-Statement_SOR-EL_EB.pdf

Neuman, S.B., Quintero, E., & Reist, K. (2023). Reading reform across America: A survey of state legislation. Albert Shanker Institute. Retrieved from <https://www.shankerinstitute.org/read>

Olsen, L. (2022). Comprehensive literacy instruction for English language learners. National Committee for Effective Literacy. Retrieved from <https://multilingualliteracy.org/wp-content/uploads/2022/09/21025-NCEL-Literacy-Model-FINAL.pdf>

The Office of Bilingual Education and World Languages

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