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Ensuring Equitable Access to Dual-Language Immersion Programs: Supporting English Learners' Emerging Bilingualism

# Ensuring Equitable Access to Dual-Language Immersion Programs: Supporting English Learners' Emerging Bilingualism 

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## Executive Summary

Children who are English learners (ELs) comprise a large, diverse, and growing student group in U.S. schools. Fully 21 percent of U.S. school-aged children speak one of more than 400 non-English languages at home. More than 5 million U.S. students were formally classified as ELs in 2019-a 1.3 million-student increase since 2000. Indeed, roughly one in ten American students is currently classified as an EL.

ELs face systemic educational challenges rooted in language, race, class, and nativity. These students are disproportionately likely to be children of color and disproportionately likely to be growing up in low-income households. What's more, while a majority of these children are native-born American citizens, many are children of immigrants living in communities facing the systemic pressures and biases inherent to the American immigrant experience. ${ }^{2}$

As a result, education leaders in essentially every community across the country face crucial decisions regarding how best to serve this diverse, high-potential group of students. A key component of meeting this challenge is advancing educational equity for ELs, which requires prioritizing
programs that help the largest possible share of ELs reach English proficiency and be reclassified as former ELs within their first five to seven years in U.S. schools.

A growing research consensus shows that, over time, linguistically integrated "two-way" dual-language immersion (DLI) programs serve ELs best. These programs offer linguistic and academic instruction in two languages, and enroll roughly equal shares of native English speakers and native speakers of the program's non-English partner language. These integrated programs best advance ELs' linguistic and academic development, support these children's emerging bilingualism, and are popular with a diverse range of families. It's perhaps no surprise that DLI programs have been growing in early learning programs and preK-12 settings around the country.

But without structures in place to protect equity, the linguistic integration that appears to be key to two-way DLI's success can become colonization that eventually displaces ELs from these schools. Many dual-language programs are at risk of tilting toward language enrichment for Englishdominant children, instead of advancing linguistic equity and expanding educational opportunity for ELs. ${ }^{3}$

[^0]How can policymakers encourage the creation of diverse, integrated two-way DLI settings-while still protecting equitable access for ELs? To help answer that question, The Century Foundation and Children's Equity Project constructed a first-of-its-kind database covering more than 1,600 dual-language immersion programs, serving 1.1 million students in a geographically, racially, socioeconomically, culturally, and politically diverse array of communities across thirteen states and the District of Columbia. ${ }^{4}$

The analysis of aggregated demographic data completed for this report reveals some distinct patterns for DLI schools in a range of cities, illustrating different challenges in different communities. Looking at a single-year snapshot of DLI school demographics for 2019-20 tells one story: in Dallas, New York City, Los Angeles, Albuquerque, Oakland, San Francisco, Houston, Portland, and others, a majority of DLI schools enrolled a lower share of white students compared to their share of the district population. And in Seattle and Orlando, not even one DLI school had a student population whiter than their school district populations. By contrast, in Washington, D.C., thirteen out of seventeen DLI schools had student populations whiter than their district, and in Salt Lake City, half of the DLI schools did.

However, demographic trends over a five-year period tell a somewhat different story. EL enrollment shares are shrinking in a majority of DLI schools in New York City, Los Angeles, San Francisco, Oakland, and San José. Meanwhile, white enrollment shares are up in a majority of DLI schools in New York City, Dallas, Los Angeles, Albuquerque, Portland, and Washington, D.C.

The potential shifts suggested in these data-from the goal of advancing linguistic equity and expanding educational opportunity for ELs and toward language enrichment for English-dominant children-should trigger alarm bells. In order to deliver on DLI programs' promise, education policymakers will need to protect equitable DLI access, and these steps will necessarily have to vary by location. As noted above, communities vary widely in the particulars of their EL enrollments, community demographics (and demographic trends), bilingual teacher pipelines, state

DLI investments, and much more. There simply cannot be a single, standardized definition of equitable access to DLI across these differing contexts. However, local and state education leaders should lead with four interrelated principles:

1. When resources are available to expand DLI programming, every effort should be made to grow two-way DLI programs offering academic instruction in communities where ELs live and in languages that ELs speak.
2. ELs' access to new or existing DLI programs should be overtly prioritized alongside a goal of integrating these programs on linguistic, racial, ethnic, socioeconomic, and disability status grounds.
3. ELs should never be disproportionately enrolled in English-only schools when their communities operate DLI programs offering academic instruction in their home languages.
4. To the greatest possible extent, DLI programs should be designed and implemented to enroll diverse classrooms that resemble the racial, ethnic, and socioeconomic demographics of the broader community.

To convert these priorities into policy, local, state, and federal policymakers can:

- invest new funding to expand the number of two-way DLI programs available in U.S. schools;
- prioritize ELs' enrollment in new DLI programs, andwhenever possible-locate new DLI programs in linguistically diverse communities that make integrated two-way DLI easier to implement;
- reform teacher training, credentialing, and hiring policies to eliminate obstacles for bilingual teacher candidates; and
- invest in expanding and/or establishing new bilingual teacher training pathways.


## Introduction: ELs in U.S. Schools

Children who are English learners (ELs) have remarkable skills, talents, and potential-and they make up a growing

## Definitions

- Dual-language immersion (DLI): An educational program that offers academic instruction in two languages with the goal of producing high academic achievement, sociocultural competence, and bilingual and biliterate students.
- Two-way dual-language immersion: A DLI program that enrolls linguistically integrated classrooms, with roughly equal shares of native English speakers and native speakers of the program's non-English partner language.
- Partner language: The non-English language used for academic instruction in a dual-language immersion program.
- English learners: Emerging bilingual students in the K-12 education system who, according to their state's definition of English proficiency, qualify for language instructional support from their schools. These students are sometimes also referred to as dual language learners, English language learners, emergent bilingual learners, emergent multilingual learners, or multilingual learners.


## A Note on Terminology

There is no field consensus on the appropriate term-or terms-to refer to linguistically diverse students in U.S. public education. Head Start refers to these students as "dual language learners" (DLLs) to reflect the fact that younger learners begin the process of learning English as they continue to develop early levels of proficiency in their native languages. Most federal education policies related to school aged children who are not yet proficient in English refer to this group as "English learners," (ELs), which is a marked improvement from older, deficit-laden terms such as "Limited English Proficient." Some local and state school systems have adopted more asset-based language that better conveys the value of children's native languages, such as "multilingual learners" or "emergent bilinguals." While we agree that these terms provide more affirming descriptions of these children's linguistic development, we follow the National Academies of Science, Engineering, and Medicine's 2017 consensus report in using the federal terms-EL and DLL. Because this project covers a national scope and is predominantly built from federal education databases, these terms provide a common vocabulary for referring to this diverse student group.
share of the U.S. student body. Fully 21 percent of U.S. schoolaged children speak a non-English language at home. ${ }^{5}$ More than 5 million U.S. students were formally classified as ELs in 2019-a 1.3 million-student increase since 2000. Indeed, roughly one in ten American students is currently classified as an EL.

Linguistic diversity is higher in the early years: nearly onethird of Head Start students are dual-language learners (DLLs), the term for young children who begin learning English even as they continue to develop proficiencies in
their home languages. What's more, this linguistic diversity spans over 400 home languages-and an extraordinary breadth of cultural capital. ${ }^{6}$

And yet, ELs are among the most historically marginalized student groups in U.S. schools. These students are disproportionately likely to be children of color and disproportionately likely to be growing up in low-income households. What's more, while a majority of these children are native-born American citizens, many are children of immigrants living in communities facing the systemic
pressures and biases inherent to the American immigrant experience. ${ }^{7}$ A recent study from the Brookings Institute found that these inequities combine to make ELs more likely to attend socioeconomically segregated schools than nearly any other student group. ${ }^{8}$ In sum, any effort to advance educational equity must attend to the full breadth of strengths and needs EL students bring to schools each day. These students generally encounter systemic barriers rooted not just in their linguistic diversity but also their racial, ethnic, and socioeconomic backgrounds-to say nothing of their proximity to the U.S. immigration experience.

Nonetheless, in U.S. schools, ELs are largely defined by their proximity to the English language and-by extensiontheir pace of integration into the dominant, monolingual American culture.' Framing ELs primarily in terms of their still-developing language skills can produce narrow, biased thinking from educators and policymakers about these students, their assets, and their potential. Indeed, until 2015, the formal federal term for these children was "Limited English Proficient," or LEP. This deficit-laden framing too often shapes the structures governing these children's educational opportunities.

Still, Englishis the language ofpower in the UnitedStates, from schools to society to the economy, and ELs unquestionably benefit from acquiring proficiency. Over the past century, the country has developed a system: federal law requires U.S. schools to identify students as ELs according to their state's definition of English proficiency. Students who are classified as ELs receive regular language instruction-through the Elementary and Secondary Education Act's Title III funding stream-until they reach a proficient score on their state's annual English language proficiency assessment. Federal law defines English proficiency in terms of how a students' still-emerging English skills may interfere with their ability to succeed on math and literacy assessments in English. ${ }^{10}$ That is, when students meet the "English proficient" benchmark, they are reclassified as "former ELs," with the expectation that their English skills are now adequate to help them do well on academic assessments.

Again, this approach contains a tension: it helps to focus
resources and attention on EL students, but it can also foster a false, stigmatizing narrative about ELs' academic potential. While these mandated definitions of English proficiency all but guarantee that current ELs will initially post low scores on academic assessments in English, studies repeatedly find that former ELs generally go on to long-term academic success." Indeed, many studies find that former ELs perform as well or better on a wide range of metrics than monolingual peers who were never identified as ELs. ${ }^{12}$

By contrast, research suggests that long-term English learners (LTELs)-students who remain in EL programs beyond six to seven years-tend to have significantly worse academic outcomes than other student groups. ${ }^{13}$ As such, educational equity for ELs requires prioritizing programs that, over time, help the largest possible share of ELs reach English proficiency and be reclassified as former ELs (instead of becoming LTELs).

Fortunately, there is a clear research consensus on how to best address these tensions. Bilingual education programsand particularly those that provide linguistically integrated "two-way" dual-language immersion (DLI)-are the best way to support ELs' acquisition of English, academic development, and emerging bilingualism. ${ }^{14}$ Two-way DLI programs offer linguistic and academic instruction in two languages, and enroll roughly equal shares of native English speakers and native speakers of the program's non-English partner language (see "Definitions" text box).

The growing consensus around DLI programs' effectiveness presents schools with an exciting potential confluence of research, policy, and practice. The educational programs that best advance ELs' linguistic and academic development: (1) support these children's emerging bilingualism, (2) work best when they are linguistically integrated, and (3) are popular with a diverse range of families. It's perhaps no surprise that DLI programs have been growing in early learning programs and PreK-12 settings around the country.

But without structures in place to protect equity, the linguistic integration that appears to be key to two-way DLl's success can become colonization that eventually displaces

ELs from these schools. Many dual-language programs are at risk of tilting toward language enrichment for Englishdominant children, instead of advancing linguistic equity and expanding educational opportunity for ELs. As one of the authors wrote in a 2017 Atlantic Monthly article, "But....if a two-way dual-immersion program helps generate middleclass interest in multilingualism, that dynamic could also undermine the program's design and effectiveness. What happens when rising demand from privileged families starts pushing English learners out of these programs?" ${ }^{15}$

It's an iron law of education policymaking: nothing exacerbates educational unfairness like scarcity. When an educational opportunity or resource is in short supply, the privileged can nearly always wield their socioeconomic advantages and social capital to gain disproportionate access. Even longstanding and/or purportedly fair educational policies such as neighborhood-based school enrollment or open enrollment lotteries can unintentionally amplify access inequities. Access to neighborhood schools requires access to sufficient resources to purchase housing in their neighborhood. In many communities, gentrification patterns are pushing more families-and disproportionately families of color-out. Meanwhile, while school enrollment lotteries are generally open to families who live outside a particular school's neighborhood, these can still advantage those with greater social capital and time to be aware of opportunitiesand engage in the steps required to be successful. What's more, parents with greater resources and power have more influence over where new DLI options expand to, increasing their advantage by proximity to opportunity.

In short, advancing educational equity-in terms of access to DLI schools and beyond-generally requires education leaders to overcome deep-rooted racial and economic inequalities by weighting their systems in favor of the historically marginalized. But how-and how much? The answer can depend on the specific contours of a particular community's education, housing, and transportation systems (and often, many other variables).

It will also depend on getting a clear grasp of the demographics of DLI schools in different communities. It
is impossible to address inequitable access to DLI without getting a firmer grasp on the scope of the problem, and aggregated data on the demographics of DLI schools are scarce. There is no updated and reliable national database of dual-language immersion programs, and research on these schools has not generally focused on equitable access. This report draws upon a database of more than 1,600 schools around the United States-created by The Century Foundation and Children's Equity Project-to explore the consequences of different policy designs for DLI programs and their enrollments. (See Methods, Data, and Study section for more information on the database.)

## The Evidentiary Base for Expanding ELs' Access to Bilingual Learning Opportunities

The research consensus indicating that DLI programs are optimal for ELs has grown-and grown more refined-in recent years. There are-at least-three main forms of bilingual instruction under the dual-language umbrella. First: linguistically integrated "two-way" DLI programs, which provide academic instruction in two languages to roughly integrated classrooms of native speakers of those two languages. Second: "one-way" DLI programs, which provide academic instruction in two languages to classrooms of students who are mostly native speakers of the non-English language used in instruction. Third: also "one-way" DLI programs, except that these provide academic instruction in two languages to classrooms of students who are mostly native English speakers.

Studies have generally found that, for ELs, bilingual programs usually outperform English-only programs, DLI programs outperform other forms of bilingual education, and that linguistically integrated, two-way DLI programs seem to perform best of all. ${ }^{16}$

Researchers studying ELs in Portland (OR) Public Schools' DLI programs compared the long-term linguistic trajectories of kindergarten ELs randomly enrolled in dual-language immersion programs with kindergarten ELs who wound up in other programs. By third grade, ELs in DLI were more
likely to still be classified as ELs-that is, that they were less likely to have reached English proficiency than EL peers in other programs. Were these the study's only findings, they would suggest that DLI is an ineffective way to support ELs. However, the researchers found that, by middle school, the pattern had flipped: ELs in DLI were considerably more likely to have reached English proficiency and be reclassified out of the EL student group. ${ }^{17}$

Researchers studying ELs in a large California district also found that, while ELs in English-only programs "have more favorable outcomes in elementary grades...students in two-language programs catch up and surpass their English immersion peers in middle school." ${ }^{18}$ In other words, as in the Portland study, they found that English-only settings help some ELs acquire English proficiency in the short term, but that bilingual education programs were the most effective language instruction model for ELs in the long term.

These programs similarly support long-term academic success for ELs. In the Portland study, researchers found that DLI participants scored higher on reading assessments by eighth grade-showing learning gains equivalent to nine months of learning beyond their peers who were not enrolled in DLI. In a separate California study, researchers found that, again, while ELs in dual-language immersion programs initially performed worse on literacy assessments than ELs in English-only settings, the DLI students eventually caught up and surpassed their peers in the long run. ${ }^{19}$

Meanwhile, a study of Charlotte-Mecklenburg Schools in North Carolina indicated similar academic benefitsand more. Researchers found that attending a DLI school raised annual math and reading scores for ELs and non-ELs alike. What's more, the study found that English-dominant students in the area's DLI programs were more likely to attend schools with higher numbers of ELs and smaller shares of white students. In other words, DLI programs in Charlotte-Mecklenburg Schools aren't just helping children succeed academically-they may be producing more diverse campuses. ${ }^{20}$

There is some emerging evidence that linguistically
integrated two-way DLI programs may be more effective for ELs than other DLI programs. Building on the Portland, California, and North Carolina findings, a new study of Utah's DLI programs found, for instance, that ELs and native English speakers alike did better in two-way DLI programs. Students in two-way programs gained stronger math and literacy boosts than their peers in one-way programs, with uniquely large bumps for native Spanish-speaking ELs. In addition, Spanish-speaking ELs in two-way, linguistically integrated, Spanish-English DLI were more likely to reach English proficiency (and thereby be reclassified as former ELs) by late elementary school. ${ }^{21}$ In other words, there appear to be some specific academic and linguistic benefits to be gained by offering bilingual Spanish-English instruction to classrooms with similar shares of native Spanish and native English speakers.

As in the North Carolina study, the Utah researchers also found that DLI in Utah was related to greater school diversity. That is, in Utah schools without DLI, 76 percent of students were white, and in Utah schools with one-way DLI (that is, schools offering bilingual instruction to predominantly English-dominant children), 83 percent of students were white. But in Utah's two-way DLI schools, just 48 percent of students were white. The pattern was inverted for Latino students, who were less likely to be enrolled in one-way DLI schools or schools without DLI, but were much more likely to enroll in two-way DLI. That is, while Latinos make up not quite 15 percent of Utah students, they accounted for over 40 percent of the enrollment in Utah's 31 two-way SpanishEnglish DLI programs. ${ }^{22}$ (See Table 1.)

Finally, it bears noting that the benefits to supporting DLLs' bilingualism are greatest in the early years. Early childhood is a period of rapid brain development that is highly consequential for language development, including bilingual development. Indeed, neuroscientists have found an array of early cognitive and social-emotional benefits associated with bilingualism, including executive functioning skills such as greater ability to focus. ${ }^{23}$ Some data indicate that the young child population is even more linguistically diverse than the older child population. Fully 52 percent of the country's ELs were enrolled in the K-4 grades in 2019. ${ }^{24}$

TABLE 1

## ENROLLMENT IN DUAL-LANGUAGE IMMERSION IN UTAH,

BY STUDENT CHARACTERISTICS

|  | White | Latino/a/x | EL Status | Low-income |
| :--- | :---: | :---: | :---: | :---: |
| No DLI | $76 \%$ | $16 \%$ | $13 \%$ | $36 \%$ |
| One-way DLI | $83 \%$ | $10 \%$ | $8 \%$ | $25 \%$ |
| Two-way DLI | $48 \%$ | $41 \%$ | $38 \%$ | $58 \%$ |
| Utah student body (2017) | $74 \%$ | $14 \%$ | $7 \%$ | $34 \%$ |

Source: Jennifer L. Steele, Johanna Watzinger-Tharp, Robert O. Slater, Gregg Roberts, Karl Bowman, "Achievement Effects of Dual Language Immersion in One-Way and Two-Way Programs: Evidence from a State Scale-Up in Utah," working paper, https:// jensteele1.github.io/files/Utah_2021April26.pdf; "State Nonfiscal Survey of Public Elementary/Secondary Education," 2000-01 and 2017-18, U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), https:// nces.ed.gov/programs/digest/d19/tables/dt19_203.70.asp; "Local Education Agency Universe Survey", 2000-01 through 2017-18,
U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), https://nces.ed.gov/ programs/digest/d19/tables/dt19_204.20.asp; "Public Elementary/Secondary School Universe Survey," 2000-01, 2010-11, 2016-17, and 2017-18, U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), https://nces. ed.gov/programs/digest/d19/tables/dt19_204.10.asp.

Though there is no data system tracking DLI programs in early childhood, English is the language of instruction in most early learning settings (as in preK-12 schools). Head Start is the only major early education system with consistent (if imperfect) policies and practices specific to supporting young bilinguals, including requiring bilingual staff and home language exposure if more than 50 percent of children in a program speak the same non-English language. ${ }^{25}$ A 2017 analysis of state pre-K systems found that sixteen states lacked early education policies to support DLLs, and nineteen states and the District of Columbia did not have data on the number of DLLs in their pre-K programs. ${ }^{26}$ Meanwhile, child care systems often have even fewer policies and practices to support DLLs. These children are often invisible in state child care licensing policies, quality rating and improvement systems, and child care provider professional development requirements.

More-and more standardized-data is clearly needed to understand the population of young DLLs and the languages they have exposure to in early learning settings. Additional research is needed to identify and operationalize high quality implementation of DLI approaches in the early years, including in infancy, toddlerhood, the preschool years,
and the early grades.

In sum, the research suggests that bilingual education programs are likely the best way to help the largest share of ELs reach English proficiency and succeed academically. And there is some evidence that linguistically integrated, two-way dual-language immersion programs offer the most thoroughly equitable educational opportunities for ELs. These programs are uniquely beneficial for supporting the emerging bilingualism of ELs and they can help Englishdominant children learn an additional language. Finally, the benefits of supporting children's bilingual development are greatest when policymakers invest in the earliest possible interventions.

## Language Politics

Two-way dual-language immersion programs appear to be more successful in part because of the diversity of linguistic abilities present in each classroom. Instead of trying to simultaneously learn a new language and academic content solely from an English-speaking teacher in the classroom, ELs are immersed in a social context full of English-dominant peers while also receiving academic instruction in both their
native language and English. Meanwhile, instead of trying to simultaneously learn a new language and academic content solely from a Vietnamese- or Spanish- or Mandarinspeaking teacher, English-dominant students are immersed in a social context full of peers who speak that non-English language fluently. In other words, the "peer effects" of immersion in this bilingual social environment benefit ELs and English-dominant children alike. The diversity of twoway DLI classrooms is a concrete, all-but-essential, element for these programs' success.

However intuitive and empirically grounded this model may seem, growth in the number of two-way DLI programs also has roots in the shifting language politics of the past several decades. At the turn of the twentieth century, U.S. bilingual education largely consisted of segregated classrooms predominantly serving EL students. These segregated settings left bilingual education with a relatively narrow band of political support. As co-director of UCLA's Civil Rights Project/Proyecto Derechos Civiles Patricia Gándara later put it, when U.S. culture wars came for bilingual education, "there was not a large enough constituency outside of the immigrant community and the teachers who taught these students... to raise their voices against these xenophobic measures." ${ }^{27}$ The moment culminated in referendums enacting bans on bilingual education for ELs in California, Arizona, and Massachusetts. For instance, Arizona's Proposition 203, passed in 2000, made ELs ineligible to participate in bilingual learning approaches without going through a burdensome waiver process. California's Proposition 227, passed in 1998, established a similar state mandate.

In 2009, Laurie Olsen, a researcher at Californians Together, an EL advocacy group, recognized the potential political power in shifting the framing around bilingualism and biliteracy. In Olsen's view, for much of the twentieth century, "from a policy perspective, bilingual education was defined as a compensatory education program responding to a civil rights issue-a matter of overcoming a language barrier to participation in English society." A better approach, Olsen explained, would expand the coalition of supporters for bilingual education, by "propos[ing] culture and language as assets for children and families, two languages as better than
one, and cross-cultural competencies as necessary for all students in a 21 st-century global society. ${ }^{28}$ Instead of treating bilingual education as a key mechanism for extending opportunity to ELs, advocates could, Olsen argued, present bilingualism as a valuable goal for all children. In essence, by broadening which student groups are included in bilingual classrooms, advocates could help families, educators, and policymakers recognize ELs' bilingualism and biliteracy as assets. ${ }^{29}$

In the past twenty years, the growing bilingual education research consensus has led an increasing number of schools to shift away from a monolingual, English-only framing of ELs to a structured, systemic recognition of the value of these children's emerging bilingual abilities. But the growth of these programs has also come within the political context Olsen recognized. New DLI campuses have produced broader public interest in building a multilingual education system, exposing more families to the potential of this model, adding further momentum to the national shift away from English-only education.

Evidence for this shift abounds. California voters overturned the state's English-only mandate in a 2016 referendum, and a 2017 Massachusetts law loosened restrictions limiting the growth of bilingual education. ${ }^{30}$ Texas is reforming funding structures to encourage the conversion of its longstanding statewide bilingual education program to a dual-language model that more fully commits to developing students' home languages. ${ }^{31}$ States such as North Carolina, Utah, and Delaware have launched statewide grant programs to encourage the growth of dual-language programs around the country. And California is beginning to rebuild its bilingual teacher training programs. Though Arizona's Proposition 203 has not been repealed, a new law signed in 2019 loosened some of its provisions, including allowing dual-language approaches as a language instruction model for ELs. ${ }^{32}$

But there are also risks to expanding the bilingual education coalition: welcoming English-dominant children into bilingual classrooms could reduce ELs' access to these classrooms. While the popularity ofDLI models have increased the supply
of bilingual instruction in U.S. schools, this has not always led to equitable DLI access for ELs. In some communities, DLI programs have become exceedingly popular with privileged, often English-dominant families. ${ }^{33}$ This can produce a scramble for limited seats as wealthy families leverage (1) their material capital to purchase housing and/or (2) their social capital to pressure district administrators or game enrollment systems to guarantee their children access to a local DLI program.

## Methods, Data, andStudyLimitations

The empirical and political contexts surrounding duallanguage immersion programs present policymakers with a thorny problem: how can they encourage the creation of diverse, integrated DLI settings-while still protecting equitable access for ELs?

To answer that question, The Century Foundation and Children's Equity Project gathered data on as many dual-language immersion programs as possible across a geographically, racially, socioeconomically, culturally, and politically diverse array of communities. We paid particular attention to districts with at least three DLI schools, in order to ensure that there was sufficient supply of and demand for bilingual instruction in these communities to meaningfully analyze differential levels of access for particular student groups.

The bulk of data presented here are gathered from the National Center for Education Statistics' Common Core of Data (CCD), using the Elementary and Secondary Information System (ELSi). We have, however, supplemented these data in some instances where federal data were not as readily available-particularly for gathering school-level EL counts.

## Variables

We gathered school- and district-level data on DLI school demographics, enrollment processes and policies, instructional languages, and trendlines over time from 2009-20. We gathered data on racial diversity as measured
by the U.S. Department of Education. We used federally mandated, state-defined EL status as a proxy variable for linguistic diversity. The goal, for each of these variablesand particularly for EL students-was to identify schools where students of a particular background might not have equitable access to dual-language programs.

It bears noting that each of these variables is imperfect. Federal data on students' racial identities are insufficiently fine-grained to permit us to differentiate between AfricanAmerican students, who are most likely to speak English (including, but not exclusively, African-American Vernacular English), and Afro-Latino students, who are likely to speak one or more non-English languages at home, such as Spanish, Haitian Creole, French, Portuguese, and others. These details are consequential for measuring equitable access to schools offering dual-language immersion programs, particularly in communities such as Boston, which runs multilingual programming in Haitian Creole and Spanish alike. ${ }^{34}$

However, EL status is not a perfect proxy for partner language dominance. In the United States, most twoway DLI settings are Spanish-English programs-since a large majority of English learners speak Spanish at home. This customarily means that dual-language programs aim to enroll equal shares of Spanish-dominant and Englishdominant students, and that most of these programs' EL students are Spanish-dominant children.

But not all ELs are Spanish dominant. As such, a SpanishEnglish DLI program with 50 percent EL enrollment may be providing equitable access to DLI programs for ELs, but that is not always equivalent to protecting equitable access for Spanish-speaking children. For instance, if that program's ELs include large numbers of native Vietnamese speakers and/or large numbers of native Arabic speakers, it may indicate that Spanish-dominant children lack fair access to a program that would support their emerging bilingualism. This matters for equity-and for student outcomes. As in the Utah study discussed above, research shows that there is a unique linguistic and academic value to "matching" ELs in programs where their home language is one of the
languages of instruction.

Finally, not all linguistically diverse students are current ELs. Some children enroll in U.S. schools with strong abilities in English and their home languages. And some children are classified as ELs when they enroll in U.S. schools, but reach English proficiency quickly and exit the EL group, becoming "former ELs." Neither of these groups' linguistic diversity is captured by using students' EL status as a proxy.

## Data Scope

First, since this study relies on school- and district-level data, it is important to note that many-perhaps a majority-of DLI programs operate as "strands" within larger schools. That is, several of the classrooms in each grade of a school are set up for DLI instruction, while the rest remain Englishonly. As such, school-level enrollment data cannot speak specifically to whether there is equitable access to the duallanguage program within some larger school contexts.

For instance, a K-5 elementary school with 50 Spanishdominant ELs among its 250 students might appear to be under-enrolling ELs in its Spanish-English dual-language program, since just 20 percent of the DLI school's students are $E L s$ (that is, $50 / 250$ ). However, if it runs just six duallanguage classrooms (that is, one per grade) with a total 120 students in its dual-language program, and enrolls all 50 ELs in these settings, the DLI program would actually have 42 percent EL enrollment (that is, 50/120)-a reasonably equitable share that is close to the even split that is key to two-way DLI programs' efficacy. Without classroom-level demographic data, it's difficult to conclusively determine whether the program is equitably accessible for the community's ELs.

So: absent reliable, comparable, nationwide demographic data disaggregated by classrooms, this report can only analyze whether students of particular backgrounds have equitable access to schools offering DLI programs, notin general-whether students have equitable access to the actual seats in DLI programs (see, for instance, the below analysis of Washington, D.C.'s Powell Elementary). This
limitation in the available data is particularly important to keep in mind for DLI programs in the secondary grades, where elementary DLI graduates are folded into much larger middle and high schools that offer smaller amounts of ongoing language instruction. That is, schoolwide data at a secondary DLI campus are likely to be less representative of the demographics of the school's DLI program than schoolwide data at an elementary DLI program.

Second, this study also confronts definitional challenges. It bears noting that there is no clear, single, field-wide definition of what constitutes a dual-language immersion program. Some programs are linguistically integrated twoway DLI settings, while others are one-way DLI for Englishdominant children, and still others are one-way DLI for English-learning children.

DLl's central requirements are these: bilingual delivery of academicinstruction, with the goals of developingall students' (1) bilingualism and biliteracy, (2) academic success, and (3) sociocultural competencies. Still, these programs vary by the breakdown of languages used. Some use a " $50 / 50$ " model, where English and the non-English partner language are used roughly the same amount throughout the day. Others use a "90/10" model, which begins by using the non-English language nearly all of the time and progressively moves to a 50/50 linguistic balance, usually by the end of elementary school. Language usage can be delineated in a variety of ways-students may switch languages each day, half-day, or by subject.

And yet, dual-language programs in one state, district, or community may have little in common with dual-language programs in other places. As a result, programs are often marketed to families as "dual language" when they do not, in fact, incorporate any of these basic elements. This lack of clarity makes it difficult to study these programs in a conclusive way.

For this study, we have gathered our database of programs from a range of sources-states' and districts' duallanguage program directories, advocacy groups' guides to local school options, and others. But we have not, by and
large, interrogated the substance of what lies behind a local determination that they are offering "dual-language" programming. This also limits the conclusiveness of our study, since it frames equitable access solely in terms of students enrolled in schools running programs that they deem to qualify as DLI, and omits students enrolled in other forms
of bilingual education. For instance, in many communities in Texas, where bilingual education programs are relatively common, the equity calculations for ELs' access to bilingual instruction in a dual-language program are likely very different than in rapidly-gentrifying coastal cities. That is, if ELs seem to lack access to DLI in a community where their

## FIGURE 1

# RACIAL COMPOSITION OF STUDENT BODY AT U.S. SCHOOLS, 2019-2020 (ELS ARE 10\% OF STUDENT BODY) 



[^1]
# RACIAL COMPOSITION OF STUDENT BODY AT SCHOOLS IN TCF/CEP STUDY (ELS ARE 17\% OF STUDENT BODY) 

African-American Latino White Asian Native American<br>Native Hawaiian/Pacific Islander Two or more races

Source: Authors' analysis of TCF DLI Access Database. Underlying data: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey"; U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2010-11, 2019-20, and 2020-21.
likely alternative language program is bilingual education, that is much less concerning than if the likely alternative is an English-only setting.

Third, we have not endeavored to study the implementation quality of any of these programs. Given the popularity of
dual-language programs as a "brand," it is not uncommon for districts to hastily roll out dual-language classrooms or schools without sufficient planning or resources. As such, it is imperative that further research on equitable access to these programs also incorporates considerations of quality.

## Data Sample

This study's database includes more than 1.1 million students, over 190,000 of whom are ELs, attending more than 1,600 DLI schools across thirteen states and the District of Columbia. ${ }^{35}$ As Figures 1 and 2 indicate, the demographics of the DLI schools in our sample differ from the demographics of the U.S. student body. This is appropriate, given that many DLI programs are launched in EL-rich communities, with the goal of serving ELs and other non-native English speakers. However, given that our sample is not representative of all DLI programs around the country, the comparison in Figures 1 and 2 should not be taken as a final picture of national enrollment in DLI schools.

## National and State Dual-Language Immersion Contexts

While there is significant evidence that dual-language programs are growing in the United States, there is no comprehensive national database tracking this trend. Until the early 2010s, the Center for Applied Linguistics maintained several databases-one tracking duallanguage immersion programs and another covering foreign-language immersion programs-which, combined, contained just over 1,300 programs. A 2021 survey from the American Councils Research Center found more than 3,600 dual-language programs. Meanwhile, as of March 2023, DualLanguageSchools.org reports 4,894 duallanguage programs. ${ }^{36}$ And yet, all of these surveys rely on self-reporting to various degrees; that is, states reporting on the number of schools that they define as offering a dual-language program-or schools or districts voluntarily enrolling themselves in DLI digests.

According to the American Councils survey, states' commitments to dual-language immersion vary widely. DLI programs are concentrated in states with Latino populations above the national average. Accordingly, a large majority (80 percent) of DLI programs are Spanish-English. Chinese programs are next most prevalent, at 8.6 percent, and then French, at 5.0 percent. The survey found 660 DLI programs in California, 521 in Texas, and 456 in New York. By contrast,
the researchers found zero DLI programs in Alabama, Arkansas, Mississippi, New Hampshire, North Dakota, and West Virginia. ${ }^{37}$

Federal databases provide some aggregated DLI enrollment data. In return for federal education funding, states report data on the language instruction models they use for ELs (Table 3). These make it clear that states like Connecticut, Illinois, New Jersey, Texas, Wisconsin, and the District of Columbia have made significant commitments to enrolling large shares of their ELs in some sort of bilingual or duallanguage programming. And yet, these data should be taken-and used-with some caution. For instance, Oregon reported no ELs enrolled in dual-language schools in 2019, despite running 95 dual-language programs, according to the American Councils report. Indeed, Portland (OR) Public Schools runs a well-established district DLI program, including a number of two-way schools. Similarly, Utah reported no ELs in dual-language or bilingual education programs, despite running dozens of two-way dual-language programs that intentionally enroll native Spanish speakers, many of whom are ELs (see Table 1 above).

And yet, allowing for some imprecision in the mixing of databases, these various data provide an initial grounds for analyzing equity of access of bilingual instruction. (See Table 2.) First: the United States enrolls just under 8 percent of its ELs in dual-language immersion programs-the most effective means of supporting these students. Second: the country enrolls just over 8 percent of ELs in bilingual education (ESL, Transitional)-generally the second-best way of supporting their success. Third, and finally: this means that over 83 percent of U.S. ELs are enrolled in some form of English-only instruction (generally some type of English as a Second Language, or ESL, programming). Whatever their limitations, these data are unambiguous: they show that, nationally, the United States has not yet made sustained investments prioritizing multilingualism in its public schoolsparticularly for the developing the emerging bilingualism of its EL students.

What's more, there are some significant disparities between states' DLI and bilingual commitments. For instance, Texas

TABLE 2

STUDENTS IN EL CLASSROOMS, BY TYPE AND STATE

| State | ELs in ESL | ELs in Integrated ESL | ELs in <br> Bilingual | ELs in <br> Dual <br> Language | ELs in Newcomer | ELs in Other | Total ELs | \% of ELs in Dual Language | \% of ELs <br> in Dual + <br> Bilingual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States | 2,700,646 | 2,056,662 | 440,984 | 404,991 | 43,832 | 475,293 | 5,115,887 | 7.9\% | 16.5\% |
| Alabama | 29,823 | 1,204 | None Reported | None Reported | 381 | None Reported | 31,903 | N/A | N/A |
| Alaska | 3,305 | 8,316 | 273 | 2,443 | 94 | None Reported | 15,346 | 15.9\% | 17.7\% |
| Arizona | 42,574 | 15,899 | 0 | 525 | 0 | 0 | 74,834 | 0.7\% | 0.7\% |
| Arkansas | 18,180 | 15,593 | None Reported | None Reported | 386 | None Reported | 39,318 | N/A | N/A |
| California | 1,106,017 | 985,031 | 91,561 | 96,820 | 19,361 | 29,514 | 1,148,024 | 8.4\% | 16.4\% |
| Colorado | 73,896 | 14,586 | 1,689 | 3,875 | 188 | 35 | 96,490 | 4.0\% | 5.8\% |
| Connecticut | 25,893 | 4,316 | 11,000 | 1,531 | None Reported | None Reported | 41,973 | 3.6\% | 29.9\% |
| Delaware | 8,950 | 819 | 117 | 1,264 | 77 | 3,198 | 15,294 | 8.3\% | 9.0\% |
| District of Columbia | 381 | 5,664 | 0 | 2,815 | 0 | 0 | 9,440 | 29.8\% | 29.8\% |
| Florida | 38,059 | 205,644 | 25,307 | 7,973 | 313 | 495 | 278,498 | 2.9\% | 11.9\% |
| Georgia | 29,783 | 46,921 | None Reported | 1,625 | None Reported | 33,433 | 128,502 | 1.3\% | 1.3\% |
| Hawaii | 15,438 | 454 | 4 | 3 | 0 | 1,838 | 17,737 | 0.0\% | 0.0\% |


| State | ELs in ESL | $\begin{gathered} \text { ELs in } \\ \text { Integrated } \\ \text { ESL } \end{gathered}$ | ELs in Bilingual | $\begin{gathered} \text { ELs in } \\ \text { Dual } \\ \text { Language } \end{gathered}$ | ELs in Newcomer | ELs in Other | Total ELs | \% of ELs in Dual <br> Language | \% of ELs in Dual + Bilingual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Idaho | 5,595 | 9,562 | 49 | 963 | 289 | 4,292 | 21,215 | 4.5\% | 4.8\% |
| Illinois | 9,934 | 35,478 | 50,194 | 32,060 | None Reported | 90,093 | 229,180 | 14.0\% | 35.9\% |
| Indiana | 48,406 | 14,591 | 671 | 713 | None Reported | 10 | 67,504 | 1.1\% | 2.1\% |
| lowa | 23,830 | N/A | 98 | 1,032 | 1,026 | 4,203 | 31,509 | 3.3\% | 3.6\% |
| Kansas | Data missing |  |  |  |  |  | 42,833 | N/A | N/A |
| Kentucky | 9,217 | 2,673 | 275 | 201 | 74 | 25,504 | 28,351 | 0.7\% | 1.7\% |
| Louisiana | 4,053 | 15,098 | 0 | 347 | 706 | 4,286 | 29,081 | 1.2\% | 1.2\% |
| Maine | 1,598 | 824 | None Reported | None Reported | 116 | 1,718 | 5,453 | N/A | N/A |
| Maryland | 48,775 | 39,790 | 846 | 9 | None Reported | 3,799 | 93,249 | 0.0\% | 0.9\% |
| Massachusetts | None Reported | 85,252 | 976 | 2,052 | None Reported | None Reported | 98,055 | 2.1\% | 3.1\% |
| Michigan | 69,473 | 13,422 | 3,205 | 2,248 | 1,926 | None Reported | 93,889 | 2.4\% | 5.8\% |
| Minnesota | 43,788 | 15,820 | 77 | 2,682 | 2,362 | 1,537 | 75,018 | 3.6\% | 3.7\% |
| Mississippi | 8,148 | 1,309 | None Reported | 6 | None Reported | None Reported | 11,614 | 0.1\% | N/A |
| Missouri | 14,155 | 14,151 | 1 | 592 | 537 | 1,858 | 34,219 | 1.7\% | 1.7\% |


| State | ELs in ESL | ELs in Integrated ESL | ELs in Bilingual | ELs in Dual Language | ELs in Newcomer | ELs in <br> Other | Total ELs | $\begin{aligned} & \text { \% of ELs } \\ & \text { in Dual } \\ & \text { Language } \end{aligned}$ | \% of ELs <br> in Dual + <br> Bilingual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Montana | None Reported | 2,896 | None Reported | 57 | None <br> Reported | None Reported | 3,555 | 1.6\% | N/A |
| Nebraska | 9,290 | 11,780 | 2 | 1,781 | 735 | 1,758 | 23,035 | 7.7\% | 7.7\% |
| Nevada | 6,192 | 66,178 | 0 | 113 | 205 | 2,923 | 70,217 | 0.2\% | 0.2\% |
| New Hampshire | 2,338 | 187 | 0 | 0 | 53 | 70 | 4,911 | 0.0\% | 0.0\% |
| New Jersey | 31,256 | 21,481 | 24,234 | 8,708 | None Reported | 5,446 | 98,748 | 8.8\% | 33.4\% |
| New Mexico | 29,972 | 14,132 | 2 | 1 | 0 | 2 | 52,898 | 0.0\% | 0.0\% |
| New York | 168,780 | 0 | 30,663 | 15,543 | 0 | 0 | 233,627 | 6.7\% | 19.8\% |
| North Carolina | 119,596 | None Reported | None Reported | None Reported | None <br> Reported | None Reported | 122,599 | N/A | N/A |
| North Dakota | 2,862 | 1,125 | None Reported | None Reported | 23 | None Reported | 4,212 | N/A | N/A |
| Ohio | 41,053 | 3,013 | 293 | 336 | 780 | 13,131 | 60,049 | 0.6\% | 1.0\% |
| Oklahoma | 29,990 | 20,324 | 196 | 621 | 1,073 | 1,035 | 59,952 | 1.0\% | 1.4\% |
| Oregon | 49,989 | None Reported | None Reported | None Reported | 608 | None Reported | 53,127 | N/A | N/A |
| Pennsylvania | 0 | 66,068 | 1,304 | 367 | 0 | 0 | 72,200 | 0.5\% | 2.3\% |


| State | ELs in ESL | ELs in Integrated ESL | ELs in Bilingual | ELs in <br> Dual <br> Lan- <br> guage | ELs in Newcomer | ELs in Other | Total ELs | \% of ELs <br> in Dual <br> Language | \% of ELs in Dual + Bilingual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rhode Island | 2,177 | 5,874 | 428 | 709 | 293 | 5,037 | 17,116 | 4.1\% | 6.6\% |
| South Carolina | 19,260 | 13,524 | 0 | 0 | 186 | 12,792 | 45,871 | 0.0\% | 0.0\% |
| South Dakota | 4,290 | 1,088 | None Reported | None Reported | 941 | 114 | 6,579 | N/A | N/A |
| Tennessee | 23,817 | 20,946 | None Reported | None Reported | 1,363 | 3,467 | 50,037 | N/A | N/A |
| Texas | 342,623 | 143,546 | 174,608 | 200,667 | 0 | 159,064 | 1,021,540 | 19.6\% | 36.7\% |
| Utah | None Reported | None Reported | None Reported | None Reported | None Reported | 53,110 | 54,357 | N/A | N/A |
| Vermont | Data missing |  |  |  |  |  | 1,683 | 0.0\% | 0.0\% |
| Virginia | 76,944 | 31,878 | 9 | 2,147 | 3,361 | None Reported | 115,803 | 1.9\% | 1.9\% |
| Washington | 45,057 | 65,610 | 1,635 | 5,540 | 1,261 | 8,655 | 129,564 | 4.3\% | 5.5\% |
| West <br> Virginia | 0 | 2,040 | 0 | 0 | 0 | 0 | 2,040 | 0.0\% | 0.0\% |
| Wisconsin | 13,428 | 12,555 | 21,267 | 7,162 | 5,114 | 2,294 | 50,902 | 14.1\% | 55.9\% |
| Wyoming | 2,101 | 0 | 0 | 0 | 0 | 0 | 2,736 | 0.0\% | 0.0\% |
| Source: "Title III Students Served File Specifications," U.S. Department of Education, EdDataExpress, EdFacts File 116, Data Group 849, https:// eddataexpress.ed.gov/download/data-builder/data-download-tool?f\%5B0\%5D=data_group_id\%3A849\&f\%5B1\%5D=level\%3AState\%20Edu-cation\%20Agency\&f\%5B2\%5D=school_year\%3A2019-2020; "Local Education Agency Universe Survey," 2000-01 through 2018-19, and "State Nonfiscal Survey of Public Elementary/Secondary Education," 2019-20, U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); and EDFacts file 141, Data Group 678, 2019-20. |  |  |  |  |  |  |  |  |  |

reported enrolling more than 200,000 ELs in dual-language programming in 2019-20, alongside another nearly 175,000 ELs enrolled in some form of bilingual education. California, by contrast, enrolled just 97,000 ELs in dual-language programs, and another 92,000 ELs in bilingual settings. Notably, California has more DLI programs (per the American Councils survey) and more ELs, but Texas enrolls roughly twice as many ELs in dual language. This suggestswithin the context of the constraints of these state-reported data and the limits of the American Councils survey-that seats in California's bilingual and DLI programs may be more likely to be filled by English-dominant children than comparable programs in Texas. What's more, Texas ELs who are not enrolled in DLI have a solid chance of enrolling in the state's large bilingual education program.

By contrast, Table 3 shows a rough ranking of states' commitments to dual language in proportion to their enrollment of ELs. Perhaps unsurprisingly, given its low EL population and statewide DLI program, Utah tops this list, with one DLI program for every 183 ELs. Delaware, which launched a statewide DLI grants program akin to Utah's in 2012, also ranks high. ${ }^{38}$ New York's position (\#6 in the country, with one DLI program per 512 ELs) is of particular note, given that it enrolls more ELs than any state other than California, Texas, and Florida.

## Defining Equitable Access to DLI: A Moving Target

As noted above, this report's database has some limitations. It does not provide grounds for making strong national claims about equitable DLl access (such as"what percentage of DLI programs are gentrifying?"). And given that new DLI programs are constantly opening-and occasionally closing-the list of DLI schools may be erroneously missing or including some DLI campuses.

However, the sample is adequate for examining different local DLI contexts and how they may be shifting. This is particularly valuable, as it is impossible to devise and apply a single measure for evaluating equity of access across all local DLI contexts. As discussed above, communities launch

DLI programs for a wide range of primary purposes-some of which do more to advance equitable DLI access than others. Some programs are launched to help ELs retain their emerging bilingual abilities and succeed academically. Other programs are launched to deepen and extend existing transitional bilingual education models. Still others are launched to intentionally integrate schools: to help bridge lines of difference within communities by connecting students and families of diverse racial, ethnic, linguistic, cultural, and/or socioeconomic backgrounds. And, of course, some DLI schools launch with enrichment in mind-giving English-dominant students a chance to acquire a second language. Naturally, none of this is static-programs may, of course, launch with multiple goals or with objectives that shift over time.

How, then, to measure equitable access to DLI schools? There are three considerations for evaluating any particular school or district.

## Communities should strive to enroll a significant number and share of native speakers of their DLI program's non-English "partner" language.

In most definitions of two-way DLI programs, providing equitable access means enrolling roughly equal shares of native speakers of English and the partner language. However, while research shows the value of linguistic integration-of balancing DLI enrollment between native speakers of English and the partner language-there is not yet a consensus for how perfectly dual-language programs must hew to a strict 50/50 split for students to garner these benefits. Indeed, local linguistic diversity and student mobility can make this difficult to achieve and sustain in the real world. Equitable access to dual-language immersion will necessarily be different in less linguistically diverse communities.

For instance, in a community such as San Antonio, where 41.7 percent of families speak a non-English language at home, and roughly one in five San Antonio Independent School District students are current ELs, equitable access to DLI could very well mean reserving roughly half of each

TABLE 3

| STATES, IN ORDER OF NUMBER OF EL STUDENTS PER DLI PROGRAM |  |  |  |
| :---: | :---: | :---: | :---: |
| State | State ELs Enrollment | DLI per State | ELs per DLI Program |
| Utah | 54,357 | 297 | 183 |
| Delaware | 15,294 | 60 | 255 |
| Wyoming | 2,736 | 10 | 274 |
| New Mexico | 52,898 | 133 | 398 |
| Louisiana | 29,081 | 71 | 410 |
| New York | 233,627 | 456 | 512 |
| North Carolina | 122,599 | 229 | 535 |
| Oregon | 53,127 | 95 | 559 |
| Hawaii | 17,737 | 29 | 612 |
| Wisconsin | 50,902 | 82 | 621 |
| Minnesota | 75,018 | 107 | 701 |
| District of Columbia | 9,440 | 13 | 726 |
| Alaska | 15,346 | 19 | 808 |
| Idaho | 21,215 | 20 | 1,061 |
| Washington | 129,564 | 108 | 1,200 |
| Arizona | 74,834 | 61 | 1,227 |
| South Carolina | 45,871 | 35 | 1,311 |
| Rhode Island | 17,116 | 13 | 1,317 |
| Massachusetts | 98,055 | 61 | 1,607 |
| Vermont | 1,683 | 1 | 1,683 |
| California | 1,148,024 | 660 | 1,739 |
| Georgia | 128,502 | 71 | 1,810 |
| Nebraska | 23,035 | 12 | 1,920 |
| Texas | 1,021,540 | 521 | 1,961 |


| State | State ELs Enrollment | DLI per State | ELs per DLI Program |
| :---: | :---: | :---: | :---: |
| Colorado | 96,490 | 45 | 2,144 |
| Indiana | 67,504 | 31 | 2,178 |
| Virginia | 115,803 | 51 | 2,271 |
| Maryland | 93,249 | 41 | 2,274 |
| Michigan | 93,889 | 40 | 2,347 |
| Kentucky | 28,351 | 11 | 2,577 |
| Florida | 278,498 | 107 | 2,603 |
| lowa | 31,509 | 12 | 2,626 |
| Oklahoma | 59,952 | 19 | 3,155 |
| South Dakota | 6,579 | 2 | 3,290 |
| Connecticut | 41,973 | 12 | 3,498 |
| Montana | 3,555 | 1 | 3,555 |
| Ohio | 60,049 | 15 | 4,003 |
| Missouri | 34,219 | 8 | 4,277 |
| Illinois | 229,180 | 52 | 4,407 |
| Kansas | 42,833 | 9 | 4,759 |
| Maine | 5,453 | 1 | 5,453 |
| New Jersey | 98,748 | 15 | 6,583 |
| Pennsylvania | 72,200 | 10 | 7,220 |
| Nevada | 70,217 | 2 | 35,109 |
| Tennessee | 50,037 | 1 | 50,037 |
| Alabama | 31,903 | 0 | - |
| Arkansas | 39,318 | 0 | - |
| Mississippi | 11,614 | 0 | - |
| New Hampshire | 4,911 | 0 | - |
| North Dakota | 4,212 | 0 | - |


| State | State ELs Enrollment | DLI per State | ELs per DLI Program |
| :--- | :---: | :---: | :---: |
| Colorado | 96,490 | 45 | 2,144 |
| Indiana | 67,504 | 31 | 2,178 |

Source: "2021 Canvas of Dual Language and Immersion (DLI) Programs in U.S. Public Schools," American Councils Research Center, American Councils for International Education, October 2021, https://www.americancouncils.org/sites/de-fault/files/documents/pages/2021-10/Canvass\ DLI\ -\ October\ 2021-2_ac.pdf; "Local Education Agency Universe Survey," 2000-01 through 2018-19, and "State Nonfiscal Survey of Public Elementary/Secondary Education," 2019-20, U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); and EDFacts file 141, Data Group 678, 2019-20.
program's seats for Spanish-dominant children. ${ }^{39}$ But in Washington, D.C., where just under 13 percent of students are ELs, equitable access to DLI programs may necessarily look differently-since congregating all English learners in a handful of DLI schools would risk essentially segregating them away from the majority of (non-DLI) schools. ${ }^{40}$

## ELs should be prioritized for DLI seats, but leaders

 must weigh local context with that priority, using the model to increase integration-across all lines of difference.ELs are a historically marginalized group of children. They have the most to gain from access to DLI programs, and the most to lose from a lack of access. But ELs and their non-EL peers alike come from a diverse array of racial and ethnic backgrounds, disability statuses, and socioeconomic levels. So leaders should ensure that efforts to create linguistically integrated DLI programs do not disproportionately exclude students from any demographic. This will require special attention to the physical placement of new DLI programs, intentional outreach to diverse communities, coordination with special education systems, and carefully attending to classroom level diversity, and other factors.

Consider, for example, a DLI school that reserves half of its seats for Spanish-dominant students and the other half for English-dominant students. However, after enrollment is complete, it becomes clear that nearly all of the Spanishdominant students identify as Latinos with cultural roots in Central America and nearly all the English-dominant students identify as white. If the community includes large
numbers of Afro-Latino Spanish speakers and/or AfricanAmerican English-speakers-but enrolls essentially none of them in its DLI program-it would be clear that the program's linguistic integration was masking inequities of access for students from other racial, ethnic, or cultural backgrounds.

There is ample evidence of the academic, social, and emotional benefits of fully diverse classrooms. ${ }^{41}$ It would be a mistake to forego these advantages for students in DLI, particularly in light of evidence from the aforementioned studies in North Carolina and Utah showing how DLI may help create more diverse campuses.

Equitable access to DLI must be measured in the context of different, often nested structures governing school enrollment-schools, districts, regions, and states.

If the demographics of a DLI school are significantly different from their surrounding neighborhoods or school district, that may indicate that a program is not equitably accessibleparticularly if the school under-enrolls ELs relative to the surrounding area. Neighborhood enrollment zones often impose consequential and segregationary limitations on which students have access to a particular school. But this is just a first level of analysis.

School district boundaries can create similar access barriers within a broader region, so the demographics of a particular school district may not always be the appropriate comparison group for determining whether students of various backgrounds have equitable access to schools offering
DLI. For instance, an EL enrollment rate of 18 percent in DLI schools may seem reasonably equitable in a school district with just 11 percent EL enrollment. But that picture changes significantly if neighboring school districts have EL enrollment rates of over 30 percent-and no DLI schools of their own (see, for instance, the analysis of Washington, D.C. and its suburbs, below).

Meanwhile, at the state level, equitable DLI investments will necessarily prioritize new seats in communities with significant linguistic diversity and large EL enrollment over communities with fewer ELs.

Finally, it is clear that no district's ELs should be predominantly enrolled in English-only classrooms that strip them of their emerging bilingual abilities even as Englishdominant peers in their community gain increased access to bilingual classrooms. Similarly, no state should be investing to expand DLI programs in English-dominant communities with limited linguistic diversity while communities with large shares of ELs still lack DLI programs. At minimum, equitable access must mean that, when bilingual programs such as dual-language immersion are available in a particular area, local education leaders set aside a significant quantity of seats for English-learning students who are native speakers of the program's partner language.

In sum, there is no single definition of equitable DLI access. To be sensitive to the wide range of local DLI contexts, then, the bulk of our analysis consists of comparisons between the demographics of local DLI programs with the demographics of the broader district and/or the surrounding region.

## What the Data Show about DLI Access

No two communities are demographically identical, and the pressures shaping DLI access correspondingly differ from place to place. This section illustrates various challenges of ensuring equitable access to DLI in communities with significantly different demographics. It opens with a discussion of how changing demographics and demand for DLI at the community level is leading to a gentrification of
many DLI schools nationwide and threatening ELs' access. It then presents an analysis of Dallas, Texas, a linguistically diverse community that runs one of the largest districtwide DLI programs in the country. It also includes analysis of the DLI programs in the Washington, D.C. metropolitan area, a diverse community facing significant gentrification pressures.

## Integration, Gentrification, and Colonization: DLI Demographic Change Over Time

Equitable access to DLI cannot be fully measured in a static, single-year analysis. DLI schools are sometimes launched to better serve a particular neighborhood or community, only to have that community's demographics shift in the years after the DLI program's launch. This is particularly challenging in gentrifying urban areas where growing housing costs may force some families to leave their neighborhoods, school districts, and/or cities for more affordable areas. Given that ELs are disproportionately likely to be growing up in lowincome households, gentrification patterns risk reducing the linguistic diversity of urban communities and the DLI schools that serve them.

Table 4 shows aggregated demographic patterns for DLI schools in a range of cities from our database. The analysis illustrates different challenges in different communities. Looking at a single-year picture of DLI school demographics in 2019-20 tells a story: in Dallas, New York City, Los Angeles, Albuquerque, Oakland, San Francisco, and others, a minority of DLI schools enrolled a higher share of white students compared to their share of the district population. In Seattle and Orlando, no DLI schools had student populations whiter than their school district populations. By contrast, in Washington, D.C., thirteen out of seventeen DLI schools had student populations whiter than their surrounding district, and in Salt Lake City, half of the DLI schools did.

However, demographic trends over a five-year period tell a somewhat different story. EL enrollment shares are shrinking in a majority of DLI schools in New York City, Los Angeles, San Francisco, Oakland, and San José. Meanwhile, white enrollment shares are up in a majority of DLI schools in New

## WHAT'S IN A NAME? A TALE OF FARFLUNG DLI CAMPUSES NAMED FOR MARK TWAIN

It's only natural that many American preK-12 schools are named after Mark Twain, one of the country's literary titans. A number of these schools host DLI programs-which are having a wide range of impacts on their

## student demographics.

| Mark Twain Middle School (Los Angeles, CA) | Mark Twain Middle School in Los Angeles hosts Spanish-English and Mandarin-English dual-language immersion programs. In 2009-2010, the school was 82 percent Latino, and slightly more than 25 percent of students were ELs. Fewer than 1 percent of students were Asian, and around 6 percent of students were white. During the subsequent decade, DLI programs in Mark Twain's neighborhood were being launched with an explicit goal: "to attract and retain students." ${ }^{42}$ It worked. By 2020, Mark Twain's enrollment was up, but its EL population had dropped to under 9 percent of the student body. Meanwhile, the Asian share of the student population grew to 5 percent, the Latino share of the population dropped by one-third, and the white share of the population more than tripled. |
| :---: | :---: |
| Mark Twain Elementary (Dallas, TX) | Mark Twain Elementary School for the Gifted and Talented in Dallas hosts a Spanish-English immersion program. From 2015 to 2020, the school's EL population decreased by 4 percentage points. In 2020, the schools' EL population was 24 percent, which was 18 percentage points lower than the EL enrollment share in Dallas ISD (42 percent). In 2020, the school was disproportionately less white (1 percent) than the district (6 percent) and more African-American (58 percent) than the district (22 percent). |
| Mark Twain Elementary (Pasco, WA) | Mark Twain Elementary in Pasco launched a Spanish-English immersion program in 2019-20. It remains to be seen how this will affect the school's demographics. In the preceding years, from 2009 to 2020, the school saw a five-percentage-point decrease in its white population (29 to 24 percent) and a four-percentage-point increase in its Latino population ( 65 to 69 percent). The $E L$ population held steady at 29 percent. These trends-a slight decrease in white enrollment, a slight increase in Latino enrollment, and little change in the EL population share-largely mirror those of the Pasco School District over the past decade. |
| Mark Twain Dual Language Academy (San Antonio, TX) | Mark Twain Middle School in San Antonio was converted into Mark Twain Dual Language Academy in the 2017-18 school year. The new model was explicitly aimed at fostering socioeconomic integration and celebrating the city's rich linguistic and cultural heritage. ${ }^{43}$ From 2017 to 2020, the school nearly tripled, with the share of white families growing at a slightly faster rate and the share of low-income families dropped three percentage points (from 64 percent to 61 percent). To be sure, Mark Twain remained over 90 percent Latino. From 2017-20, the school's EL share grew eleven percentage points (from 34 to 45 percent). |

Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); DC Report Card Data,

Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/page/dc-school-report-card-re-source-library.

York City, Dallas, Los Angeles, Albuquerque, Portland, and Washington, D.C.

The numbers in Table 4 should be interpreted with caution. It is impossible to use these data to establish a clear relationship between DLI schools and changes in school demographics-
urban schools exist in complex social, cultural, and economic contexts. For instance, in the Los Angeles Unified School District (LAUSD), EL enrollment has dropped significantly in the past decade. In 2009-10, 31.2 percent of LAUSD students were ELs, while in 2019-20, just 20 percent were. ${ }^{44}$ By contrast, the district's share of white students has gone up

TABLE 5

DEMOGRAPHIC DLI TRENDS IN SELECTED CITIES, 2015-20

| Community* | Number of DLI Schools** | Number of DLI Schools with Decreasing EL Enrollment Share (2015-20) | Number of DLI Schools with Increasing White Enrollment Share (2015-20) | Number of DLI Schools with Larger Share of White Enrollment versus the District's (2019-20) |
| :---: | :---: | :---: | :---: | :---: |
| NYC | 176 | 107 | 94 | 37 |
| Dallas | 154 | 44 | 92 | 33 |
| Los Angeles | 147 | 133 | 108 | 16 |
| San Antonio | 121 | N/A | 61 | 37 |
| Albuquerque | 59 | N/A | 32 | 2 |
| Houston | 40 | N/A | 15 | 11 |
| Portland (OR) | 26 | N/A | 16 | 6 |
| San Francisco | 21 | 11 | 5 | 3 |
| San José | 18 | 11 | 6 | 6 |
| Washington, D.C. | 17 | 7 | 15 | 13 |
| Salt Lake City | 14 | 1 | 5 | 7 |
| Oakland | 12 | 10 | 5 | 1 |
| Orlando | 10 | N/A | 3 | 0 |
| Seattle | 10 | N/A | 6 | 0 |
| Miami | 7 | N/A | 3 | 3 |
| Charlotte (NC) | 7 | N/A | 2 | 4 |

* DLI charter schools are included with the school district where they operate. Also, some cities include multiple school districts-for this table, we have included all DLI schools within the city, even if they are not part of the same district. This means, for instance, that San Antonio ISD's DLI schools and Northside ISD's DLI schools with San Antonio addresses are both included in San Antonio's count of DLI schools, since both districts operate within the city of San Antonio.
** In some instances, schools have been omitted for incomplete data, and/or because they were not operating DLI schools during the full 2015-20 time period.
Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD).

FIGURE 3


[^2]
## TABLE 6

## SNAPSHOTS: GENTRIFYING DUAL-LANGUAGE IMMERSION SCHOOLS

| School | Description |
| :---: | :---: |
| P.S 180 Hugo Newman (Manhattan, NY) | P.S. 180 Hugo Newman has a Spanish-English dual-language immersion program in Manhattan. From 2009 to 2020, the school's white population share grew by eleven percentage points and its Latino population grew by five percentage points-while its African-American population dropped from 70 percent to 48 percent. Notably, the school's Latino enrollment share slightly increased, the total number of Latino students decreased. P.S 180 Hugo Newman is a five-minute walk from Columbia University, which has created ongoing gentrification pressures. |
| Mercer International Middle School (Seattle, Washington) | Mercer International is a middle school in Seattle, Washington offering language immersion in Spanish and Mandarin. Between 2009 and 2020, the school grew by roughly 50 percent, but its white enrollment share nearly tripled. By contrast, the Latino population share grew by just two percentage points, and its Asian population dropped ten percentage points. The school is located in South Seattle, recognized as Seattle's most diverse area. Yet, since 2010, the white population has grown steadily, perhaps contributing to the shifts in Mercer's demographics. ${ }^{46}$ |
| Dos Puentes Elementary <br> School (Manhattan, NYC) | When Dos Puentes Elementary launched its Spanish-English DLI program in the "Little Dominican Republic" section of Manhattan's Washington Heights neighborhood in 2013, two-thirds of the inaugural students were ELs. ${ }^{47}$ More than 80 percent of students were Latino and just over 15 percent were white. Over the next six years, the school grew dramatically, swelling to more than six times its original size. By 2020, fewer than one-third of Dos Puentes students were ELs, the Latino population share had decreased by six percentage points, and the white population had grown by four points. In 2013, nearly 80 percent of students were from low-income families, but by 2020 , just under two-thirds were. |

Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); DC Report Card Data, Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/page/dc-school-report-card-re-source-library.
from 8.9 percent in 2009-10 to 10.3 percent. ${ }^{45}$ In other words, it is not entirely surprising that some LAUSD DLI schools would see decreased EL enrollment and/or increased white enrollment.

Further, it bears repeating that DLI works best when it enrolls native speakers of each instructional language-English and the non-English partnerlanguage. In some communities, such as Dallas, the presence of more English-dominant students may be valuable for growing the two-way DLI programs that are optimal for ELs' success. The challenge, then, is for DLI schools and their surrounding districts to navigate shifting community demographics to facilitate linguistic-as well as racial, ethnic, and socioeconomic-integration without
allowing DLI schools to become colonized by privileged, English-dominant, often white families.

## Widespread DLI Access in Dallas, Texas

Dallas Independent School District (ISD) runs one of the country's largest district DLI programs. District leaders consider DLI to be their default method for supporting EL students' linguistic and academic development. Appropriately, then, in 2019, the district's 154 SpanishEnglish DLI schools enrolled nearly 45,000 of the district's 64,217 ELs. At the district level, Dallas' DLI programs provide an illustration of equitable access for ELs. While just 8 percent of U.S. ELs are enrolled in DLI, nearly 70 percent
of Dallas ELs are. On average, Dallas schools offering DLI programs enroll a higher percentage of ELs than the district at large. Further, the racial and ethnic demographics of Dallas' DLI schools closely track district demographics, with no student group over- or underrepresented by more than 2.5 percentage points. (See Figure 3.)

To be sure, Dallas benefits from several advantages unique to its district. Texas has maintained a bilingual education mandate for the state's ELs since 1973. ${ }^{48}$ Districts that enroll at least twenty ELs speaking a particular home language are required to launch and operate a bilingual education program in that language. ${ }^{49} \mathrm{~A}$ half century of mandatory statewide bilingual education has contributed to Texas' longstanding linguistic diversity, both in the state's preK-12 schools and its teacher training programs. Further, the state recently changed its EL funding formula, providing additional resources to districts that enrolled their ELs in DLI programs. ${ }^{50}$ These factors likely combine to create something like an educational "economy of scale," with large numbers of bilingual students, caregivers, teachers, and administrators across the state. This linguistic diversity-and state support-allows Dallas to pool significant amounts of EL-specific funding and makes these students a clear instructional priority in district language policies.

However, Dallas ISD does not enroll large numbers of white, wealthy, and/or English-dominant students. In 2019, more than 94 percent of Dallas ISD students were children of color and nearly 41 percent of students were classified as ELs. ${ }^{51}$ About 85 percent of students are economically disadvantaged. ${ }^{52}$ What's more, while Texas does not publish this information, data from states that do suggest that the former ELs student group is often nearly equivalent in size to the current ELs student group. ${ }^{53}$ As such, this suggests that at least an additional 25-30 percent of Dallas ISD students may be linguistically diverse former ELs-leaving Dallas with a relatively small percentage of English-dominant students.54

In other words, longstanding white flight from Dallas into surrounding suburbs-and now exurbs-has created a situation in which the district's DLI schools are limited to offering one-way DLI in a largely socioeconomically
segregated context. Dallas' DLI schools might benefit if they were able to enroll enough English-dominant children from the region's other school districts to be able to offer more linguistically integrated two-way DLI programs. ${ }^{55}$

## A Regional Case Study: Washington, D.C. and Its Suburbs

Washington, D.C. has a long tradition of bilingual education stretching back to the 1970s, when the local Latino community started the city's first dual-language program in an effort to maintain their linguistic roots. This campus, known as Oyster Bilingual School, was founded to better serve an influx of Salvadoran immigrants and refugees. ${ }^{56}$

The school is now Oyster-Adams Bilingual School, and it presents a complex equity picture for DLI access. In 2019-20, 28 percent of Oyster-Adams students were ELs, compared to just 12 percent of D.C. students, and 55 percent of students identify as Latino-compared to just 20 percent of D.C. students. (See Table 5.) As noted above, it is entirely appropriate for a Spanish-English DLI program to oversample for ELs and Spanish-dominant students, given the unique benefits these students gain from having their emerging bilingualism supported in DLI programs.

However, the relative linguistic diversity of Oyster-Adams' program may mask other access inequities. The school's white enrollment share is nearly triple the share for D.C., and its African-American enrollment share is vanishingly small at 4 percent-particularly in a city where nearly twothirds of students are African-American. Further, the school has become one of the most socioeconomically exclusive campuses in the District of Columbia. Nearly 50 percent of D.C. students are identified as "at-risk," meaning that (1) they are in the foster care system, (2) they are experiencing homelessness, or (3) their families qualify for Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP). ${ }^{57}$ By contrast, just 8 percent of students in Oyster-Adams' DLI program are classified as at-risk.

This paradox-a relatively linguistically diverse two-way

TABLE 7

STUDENT DEMOGRAPHICS FOR OYSTER-ADAMS AND WASHINGTON, D.C., 2019-20

| $\mathbf{2 0 1 9 - 2 0}$ | Oyster-Adams | Washington, D.C. |
| :--- | :---: | :---: |
| ELs | $28 \%$ | $12 \%$ |
| White | $34 \%$ | $12 \%$ |
| Latino | $55 \%$ | $20 \%$ |
| Black | $4 \%$ | $64 \%$ |
| Asian | $2 \%$ | $2 \%$ |
| At-risk | $8 \%$ | $47 \%$ |
| Students with disabilities | $12 \%$ | $17 \%$ |
| Homeless | $1 \%$ | $7 \%$ |
| Soure: 2020 |  |  |

Source: "2020 DC Report Card Data," Office of the State Superintendent of Education, accessed March 1, 2023, https:// osse.dc.gov/page/dc-school-report-card-resource-library.

DLI program serving a disproportionately white and wealthy student body-is likely linked to housing patterns. A majority of the students attending Oyster-Adams live in the surrounding Woodley Park neighborhood, a pricey enclave of wealthy families and ambassador residences. Average home prices in Woodley Park are just short of $\$ 1$ millionand they're approaching $\$ 2$ million for single-family homes. ${ }^{58}$

Similar housing pressures are influencing neighborhoods across Washington, D.C.-one of the country's fastest gentrifying cities. Real estate and housing data website Zillow indicates that the value of Washington, D.C. homes rose from $\$ 147,817$ in January 2000 to $\$ 435,365$ in November 2014, and to $\$ 655,099$ in June 2022. ${ }^{59}$

Unsurprisingly, other DLI schools in the city are moving in the same direction. Powell Elementary, once rated the secondbest Spanish-English bilingual school in the United States by the Spanish Embassy, has seen significant demographic shifts. ${ }^{60}$ In the past decade, the school's white population has climbed twelve percentage points alongside drops in its

African-American population (by nine percentage points) and Latino population (by six percentage points).

Notably, however, these are school-level data, and during these years, Powell was running a strand DLI program in a limited number of its classrooms. While data on the demographics of its DLI strand aren't publicly available, members of the community note that the strand is significantly whiter than the English-only part of the school. As such, the growth in the school's share of white, Englishdominant students-and the decreases in the AfricanAmerican population-are likely more pronounced in the DLI program itself.

It bears noting that the school has also shed low-income students during this period. From 2014 to 2019, the school's at-risk population dropped from 45 percent of students to 32 percent (see Figure 4). ${ }^{61}$ This remains considerably higher than Oyster-Adams, but it also lags Washington, D.C.'s rate (47 percent).

Since Powell and Oyster-Adams are neighborhood schools, their campus demographics are particularly susceptible to housing trends. Privileged families can essentially purchase access to their DLI programs through the housing market. Still, D.C. provides ample evidence that gentrification of DLI is not solely a product of housing patterns. Indeed, the city's charter schools enroll students through lotteries that do not weight students' applications according to their home
addresses. And yet, just under a mile away from Powell, the main campus of Latin American Montessori Bilingual Public Charter School (LAMB) has grown significantly whiter in the past decade (see Figure 5).

LAMB was founded in 2001 as Washington, D.C.'s only Spanish-language immersion Montessori school. Family demand for LAMB is high. After the 2020-21 enrollment

FIGURE 4

POWELL ELEMENTARY STUDENT DEMOGRAPHICS, 2009-2020


Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); DC Report Card Data, Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/page/dc-school-report-card-resource-library.

FIGURE 5

## LATIN AMERICAN MONTESSORI BILINGUAL PUBLIC CHARTER SCHOOL STUDENT DEMOGRAPHICS, 2011-2020



Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); DC Report Card Data, Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/page/dc-school-report-card-resource-library.
lottery, LAMB had more than 1,000 students on its waitlist. From 2015 to 2020, the share of Latino students in D.C. increased by roughly 5 percentage points, but LAMB saw a 22-point decrease (from slightly over 51 percent to just under 30 percent) in its Latino population. ${ }^{62}$ Meanwhile, the school's white population increased by 17 percentage points.

During that period, LAMB added more than 130 seats. And
yet, even with this expanded student body, LAMB enrolled fewer total Latino students in 2020 than it did in 2015 (from 175 down to 141). Expand the timeline and the demographic trends are even more pronounced-from 2009 to 2020, LAMB (1) grew from 172 to 479 students, (2) shrank its Latino student share from 58 percent to 30 percent, and (3) more than doubled its white student share from 21 percent to 43 percent.

# D.C. METRO REGION DLI STUDENT DEMOGRAPHICS VERSUS ALL SCHOOL 

STUDENT DEMOGRAPHICS

|  | African-American | Latino | White | Asian | Two or More <br> Races | ELL |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| All D.C. Metro <br> Region schools | $41 \%$ | $30 \%$ | $17 \%$ | $7 \%$ | $3 \%$ | $18 \%$ |
| D.C. Metro Re- <br> gion DLI schools | $32 \%$ | $40 \%$ | $19 \%$ | $6 \%$ | $3 \%$ | $23 \%$ |

Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); DC Report Card Data, Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/page/dc-school-report-card-re-source-library.

As noted above, a full picture of the demographics of D.C.'s neighborhood and charter school DLI programs should be measured against their regional context. Table 6 shows the DLI demographics for the D.C. Metro Region (including D.C. Public Schools, D.C. charter schools, Montgomery County Public Schools, Prince George's Public Schools, and Arlington Public Schools). Several patterns stand out. First, given that most of the region's DLI programs are SpanishEnglish, it's appropriate that Latino students make up a larger share of regional DLI enrollment. It's also encouraging that ELs make up a disproportionately larger share of DLI enrollment. However, it bears noting that the regional EL enrollment in DLI is just 8,111 in a region with nearly 75,000 ELs-meaning just 11 percent of D.C.-area ELs were enrolled in DLI in 2019-20 (See Table 10). Further, Table 8 shows that white students are somewhat overrepresented in DLI, while African-American students are significantly underrepresented.

A look at the district-level DLI demographics helps explain this regional picture (see Table 9). African-American students are heavily underrepresented in DLI programs in D.C. and slightly underrepresented in Montgomery County Public Schools (Maryland). They are slightly overrepresented in Prince George's County (Maryland) and Arlington County (Virginia).

Access to DLI programs in different parts of the region's
educational ecosystem depends on a host of interrelated variables, including proximity, historical housing policy choices, DLI locations, school enrollment patterns, and infrastructure investments. For instance, Washington, D.C. and its suburbs are shaped both by waves of white flight from the mid-twentieth century and more recent gentrification trends. These-and other-historical trends made Prince George's County one of the country's largest middle-class African-American communities. They also contributed to the concentration of Spanish-speaking Latino immigrants in part of Montgomery County, Maryland.

Advancing equitable access to DLI, then, requires attending to both neighborhood and district, local and regional, and urban and suburban contexts. In D.C., for instance, gentrification is displacing ELs, children of color, and lowincome residents from neighborhoods like Oyster-Adams' and Powell's. In response, DC Public Schools has permitted leaders at these (and similar DLI) campuses to reserve large shares of their pre-K seats for Spanish-dominant children-including those who live outside the surrounding neighborhood. To date, DCPS DLI principals have generally only used this flexibility for enrolling their pre-K programs, meaning that their kindergarten enrollments are generally filled with children whose families can afford to purchase guaranteed access through the housing market in those neighborhoods. For instance, Oyster-Adams reserved 35 of its 38 pre-K seats for Spanish-dominant children in 2021-

TABLE 9

## D.C. METRO REGION DLI STUDENT DEMOGRAPHICS VERSUS ALL SCHOOL STUDENT DEMOGRAPHICS, DISAGGREGATED BY DISTRICT

|  | African- <br> American | Latino | White | Asian | Two or More <br> Races | ELL |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| D.C. <br> demographics | $62.59 \%$ | $16.21 \%$ | $11.97 \%$ | $1.47 \%$ | $2.58 \%$ | $9.99 \%$ |
| D.C. DLI <br> demographics | $34.15 \%$ | $47.39 \%$ | $17.87 \%$ | $2.46 \%$ | $5.56 \%$ | $29.02 \%$ |
| Montgomery <br> County <br> demographics | $21.41 \%$ | $32.42 \%$ | $26.89 \%$ | $14.14 \%$ | $4.87 \%$ | $17.08 \%$ |
| Montgomery <br> County DLI demo- <br> graphics | $20.27 \%$ | $39.21 \%$ | $24.39 \%$ | $10.68 \%$ | $1.96 \%$ | $21.18 \%$ |
| Prince George's <br> County <br> demographics | $55.16 \%$ | $36.50 \%$ | $3.90 \%$ | $2.68 \%$ | $1.27 \%$ | $21.79 \%$ |
| Prince George's <br> County DLI demo- <br> graphics | $55.65 \%$ | $29.57 \%$ | $7.94 \%$ | $2.79 \%$ | $1.50 \%$ | $16.80 \%$ |
| Arlington <br> demographics | $10.10 \%$ | $28.28 \%$ | $45.14 \%$ | $9.08 \%$ | $7.16 \%$ |  |
| Arlington DLI <br> demographics | $13.71 \%$ | $44.99 \%$ | $29.03 \%$ | $6.61 \%$ | $5.33 \%$ | $21.32 \%$ |

Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); DC Report Card Data, Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/page/dc-school-report-card-resource-library.
22. In all subsequent grades, the housing market dictated access, and DC Public Schools lottery data indicate that Oyster-Adams admitted zero students from outside its neighborhood in any other grade. ${ }^{63}$
D.C. law prohibits charter schools from reserving seats for students based on their language dominance. However, the D.C. Council recently permitted charter schools to opt into tilting their enrollments toward students who are homeless, in the foster system, and/or who qualify for social assistance programs. Just eleven schools chose to weight their lotteries toward these students in 2022, including only two duallanguage schools. ${ }^{64}$ At present, it is too early to gauge how
this will impact the demographics of D.C.'s charter school DLI programs.

But these city-specific policies, while relevant, must also be considered in light of the broader regional DLI context. For instance, the gentrification of D.C.'s neighborhoods and schools impacts the surrounding area. Many of the ELs and their families displaced from schools such as Powell, LAMB PCS, and so forth may continue to live in the region.

Indeed, the linguistic diversity of D.C.'s suburbs has grown in recent years. ${ }^{65}$ This may be creating new regional access inequities. For instance, while the 9,440 ELs in D.C. schools

## D.C. METRO REGION EL AND DLI ENROLLMENT

| Total ELs | ELs in DLI | Percentage <br> of Region's <br> ELs | Percentage <br> of ELs in DLI | Percentage of Region's <br> ELs in DLI |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Washington, D.C. | 9,440 | 3,107 | $13 \%$ | $33 \%^{*}$ | $38 \%$ |
| Arlington | 5,086 | 1,087 | $7 \%$ | $21 \%$ | $13 \%$ |
| Montgomery <br> County | 28,231 | 2,537 | $39 \%$ | $9 \%$ | $31 \%$ |
| Prince George's <br> County | 29,625 | 1,380 | $41 \%$ | $5 \%$ | $17 \%$ |
| Region | 72,382 | 8,111 | $100 \%$ | $11 \%$ |  |

*Note: this calculation of the share of the District of Columbia's ELs enrolled in DLI differs slightly from the share reported in Table 2 because of differences in the underlying databases. Table 2 relies upon aggregated state ELs and DLI data reported to and published by the U.S. Department of Education, while the data presented in Table 8 are aggregated from our database tracking campus-specific DLI enrollment data.

Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); DC Report Card Data, Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/page/dc-school-report-card-resource-library.
represent just 13 percent of the region's ELs, the 3,107 ELs enrolled in D.C.'s DLI schools represent 38 percent of the region's ELs enrolled in DLI schools. That is, while D.C. has the second-smallest EL population among the region's school districts, it has the highest number of ELs enrolled in DLI schools.

As these families are gentrified out of Washington, D.C., will they find similar levels of DLI access in surrounding communities? Perhaps not. For instance, Prince George's County Public Schools enrolls 29,625 ELs, more than three times as many as D.C., but only enrolls 1,380 of those ELs in DLI. This means that, despite its much larger EL population, Prince George's County enrolls disproportionately fewer of them in its schools offering DLI. Indeed, while D.C.'s twentyfour DLI campuses may be gentrifying, Prince George's County Public Schools only operate roughly half as many
programs. Further, while Montgomery County Public Schools' EL enrollment is also much larger than D.C.'s (and similar to Prince George's County's), it also enrolls fewer ELs in DLI schools.

## Reforms to Improve Equitable Access to DLI

DLI programs can be a powerful tool to advance equity and improve outcomes for ELs while also serving as a lever to increase schools' linguistic, socioeconomic, racial, and ethnic diversity. And yet, without structural guardrails, privileged enthusiasm for multilingual instruction can undermine DLI programs' equity potential.

Protecting equitable DLI access will necessarily vary by location. As noted above, communities vary widely in the
particulars of their ELenrollments, community demographics (and demographic trends), bilingual teacher pipelines, state DLI investments, and much more. There simply cannot be a single, standardized definition of equitable access to DLI across these differing contexts. However, nearly all communities have policy levers available for protecting these principles in their DLI programs. Some of the primary tools and considerations are discussed below.

## How to Equitably Expand Access to Dual-Language Immersion

The ending of English-only instructional mandates in California (2016) and Massachusetts (2017) codified an ongoing cultural and political shift toward valuing ELs' emerging bilingualism. The rapid growth in DLI programs in the past ten to fifteen years is further evidence of greater public acceptance of-and demand for-more bilingual learning opportunities in public schools. Some states-North Carolina, Utah, Delaware, and others-have responded to this moment with statewide grant programs providing applicant schools with funding to design and launch new DLI programming.

Nonetheless, any efforts-even with supporting public resources-to expand DLI programming quickly run into a key limiting variable: the resounding monolingualism of the American teaching force. Just one in eight American teachers speaks a non-English language at home. ${ }^{66}$ Of that roughly 12 percent sliver of teachers who are linguistically diverse, many are not trained or credentialed to provide the academic instruction in non-English languages-the central offering of DLI programs. Predictably, then, many states experience persistent shortages of bilingual teachers, and DLI administrators around the country regularly identify the limited supply of bilingual educators as the key obstacle to growing their programs. ${ }^{67}$

The limited supply of bilingual educators is the result of the English-only nature of most American teacher training, credentialing, and licensing systems. Notwithstanding bilingual education's deep historical roots, most preK-12 schools have long prioritized English language acquisition
to the exclusion of other languages. ${ }^{68}$ This has produced what a recent American Academy of Arts and Science's Commission on Language Learning report describes as a "stubbornly monolingual" adult population. ${ }^{69}$ Young adults interested in working as teachers generally encounter English-only preK-12 settings and post-secondary training, and are required to pass English-language teacher licensure exams before being permitted to work in their state's public schools. Research suggests that these monolingual training and licensure systems present significant, systemic obstacles to linguistically diverse teacher candidates (as well as racially and ethnically diverse teacher candidates). ${ }^{\circ 0}$

And yet, DLI programs appear to nonetheless be growing in number. Some districts-and states-staff DLI programs through J-1 guest teacher visas, which allow educators from other countries to teach in the United States for three to five years. And yet, while this approach can solve short-term DLI staffing challenges, it also renders DLI teacher turnover inevitably high. What's more, it forces local education officials to manage international teacher recruitment processesand/or to pay "finders fees" to intermediary recruiters helping teachers to navigate these processes.

As such, DLI leaders across the country are exploring a range of alternative teacher training and certification programs. These take various forms. For instance, Portland Public Schools' Dual Language Teacher Residency program is open to adults with bachelor's degrees and proficiency in one of the district's DLI languages. Participants gain a provisional Oregon teaching license and are able to immediately serve as DLI teachers while simultaneously enrolling in one of Portland's traditional teacher training programs." By contrast, a group of California counties, San Diego State University, and Feather River College are coordinating to provide remote teacher training programswith particular attention to preparing bilingual educators. ${ }^{72}$ In other communities, school districts are building pathways for bilingual students from the education tracks within their career and technical education programs to nearby colleges of education. Various alternative teacher training and certification programs, such as teacher residency and apprenticeship models, are also common.

## Recommendations

There are several steps policymakers can take in order to grow bilingual teacher training programs and equitably expand access to dual-language immersion programs.

- State and federal leaders should establish competitive grants programs to support districts and schools interested in designing and implementing new DLI programs and/or expanding existing programs.
- State leaders should establish provisional teacher licenses that allow adults with bachelor's degrees and native proficiency in non-English languages to teach in DLI classrooms. State policies should provide multiple pathways with significant resources and flexibility so that provisionally-licensed bilingual teacher candidates can then secure long-term licensure. These could include (1) enrolling in additional teacher preparation coursework, (2) successful completion of apprenticeship with a master DLI teacher, or (3) some other equivalent approach.
- School districts should engage with nearby teacher training programs to identify their DLI staffing needs and launch "grow-your-own" programs specifically tailored to preparing a supply of local educators to fill those roles.
- Federal and state leaders should invest in launching or expanding DLI teacher training tracks in existing traditional and alternative teacher training programs.


## Where to Expand Access to <br> Dual-Language Immersion

The bulk of American children are assigned to schools based on their family's residential address. ${ }^{73}$ As such, when deciding where to launch-or grow-new DLI programs, local education leaders should prioritize campuses in diverse neighborhoods where it is possible to launch linguistically integrated two-way DLI. Perfect enrollment balance between native speakers of English and native speakers may not be possible in every community, neighborhood, or school, but districts should still prioritize equitable access to DLI for ELs.

In racially, ethnically, and socioeconomically diverse communities, leaders should ensure that their DLI programs do not disproportionately exclude members of other historically marginalized student groups-including students with disabilities. The rising diversity of American neighborhoods makes it possible for most districts to prioritize locating DLI programs in intersectionally diverse settings. ${ }^{\text {4 }}$

Districts can use DLI as part of a strategy to create diverse campuses-even in the presence of housing segregation. Some school districts, such as North Carolina's CharlotteMecklenburg Schools and Wake County Public Schools, have already built DLI programs into their choice-based school desegregation plans. By reserving seats at DLI schools for students from outside their immediate neighborhoodsand providing transportation support-these systems have designed diverse campuses and more equitable access into their DLI programs. ${ }^{75}$ Notably, these districts also set enrollment priorities aimed at reducing concentrated poverty in their DLI (and other magnet) schools. ${ }^{76}$

Location and transportation support don't only matter for new DLI programs, of course. Local education leaders should attend to changing demographic trends in their existing DLI schools as well. For instance, consider a small half-school DLI "strand" program that grows popular with privileged, English-dominant families, reducing available DLI seats for ELs. To address this, the district could bring supply closer to demand by expanding the program to all classrooms in the school.

And yet, in some communities-particularly in rapidly gentrifying urban areas-these sort of DLI program expansions can spur further displacement of marginalized communities. For example, James John Elementary in Portland, Oregon launched a Spanish-English duallanguage immersion program in 2014. From 2015 to 2020, the school's white population increased by twelve percentage points and its Latino population decreased by seven percentage points. In Washington, D.C., meanwhile, African-American families have pushed back against some of the district's DLI expansion proposals, claiming that these
programs could hasten and/or entrench gentrification of their communities."

Without policies to ensure fair access for ELs, families of color, and other historically marginalized groups, it is possible that new DLI seats will disproportionately go to families most able to purchase nearby housing, most able to navigate complex new lottery and enrollment processes, and/or most willing to pressure district leadership to reserve seats for their children. That is, without intentional safeguards, DLI can act as an accelerant for campus colonization and neighborhood gentrification.

Relatedly, school and district efforts to advance equitable DLI access can sometimes backfire if they make school enrollment overly complex or burdensome for families. If families have grown accustomed to expecting that their only school option is to attend their neighborhood school, they will need proactive communication from local education leaders about changes and/or about other bilingual learning opportunities that may be newly available.

This can be particularly important for children of immigrants or families who speak a non-English language at home. Research has shown that linguistically and culturally diverse families sometimes take time to develop institutional knowledge required to navigate U.S. institutions, including public schools. ${ }^{78}$

Any efforts to improve equitable access to new or expanding DLI programs should include targeted communications to linguistically, racially, ethnically, and socioeconomically diverse communities. For instance, all DLI enrollment processes should be designed to be accessible to families who (1) are non-native speakers of English, (2) do not have regular access to the Internet and/or email addresses, and/ or (3) may need assistance completing their applications for other reasons. Whenever possible, DLI enrollment applications should be unified into a single system, so that families can apply to multiple programs at once, and application windows should remain open for significant periods of time-with DLI seats never allocated through a "first-come, first-served" process, as such methods only
exacerbate inequities.

Further, as states invest in expanding access to multilingual schooling, policymakers must prioritize equitable DLI access for communities with significant EL populations. Since research suggests that these programs are particularly key for these emerging bilingual children, equitable state DLI investments will necessarily devote many more resources to schools, districts, and regions serving higher shares of ELs.

In sum, investments in growing local-and state-supply of DLI seats can help make DLI more widely accessible. What's more, equity-minded analysis that locates new DLI programs or DLI expansions in diverse communities and neighborhoods can help extend access to a wider range of students. Thoughtful school transportation policies can also support this objective.

## Recommendations

There are several ways that policymakers can expand access to dual-language immersion where and how it makes the most sense.

- State leaders should prioritize new DLI investments in communities with the largest shares of ELs, particularly those that speak the non-English partner language.
- Local leaders should prioritize linguistically integrated, two-way DLI programs in their school systems by reserving half of DLI seats for native speakers of DLI programs' non-English partner language. State leaders should set clear definitions for what qualifies as a twoway DLI program, and should prioritize expanding access to these programs in state DLI funding.
- Local leaders should ensure that new DLI programs are located in diverse schools and neighborhoods whenever possible. This is particularly critical for neighborhood DLI programs that will give enrollment preference to students who live nearby.
- Local leaders should ensure that DLI enrollment lotteries are designed to provide equitable access for families of ELs and other linguistically diverse families. This can be achieved through reserving seats for ELs, conducting
parallel lotteries for native speakers of each of the two DLI languages, or giving a preferential weighting in enrollment lotteries for ELs and/or speakers of the nonEnglish partner language.
- Local leaders should, when necessary, provide school transportation options that make it possible to achieve enrollment that creates diverse DLI settingsparticularly linguistically integrated two-way DLI programs.
- Local leaders should require all DLI programs to prioritize native speakers of programs' non-English partner languages when backfilling DLI seats to replace students who leave the program.
- Local leaders should conduct targeted outreach about DLI enrollment options to immigrant communities and linguistically, racially, ethnically, and socioeconomically diverse communities. These communications should be translated into all languages spoken in the community, and be transmitted through multiple outreach channels-mail, text, emails, and school communication applications.


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## Notes

1 "Age by Language Spoken at Home for the Population 5 Years and Over," Table C16007, U.S. Census Bureau, American Community Survey 1-Year Estimates, 2021, https://data.census.gov/cedsci/ table? $\mathrm{g}=\mathrm{C} 16007 \& \mathrm{~g}=0100000$ US\&tid=ACSDT1Y2021.C16007; "Our Nation's English Learners," U.S. Department of Education, accessed September 9, 2022, https://www2.ed.gov/datastory/el-characteristics/index.htm|\#three.
2 "Our Nation's English Learners," U.S. Department of Education, accessed September 9, 2022, https://www2.ed.gov/datastory/el-characteristics/index. htm|\#one; U.S. Department of Education, National Center for Education Statistics, EDFacts file 141, Data Group 678, extracted September 18, 2020, from the EDFacts Data Warehouse (internal U.S. Department of Education source); and "State Nonfiscal Survey of Public Elementary and Secondary Education," Common Core of Data (CCD), 2008-09 through 2018-19, https://nces.ed.gov/programs/digest/ d18/tables/dt18_204.27.asp; Promoting the Educational Success of Children and Youth Learning English: Promising Futures (Washington, D.C.: The National Academies Press, 2017), 74, 81-2, https://www.nap.edu/read/24677/chapter/5\#81; Patricia Gándara and Jongyeon Ee, "U.S. Immigration Enforcement Policy and Its Impact on Teaching and Learning in the Nation's Schools" Working Paper, February 28, 2018, UCLA Civil Rights Project, https://www.civilrightsproject.ucla. edu/research/k-12-education/immigration-immigrant-students/u.s.-immigration-enforcement-policy-and-its-impact-on-teaching-and-learning-in-the-nations-schools/lmmigration-enforcement-on-schools-093018.pdf.
3 Conor P. Williams, "The Intrusion of White Families Into Bilingual Schools," The Atlantic Monthly, December 28, 2017, https://www.theatlantic.com/education/ archive/2017/12/the-middle-class-takeover-of-bilingual-schools/549278/.
4 The states included are: Arizona, California, Florida, Georgia, Maryland, North Carolina, New Mexico, New York, Oregon, Pennsylvania, Texas, Utah, Washington, and the District of Columbia.
5 "Age by Language Spoken at Home for the Population 5 Years and Over," Table C16007, U.S. Census Bureau, American Community Survey 1-Year Estimates, 2021, https://data.census.gov/cedsci/ table? $\mathrm{g}=\mathrm{C} 16007 \& \mathrm{~g}=0100000$ US\&tid=ACSDT1Y2021.C16007.
6 "Our Nation's English Learners," U.S. Department of Education, accessed September 9, 2022, https://www2.ed.gov/datastory/el-characteristics/index. htm|\#three; "Using Data to Support the Full and Effective Participation of Children Who Are Dual Language Learners (DLLs) and Their Families," U.S. Department of Health and Human Services, Administration of Children and Families, accessed January 13, 2022, https://eclkc.ohs.acf.hhs.gov/culture-language/article/dual-language-learners-head-start-visual-guide.
7 "Our Nation's English Learners," U.S. Department of Education, accessed September 9, 2022, https://www2.ed.gov/datastory/el-characteristics/index. htm|\#one; U.S. Department of Education, National Center for Education Statistics, EDFacts file 141, Data Group 678, extracted September 18, 2020, from the EDFacts Data Warehouse (internal U.S. Department of Education source); and "State Nonfiscal Survey of Public Elementary and Secondary Education," Common Core of Data (CCD), 2008-09 through 2018-19, https://nces.ed.gov/programs/digest/ d18/tables/dt18_204.27.asp; Promoting the Educational Success of Children and Youth Learning English: Promising Futures (Washington, D.C.: The National Academies Press, 2017), 74, 81-2, https://www.nap.edu/read/24677/chapter/5\#81; Patricia Gándara and Jongyeon Ee, "U.S. Immigration Enforcement Policy and Its Impact on Teaching and Learning in the Nation's Schools" Working Paper, February 28, 2018, UCLA Civil Rights Project, https://www.civilrightsproject.ucla. edu/research/k-12-education/immigration-immigrant-students/u.s.-immigration-enforcement-policy-and-its-impact-on-teaching-and-learning-in-the-nations-schools/lmmigration-enforcement-on-schools-093018.pdf.
8 Diana Quintero and Michael Hansen, "As We Tackle School Segregation, Don't Forget About English Learner Students," The Brookings Institution, January 14, 2021, https://www.brookings.edu/blog/brown-center-chalkboard/2021/01/14/as-we-tackle-school-segregation-dont-forget-about-english-learner-students.
9 A note on terminology: there is no field consensus on the appropriate term-or terms-to refer to linguistically diverse students in U.S. public education. Head Start refers to these students as "dual language learners," or DLLs, to reflect the fact that younger learners begin the process of learning English as they continue to develop early levels of proficiency in their native languages. Most federal policies related to these children refer to them as "English learners," or ELs, which is a marked improvement from older, deficit-laden terms like "Limited English Proficient." Some local and state school systems have adopted more asset-based terminology that better convey the value of children's native languages, such as "Multilingual

Learners" or "Emergent Bilinguals." While we agree that these terms provide more affirming descriptions of these children's linguistic development, we follow the National Academies of Science, Engineering, and Medicine's 2017 consensus report in using the federal terms-EL and DLL. Because this project covers a national scope and is predominantly built from federal education databases, these terms provide a common vocabulary for referring to this diverse student group. See, for example, Promoting the Educational Success of Children and Youth Learning English: Promising Futures, (Washington, D.C.: The National Academies Press, 2017), 16, https://nap.nationalacademies.org/read/24677/chapter/3\#16. 10 Elementary and Secondary Education Act, 20 U.S. Code (2015) § 7801.
11 Conor P. Williams, "New Studies Hint at Clearer Ways to Measure English Learners' Performance," The Century Foundation, February 20, 2020, https:/L tcf.org/content/commentary/new-studies-hint-clearer-ways-measure-english-learners-performance.
12 Marisa de la Torre, Alyssa Blanchard, Elaine M. Allensworth, and Silvana Freire, "English Learners in Chicago Public Schools: A New Perspective," University of Chicago Consortium on School Research, December 2019, https://consortium. uchicago.edu/sites/default/files/2019-12/English\ Learners\ in\ CPS-Dec2019-Consortium.pdf; Karen D. Thompson, Dr. Ilana Umansky, and Dr. Josh Rew, "Policy Brief: Better Understanding Outcomes for English Learners," Oregon Department of Education/Oregon State University English Learner Partnership, December 2019, https://osu-wams-blogs-uploads.s3.amazonaws.com/blogs. dir/2267/files/2019/12/CurrentFormerEverNeverPolicyBriefFinal.pdf.
13 Kate Menken and Tatyana Kleyn. "The Difficult Road for Long-Term English Learners," Educational Leadership 66, no. 7 (April 2009): 26-29, https://www.ascd. org/el/articles/the-difficult-road-for-long-term-english-learners; Angela Johnson, "The Impact of English Learner Reclassification on High School Reading and Academic Progress," Educational Evaluation and Policy Analysis 42, no. 1 (2020): 46-65.
14 Promoting the Educational Success of Children and Youth Learning English: Promising Futures, (Washington, D.C.: The National Academies Press, 2017), 126, 244-45, https://nap.nationalacademies.org/read/24677/chapter/1.
15 Conor P. Williams, "The Intrusion of White Families Into Bilingual Schools," The Atlantic Monthly, December 28, 2017, https://www.theatlantic.com/education/ archive/2017/12/the-middle-class-takeover-of-bilingual-schools/549278/.
16 Promoting the Educational Success of Children and Youth Learning English: Promising Futures, (Washington, DC: The National Academies Press, 2017), 280, https://nap.nationalacademies.org/read/24677/chapter/9\#280.
17 Jennifer L. Steele, Robert O. Slater, Gema Zamarro, Trey Miller, Jennifer Li, Susan Burkhauser, Michael Bacon, "Effects of Dual-Language Immersion Programs on Student Achievement: Evidence From Lottery Data," American Educational Research Journal 54, no. 1S, (April 2017): 282S-306S, https://journals.sagepub. com/doi/abs/10.3102/0002831216634463.
18 Ilana M. Umansky and Sean F. Reardon, "Reclassification Patterns among Latino English Learner Students in Bilingual, Dual Immersion, and English Immersion Classrooms," American Educational Research Journal 51, no. 5 (October 2014): 879-912.
19 Rachel A. Valentino and Sean F. Reardon, "Effectiveness of Four Instructional Programs Designed to Serve English Language Learners: Variation by Ethnicity and Initial English Proficiency," Educational Evaluation and Policy Analysis 37, No. 4 (December 2015): 612-637.
20 Andrew Bibler, "Dual Language Education and Student Achievement" Education Finance and Policy 16, no. 4 (Fall 2021): 634-58, 652.
21 Jennifer L. Steele, Johanna Watzinger-Tharp, Robert O. Slater, Gregg Roberts, Karl Bowman, "Achievement Effects of Dual Language Immersion in One-Way and Two-Way Programs: Evidence from a State Scale-Up in Utah," working paper, https://jensteele1.github.io/files/Utah_2021April26.pdf.
22 "State Nonfiscal Survey of Public Elementary/Secondary Education," 2010-11, 2019-20, and 2020-21,U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), https://nces.ed.gov/ programs/digest/d21/tables/dt21_203.70.asp; Jennifer L. Steele, Johanna Watzinger-Tharp, Robert O. Slater, Gregg Roberts, Karl Bowman, "Achievement Effects of Dual Language Immersion in One-Way and Two-Way Programs: Evidence from a State Scale-Up in Utah," working paper, https://jensteele1.github. io/files/Utah_2021April26.pdf.
23 Promoting the Educational Success of Children and Youth Learning English: Promising Futures, (Washington, DC: The National Academies Press, 2017), 119, 123, https://nap.nationalacademies.org/read/24677/chapter/6\#123.
24 U.S. Department of Education, National Center for Education Statistics, EDFacts file 141, Data Group 678, extracted March 31, 2021, from the EDFacts Data Warehouse (internal U.S. Department of Education source); and Common

Core of Data (CCD), "State Nonfiscal Survey of Public Elementary and Secondary Education," 2008-09 through 2019-20, https://nces.ed.gov/programs/digest/d21/ tables/dt21 _204.27.asp.
25 Code of Federal Regulations, title 45 (2016), $\$ 1302.90(d)(2):$ https: $/ /$ www ecfr.gov/current/title-45/subtitle-B/chapter-XIII/subchapter-B/part-1302\#p1302.90(d)(2), 113.

26 Allison H. Friedman-Krauss, W. Steven Barnett, G.G. Weisenfeld, Richard Kasmin, Nicole DiCrecchio, Michelle Horowitz, The State of Preschool 2017; State Preschool Yearbook (New Brunswick, N.J.: National Institute for Early Education Research, Rutgers University, 2017), 33-4, https://nieer.org/wp-content/ uploads/2019/02/State-of-Preschool-2017-Full-2-13-19_reduced.pdf.
27 Patricia Gándara, "The Gentrification of Two-Way Dual Language Programs: A Commentary," Language Policy 20, no. 3 (September 2021), 525-30; https://doi. org/10.1007/s10993-021-09595-z
28 Laurie Olsen, "The Role of Advocacy in Shaping Immigrant Education: A California Case Study," Teachers College Record 111, no. 3 (March 2009): 817-850, 820, 846.
29 See also Conor P. Williams, "Who-and What-Is Bilingual Education For in the Twenty-First Century?" The Century Foundation, October 30, 2019, https://tcf. org/content/commentary/bilingual-education-twenty-first-century/.
30 "CA Education for a Global Economy Initiative," California Department of Education, accessed April 7, 2023; "LOOK Act," Massachusetts Department of Elementary and Secondary Education, accessed April 7, 2023, https://www.doe. mass.edu/ele/look-act.html.
31 Jonathan Zabala, "How Texas Is Funding the Expansion of Dual Language Programs," The Century Foundation, April 12, 2022, https://tcf.org/content/ commentary/how-texas-is-funding-the-expansion-of-dual-language-programs/.
32 Kelsey Mo, "Arizona Lawmakers Make Efforts to Remove English Only Education," Arizona Mirror, May 14, 2019, https://www.azmirror.com/2019/05/14/ new-law-changes-how-english-language-learners-are-taught-but-what-comesnext/.
33 Conor Williams, "The Middle-Class Intrusion into Bilingual Education," The Atlantic Monthly, December 28, 2017, https:/|www.theatlantic.com/education/ archive/2017/12/the-middle-class-takeover-of-bilingual-schools/549278/; Teresa Watanabe, "Dual-language Immersion Programs Growing in Popularity," Los Angeles Times, May 8, 2011, http://articles.latimes.com/2011/may/08/local/la-me-bilingual-20110508; Jay Parkes, "Who Chooses Dual Language Education For Their Children and Why," International Journal of Bilingual Education and Bilingualism 11, no. 6 (2008): 635-60, http://dx.doi.org/10.1080/13670050802149267; Melanie Asmar, "A once-segregated Denver school fights to stay integrated 50 years after historic court order," Chalkbeat Colorado, January 16, 2023, https::/co.chalkbeat. org/2023/1/16/23552379/denver-public-schools-integration-desegregation-busing-wilfred-keyes-case-stedman-elementary.
34 Tara García Mathewson, "How Discrimination Nearly Stalled a Dual-Language Program in Boston," The Atlantic Monthly, April 7, 2017, https://www.theatlantic. com/education/archive/2017/04/how-discrimination-nearly-prevented-a-dual-language-program-in-boston/522174).
35 The states included are: Arizona, California, Florida, Georgia, Maryland, North Carolina, New Mexico, New York, Oregon, Pennsylvania, Texas, Utah, Washington, and the District of Columbia.
36 DualLanguageSchools.org, https://duallanguageschools.orgl, accessed March 7, 2023.
37 "2021 Canvass of Dual Language and Immersion (DLI) Programs in U.S. Public Schools," American Councils Research Center, American Councils for International Education, October 2021, https://www.americancouncils.org/sites/default/files/ documents/pages/2021-10/Canvass\%20DLI\%20-\%20October\%202021-2 ac.pdf. 38 "World Language Immersion Program Prepares To Launch," Delaware Department of Education, press release, August 1, 2012, https://news.delaware. gov/2012/08/01/world-language-immersion-program/.
39 "QuickFacts: San Antonio city, Texas," U.S. Department of Commerce, Bureau of the Census, retrieved March 14, 2023, https://www.census.gov/quickfacts/fact/ table/sanantoniocitytexas/PST045222; U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey," 2018-19 v.1a, 2021-22 v.1a; "Public Elementary/Secondary School Universe Survey," 2018-19 v.1a; Texas Education Agency, Snapshot 2019 District Detail: San Antonio ISD, accessed March 1, 2023. 40 "DC Schools Report Card, 2021-22," Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/dcschoolreportcard/ student-enrollment.
41 "The Benefits of Socioeconomically and Racially Integrated Schools and Classrooms," The Century Foundation, April 20, 2019, https://tcf.org/content/
facts/the-benefits-of-socioeconomically-and-racially-integrated-schools-andclassrooms.
42 Ramon C. Cortines, "Recommended Plan for the Mandarin Foreign Language Immersion Program at Broadway Elementary School and the Construction Project at Mark Twain Middle School," memorandum, Office of the Superintendent, Los Angeles Unified School District, May 26, 2015, http://www.laschoolreport.com// wp-content/uploads/2015/05/Cortines-letter-Mark-Twain.pdf.
43 Beth Hawkins, "In Texas, School Integration that Celebrates Family Heritage," The 74 Million, September 30, 2018, https://www.the74million.org/article/in-texas-school-integration-that-celebrates-family-heritage/.
44 Ed-Data: Education Data Partnership, California Department of Education, EdSource, Fiscal Crisis and Management Assistance Team/California School Information Services, accessed November 11, 2022, http://www.ed-data.org/ district/Los-Angeles/Los-Angeles-Unified.
45 Ed-Data: Education Data Partnership, California Department of Education, EdSource, Fiscal Crisis and Management Assistance Team/California School Information Services, accessed November 11, 2022, http://www.ed-data.org/ district/Los-Angeles/Los-Angeles-Unified.
46 Gene Balk, "As South Seattle Gentrifies, White People Become Largest Racial Group," Seattle Times, September 16, 2019, https://www.seattletimes.com/seattle-news/data/as-south-seattle-gentrifies-white-people-become-largest-racialgroup/.
47 Elizabeth A. Harris, "Dual-Language Programs Are on the Rise, Even for Native English Speakers," New York Times, October 8, 2015, https://www.nytimes. com/2015/10/09/nyregion/dual-language-programs-are-on-the-rise-even-for-native-english-speakers.html.
48 Rodolfo Rodríguez, "Bilingual Education," Texas State Historical Association, accessed March 1, 2023, https://www.tshaonline.org/handbook/entries/bilingualeducation.
49 "Frequently Asked Questions, Texas Education Agency, January 2023, https:/1/ tea.texas.gov/sites/default/files/faq-lpac-and-emergent-bilingual-students. pdf\#page= 14 .
50 Jonathan Zabala, "How Texas Is Funding the Expansion of Dual Language Programs," The Century Foundation, April 12, 2022, https://tcf.org/content/ commentary/how-texas-is-funding-the-expansion-of-dual-language-programs/. 51 "Local Education Agency (School District) Universe Survey," 2018-19 v.1a, 2021-22 v.1a, U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD).
52 Dallas ISD Evaluation and Assessment, Office of Institutional Research, "201920 Data Packet," July 24, 2019, 12, https://mydata.dallasisd.org/docs/CILT2020/ DP1000.pdf\#page=12.
53 "2019-20 Enrollment by English Language Acquisition Status (ELAS) and Grade: Statewide Report," California Department of Education, Data Reporting Office, https://dq.cde.ca.gov/dataquest/longtermel/ELAS. aspx?cds=00\&agglevel=State\&year=2019-20; "English Language Learners in Oregon: Annual Report 2018-19," Oregon Department of Education, June 2020, 12, https://www.oregon.gov/ode/reports-and-data/LegReports/Documents/ Oregon\%20English\%20Learners\%20Report\%202018-19\%20Final.pdf.
54 Indeed, U.S. Census data indicate that, as of 2019, a majority of Dallas children spoke a non-English language at home. "Age by Language Spoken at Home for the Population 5 Years and Over," Table C16007, U.S. Census Bureau, American Community Survey 1-Year Estimates, 2019.
55 Eric Nicholson, "In Dallas, White Flight Never Ends," Dallas Observer, May 3. 2016, https://www.dallasobserver.com/news/in-dallas-white-flight-never-ends-8265092.
56 Rebecca D. Freeman, "Dual-Language Planning at Oyster Bilingual School: 'It's Much More Than Language,"' TESOL Quarterly 30, no. 3 (Autumn, 1996), 557-82, https://www.jstor.org/stable/pdf/3587698. pdf?refreqid=excelsior\%3Aeb6102e3caef2325e45bb80f5b5ab857\&ab segments=\&origin .
57 "DC Schools Report Card, 2021-22," Office of the State Superintendent of Education, accessed March 1, 2023, https://osse.dc.gov/dcschoolreportcard/ student-enrollment.
58 "DC Schools Report Card, 2021-22: Oyster-Adams Bilingual School," Office of the State Superintendent of Education, accessed March 1, 2023, https://stossepublicdocsprod.blob.core.windows.net/public-docs/dc-school-report-card/2021-22/profiles/001-0292(Oyster-Adams\%20Bilingual\%20 School).pdf; "Oyster-Adams Bilingual School, 2021-22," DC Public Schools School Profiles, accessed March 1, 2023, https:/|profiles.dcps.dc.gov/OysterAdams+Bilingual+School; Woodley Park Home Values, Zillow.com, accessed March 1, 2023, https://www.zillow.com/home-values/121815/woodley-park-
washington-dc/.
59 Washington Home Values, Zillow.com, accessed April 7, 2023, https://www. zillow.com/home-values/41568/washington-dc/.
60 Margaret Sullivan Marcus, "Perceptions of Access to Dual Language Education Programs: The Complexities of Equity" International Multilingual Research Journal 16, 1 (2022): 78-92, https://www.tandfonline.com/doi/abs/10.1080/19313152.2021.1 963510.

61 Note that public data on at-risk student enrollment are not readily available before 2014.
62 "Local Education Agency (School District) Universe Survey Membership Data," 2014-15 v.1a, 2015-16 v.1a, 2019-20 v.1a, and "State Nonfiscal Public Elementary/ Secondary Education Survey," 2021-22 v.1a, U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD).
63 Single School Lottery Results, Oyster-Adams, 2021-22 School Year, DC Public Schools, https://bit.ly/3OySdsW.
64 Martin Austermuhle, "Eleven D.C. Charter Schools to Give Admissions Preference to At-Risk Students," DCist, September 17, 2021, https://dcist.com/ story/21/09/17/dc-charter-schools-preference-atrisk-students/.
65 "Age by Language Spoken at Home for the Population 5 Years and Over, Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area," Table S1601, 2010, U.S. Census Bureau, American Community Survey, American Community Survey 5-Year Estimates, https://bit.ly/3OxJlnf; "Age by Language Spoken at Home for the Population 5 Years and Over, Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area," Table S1601, 2021,U.S. Census Bureau, American Community Survey, American Community Survey 5-Year Estimates, https://bit. ly/45qoZIQ.
66 Conor P. Williams, Amaya Garcia, Kaylan Connally, Shayna Cook, and Kim Dancy, "Multilingual Paraprofessionals: An Untapped Resource for Supporting American Pluralism," New America, June 2016, 5, https://na-production. s3.amazonaws.com/documents/DLLWH_ParasBrief6.1.pdf\#page=5.
67 "Teacher Shortage Areas Nationwide Listing, 1990-1991 through 2015-2016," U.S. Department of Education, March 2015, https://www2.ed.gov/about/offices/ list/ope/pol/tsa.pdf.
68 Jessica Lander, Making Americans: Stories of Historic Struggles, New Ideas, and Inspiration in Immigrant Education (Boston: Beacon Press, 2022), 82-97.
69 America's Languages: Investing in Language Education for the 21st Century (Cambridge, MA: American Academy of Arts and Sciences, 2017), v, https:// www.amacad.org/sites/default/files/publication/downloads/Commission-on-Language-Learning_Americas-Languages.pdf.
70 Conor P. Williams, Amaya Garcia, Kaylan Connally, Shayna Cook, and Kim Dancy, "Multilingual Paraprofessionals: An Untapped Resource for Supporting American Pluralism," New America, June 2016, 5, https://na-production. s3.amazonaws.com/documents/DLLWH_ParasBrief6.1.pdf\#page=5; Alexander Cuenca, "Mis-Shaping the Teaching Force: An Analysis of Passing Rates of Indiana's Teacher Candidates," Indiana University School of Education, Center for Evaluation and Education Policy, September 2022, https://ceep.indiana. edu/education-policy/policy-reports/2022/ceep-report-22.a-mis-shaping-the-teaching-force.pdf; Michael T. Nettles, Linda H. Scatton, Jonathan H. Steinberg, and Linda L. Tyler, "Performance and Passing Rate Differences of African American and White Prospective Teachers on Praxis Examinations: A Joint Project of the National Education Association (NEA) and Educational Testing Service (ETS)," Education Testing Services, March 2011, https://files.eric.ed.gov/fulltext/ ED523733.pdf; Dan Goldhaber, James Cowen, and Roddy Theobald, "Evaluating Prospective Teachers: Testing the Predictive Validity of the EdTPA," working paper 157, National Center for Analysis of Longitudinal Data in Education Research (CALDER), November 2016, http://www.caldercenter.org/sites/default/files/ WP\%20157.pdf.
71 "Portland Dual Language Teacher Residency Program," Portland Public Schools, November, 2022, accessed March 1, 2023, https://www.pps.net/Page/3425.
72 "Butte County Office of Education Makes Inroads on Diverse Teacher Pipelines," California School News 27, no. 1 (January 2021), https://publications. csba.org/california-school-news/january-2021/butte-county-office-of-education-makes-inroads-on-diverse-teacher-pipelines/.
73 "Table 206.30. Percentage distribution of students enrolled in grades 1 through 12, by public school type and charter status, private school orientation, and selected child and household characteristics: 2019," U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the National Household Education Surveys Program (PFI-NHES:2019), https://nces.ed.gov/programs/digest/d20/tables/dt20_206.30.asp.
74 Ted Mellnik and Andrew Van Dam,"How Mixed-Race Neighborhoods Quietly Became the Norm in the U.S.," Washington Post, November 4, 2022, https://www.
washingtonpost.com/business/2022/11/04/mixed-race-neighborhoods/.
75 Charlotte-Mecklenburg Schools director of magnet programs Walter Hall, interview by Conor P. Williams and Jonathan Zabala, November 8, 2021; Wake County Public Schools System senior director, Office of Magnet and Curriculum Enhancement Program/ School Choice, Planning and Assignment Kimberly Lane, November 9, 2021, interview by Conor P. Williams and Jonathan Zabala.
76 Wake County Public Schools System, "Application Priorities," accessed February 10, 2022, https://www.wcpss.net/Page/33790; Charlotte-Mecklenburg Schools, "2022-23 School Choice Lottery," presentation slides, accessed January 11, 2023, https://drive.google.com/file/d/11OTjhlxqx6c4olkW7RyxHb-OH-e1oNss/view.
77 Perry Stein, "Are Dual-Language Programs in Urban Schools a Sign of Gentrification?," Washington Post, July 3, 2018, https://wwwwashingtonpost. com/local/education/are-dual-language-programs-in-urban-schools-a-sign-of-gentrification/2018/07/03/926c4a42-68c2-11e8-9e38-24e693b38637_story.html.
78 Ernesto Castañeda, A Place to Call Home: Immigrant Exclusion and Urban Belonging in New York, Paris, and Barcelona (Stanford: Stanford University Press, 2018); Madeline Mavrogordato and Marc Stein, "Accessing Choice: A Mixed-Methods Examination of How Latino Parents Engage in the Educational Marketplace," Urban Education 51, no. 9 (November 2016): 1039, https://journals. sagepub.com/doi/abs/10.1177/0042085914553674.


[^0]:    https://tcf.org/content/report/how-housing-policies-create-unequal-educational-opportunities-the-case-of-queens-new-york/

[^1]:    U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary and Secondary Education," 1995-96 through 2019-20 and 2020-21 Preliminary; and National Elementary and Secondary Enrollment by Race/Ethnicity Projection Model, through 2030; U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency Universe Survey," 2000-01 through 2018-19, and "State Nonfiscal Survey of Public Elementary/Secondary Education," 2019-20; and EDFacts file 141, Data Group 678, 2019-20.

[^2]:    Source: Authors' analysis of TCF DLI Access Database. Underlying data: "Public Elementary/Secondary School Universe Survey," U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD); Texas Education Agency, Total Enrollment Counts in Student Program and Special Populations Reports, PEIMS Data.

