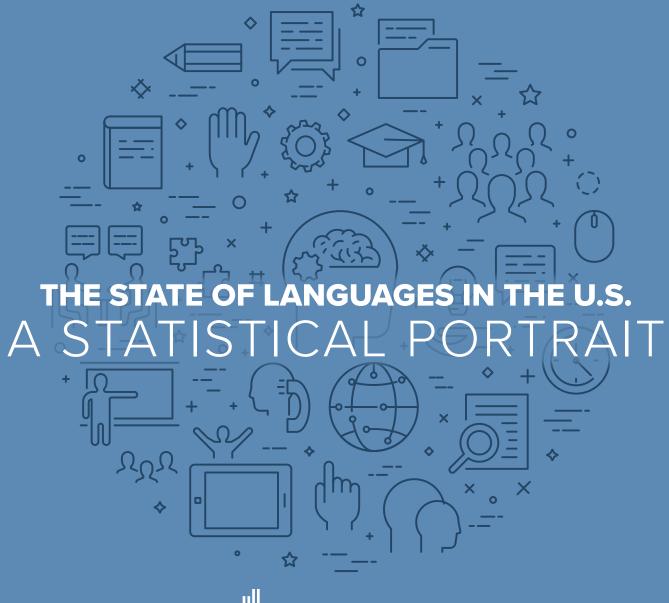
AMERICAN ACADEMY OF ARTS & SCIENCES



IIIIII HUMANITIES INDICATORS

COMMISSION ON LANGUAGE LEARNING

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A STATISTICAL PORTRAIT

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Introduction

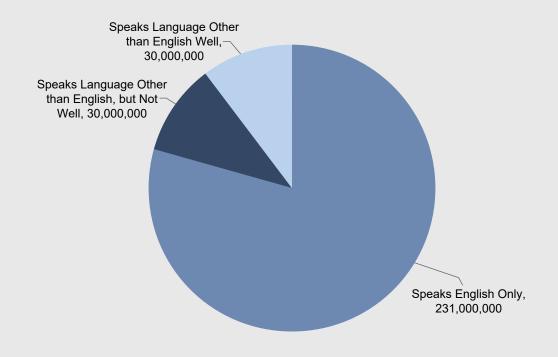
anguages are fundamental to nearly every aspect of our lives. They are not only our primary means of communication; they are the basis for our judgments, informing how we understand others as well as ourselves.

By several measures, the United States has neglected languages in its educational curricula, its international strategies, and its domestic policies. According to the U.S. Census Bureau, more than 60 million U.S. residents speak a language other than English at home—a number that has been growing decade by decade since the 1970s. But of the more than 230 million English speakers in the United States, very few develop proficiency in a language other than English in our schools, and the numbers of school language programs and qualified language teachers appear to be decreasing. Meanwhile, American businesses have reported a need for employees who understand the nuances of communicating with the international community, and the federal government continues to struggle to find representatives with enough language expertise to serve in diplomatic, military, and cultural missions around the world.

While English continues to be the lingua franca for world trade and diplomacy, there is an emerging consensus among leaders in business and politics, teachers, scientists, and community members that proficiency in English is not sufficient to meet the nation's needs in a shrinking world.

This report summarizes the nation's current language capacity, focusing on the U.S. education system. The disparity between our goals—most notably the preparation of citizens who can thrive in the twenty-first century—and the nation's current capacity in languages will be the subject of a forthcoming report from the American Academy of Arts and Sciences' Commission on Language Learning.

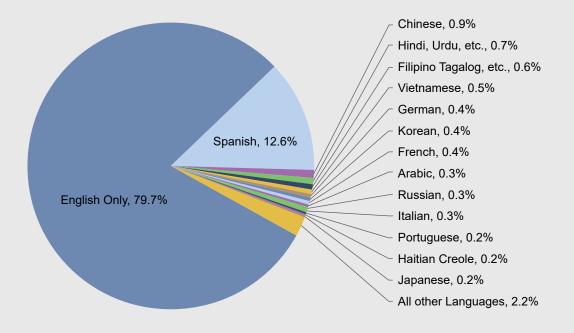
Estimate of Language Skills of U.S. Population Aged Five Years and Older, 2009–2013



The U.S. Census Bureau reports that more than 60 million residents over the age of five years old, or about 20% of the U.S. population, speak a language other than English at home. However, research from outside the federal government suggests that only about half that number, or 10% of the U.S. popu-

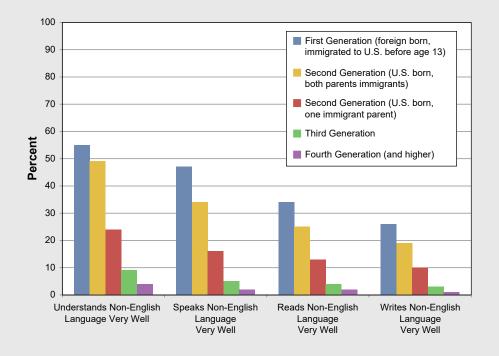
lation, speaks a language other than English proficiently. Most are heritage language speakers. Of those who speak a language other than English at home, 57% were foreign born and 43% were born in the United States. The latter are primarily U.S.-born children of immigrants.

Main Languages Spoken at Home by U.S. Residents Aged Five Years and Older, 2008–2010



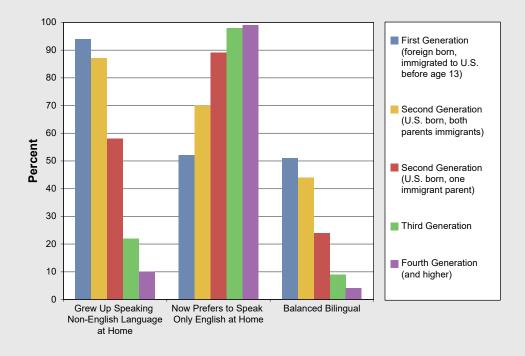
According to the U.S. Census Bureau, U.S. residents speak more than 350 languages. Among those who report speaking a language other than English, nearly two-thirds speak Spanish. And the languages spoken by U.S. residents are not evenly distributed geographically around the country. In many regions, English is the only language spoken by more than 95% of the population; in other parts of the country, a language other than English is the primary language for more than half the population. A small but very important portion of the non-English languages spoken in the United States includes the 169 Native American and Alaskan indigenous languages, which are listed as vulnerable or critically endangered by UNESCO (indicating that the language is only spoken in limited domains, such as at home, or is no longer used or taught as the mother tongue). A number of flourishing language reclamation projects are attempting to increase the number of speakers of Native American and indigenous languages in years to come.

Dimensions of Non-English Language Proficiency, by Generation, in Southern California, 2001–2004



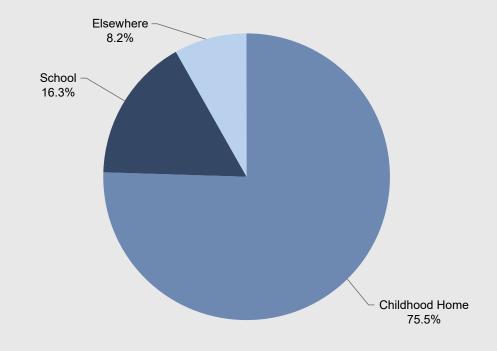
Language proficiency is typically measured along four dimensions: reading, writing, speaking, and listening comprehension. Unfortunately, the U.S. Census Bureau does not collect data on the level of proficiency in a non-English language along any of these dimensions. As a result, data on non-English language fluency come from other studies. A study in Southern California found that even in an area with a very high percentage of non-English speakers, language proficiency falls quickly in each generation after the first to enter the country. In the study, more than 45% of immigrants who arrived as children under the age of thirteen were able to speak and understand a non-English language well (though they are not necessarily literate in these languages). By the third generation, fewer than one in ten were able to communicate well in their heritage languages.

Language Shift and Bilingualism, by Generation, in Southern California, 2001–2004



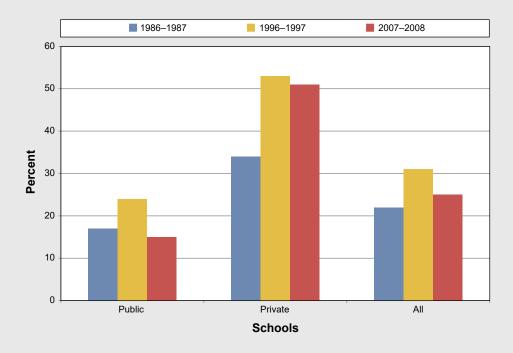
Bilingualism can have a number of meanings and represent a continuum of skills and expertise. In the chart above, a "balanced bilingual" is able to understand, speak, read, and write both English and a non-English language "well" or "very well." Heritage speakers are well positioned to develop balanced bilingualism but, as the chart above shows, they seldom sustain it. Even among those who immigrated as children, barely half were balanced bilinguals as adults. By the third generation, less than 9% remained balanced bilinguals. Among U.S.-born children of two foreign-born parents, 70% adopt English-only preferences, even though 87% of them grow up speaking a non-English language at home. By the third generation, 22% grew up in a household where a language other than English was spoken at home, but 98% preferred to speak English, accounting for the rapid decline in the use of heritage languages over time.

Where English-Speaking Adults Who Are Fluent in Another Language Acquired the Non-English Language, 2006



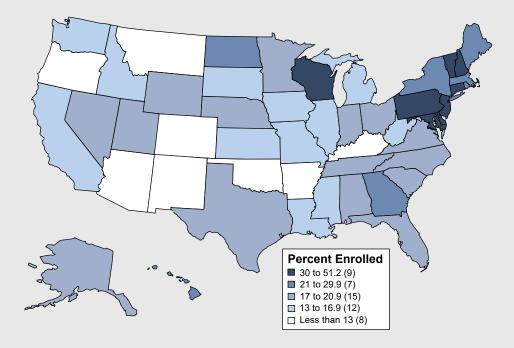
As of 2006 (the most recent year for which such data are available), the overwhelming majority of U.S. adults who reported they could speak a non-English language acquired that language at home. Only a small percentage (16.3%) acquired the language at school, reflecting the challenges faced by Americans of developing language proficiency after childhood.

Share of Elementary Schools Teaching Languages Other than English, by Control of School, Academic Years 1986/1987–2007/2008



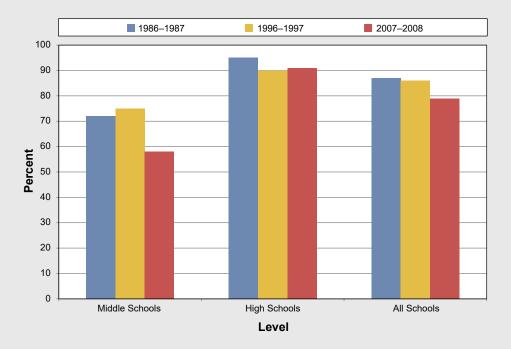
Most experts believe that language exposure at a young age provides a child with the greatest chance to acquire a high level of proficiency. However, a dwindling number of the nation's schools offer any language education. In academic year 2007/2008, 25% of elementary schools taught languages other than English. This marked a six percentage point drop from 1996/1997, with the largest decline at public schools. As of the most recent survey, 15% of public elementary schools had a program for languages other than English, compared with more than 50% of private elementary schools (which teach a small fraction of the nation's elementary school students).

Share of All K–12 Students Enrolled in Language Courses Other than English, by State, 2014–2015

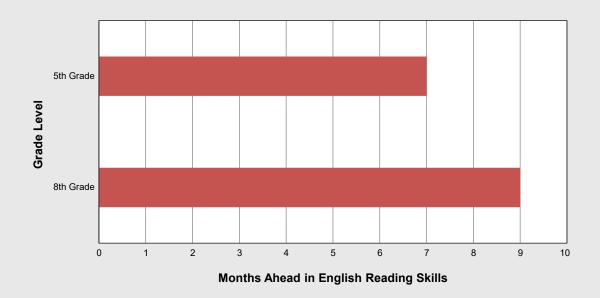


Proficiency in a second language requires extended course sequences that ensure adequate opportunities to learn and practice using the language. As of 2014, only twelve states had more than one in four elementary- and secondary-school students studying languages other than English. (Note that English language learners are not included in these reports.) The share of elementary- and secondary-school students enrolled in language classes or programs in individual states ranged from 7.9% in New Mexico to 51.2% in New Jersey. The share for the nation as a whole is 21.5%. In comparison, more than half of all students in European primary schools were learning another language in 2014.

Share of Secondary Schools Teaching Languages Other than English, by School Level, Academic Years 1986/1987–2007/2008

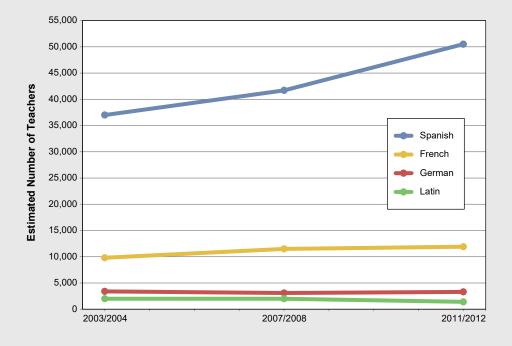


A majority of Americans first gain exposure to world languages in middle and high school; however, there has been a significant drop in the share of middle schools offering world languages: from 75% to 58% from 1996/1997 to 2007/2008. As a result, a large and expanding pool of American children are not exposed to a non-English language until their later teenage years. Even then, only a small minority of high school students are taking intermediate- or advanced-level language courses, which are typically where proficiency begins to form. Estimate of the Number of Months Students in Dual-Language Immersion Classes are Ahead of their Peers in Monolingual Classrooms in English Reading Skills, 2012–2015



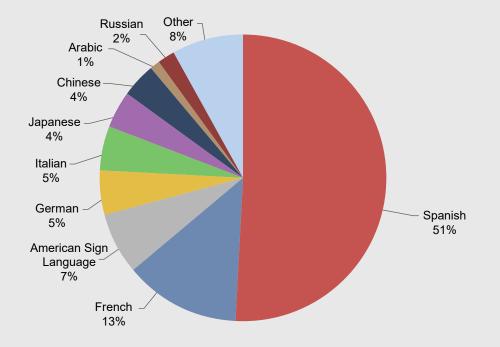
A recent study of students in dual-language immersion courses, which controlled for factors such as socioeconomic disparities, found that students who speak both English and non-English languages at home achieved higher English language arts performance in dual-immersion classes than students in non-dual immersion programs. By the time dual-immersion students reached the 5th grade, they were an average of seven months ahead in English reading skills compared with their peers in non-immersion classrooms. By the 8th grade, students were a full academic year ahead. These findings support claims that learning a second language helps students tackle the nuances and complexities of their first language.

Number of Language Teachers in Public High Schools, 2003/2004–2011/2012



The number of public high school teachers specializing in world languages has not changed substantially over the most recent decade for which data are available, even though there is a well-documented teacher shortage. The one exception is Spanish teachers, whose numbers increased by over ten thousand from 2004 to 2012. Unfortunately, over that same time period, the share of students in French, German, Latin, and Spanish language classes who had a teacher with a college degree in the subject fell between 5% and 11%.

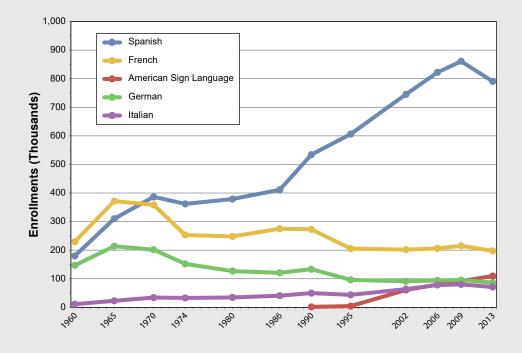
Distribution of Postsecondary Course Enrollments in Languages Other than English, 2013



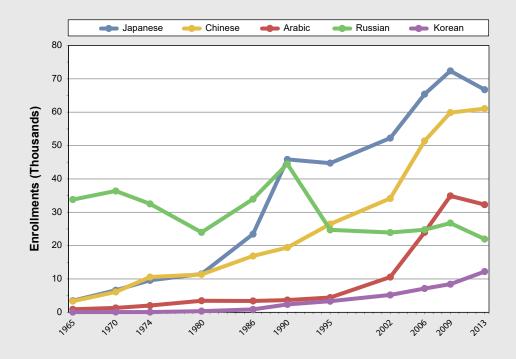
At the university level, Spanish is the most commonly studied world language, accounting for more than 51% of all student enrollments in 2013. Since the early 1990s, more students have studied Spanish than all other world languages combined.

Other European languages and American Sign Language account for most of the remaining student enrollments at the college level, but three of the fourteen "critical need" languages designated by the federal government are among the most frequently studied: Japanese, Chinese, and Russian.

Postsecondary Enrollments in the Most Commonly Taken Language Courses (Other than English), 1960–2013

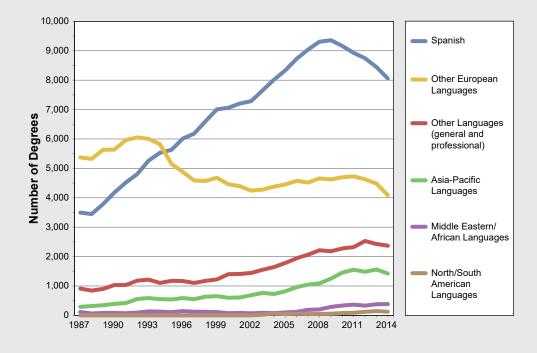


With the exception of American Sign Language, the number of students enrolled in the most commonly studied languages fell from 2009 to 2013 (the most recent year with data). Prior to 2009, enrollments in Spanish had grown dramatically since the mid-1980s, while the number of students enrolled in some of the other commonly studied languages had been trending lower. The sharp growth in the number of students taking Spanish since 1986 is slightly deceptive, however, since the total number of students enrolled in college has also increased over this period. As a result, the ratio of modern language enrollments per one hundred students has been rising and falling in a fairly narrow range (from 7.8 per 100 to 9.1 per 100). Postsecondary Enrollments in the Most Commonly Taken "Critical Need" Language Courses, 1965–2013

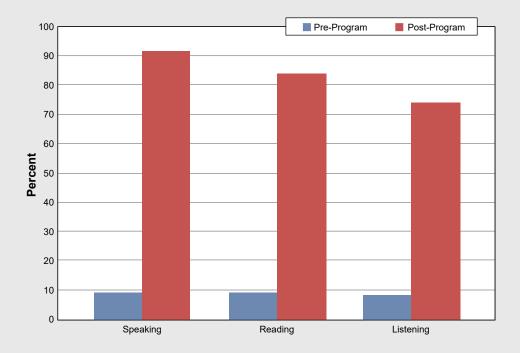


The federal government designates some languages with relatively small student enrollments as representing a "critical need" for national security and provides incentives to study these languages. As the rise and fall of course-taking in these languages indicates, the study of particular languages tends to follow events. For instance, the study of Russian decreased sharply after the fall of the Berlin Wall and the study of Arabic increased sharply after September 11, 2001. In addition to the languages of nations that represent a significant strategic interest to the United States, a number of other languages designated as a critical need—Hindi, Indonesian, Swahili—reflect a desire for stronger ties with important emerging regions around the world.

Undergraduate Degrees in Languages Other than English, by Geographical Category or Subject Area, 1987–2014

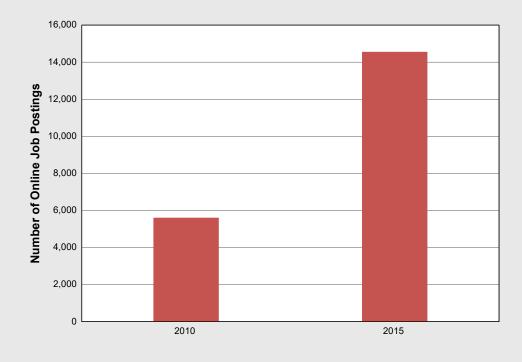


Alongside the recent declines in college enrollments in languages other than English, the number of undergraduate degrees awarded to students studying languages other than English declined from 2010 to 2014. The number of students earning degrees in Spanish had the largest numerical growth from 1987 to its peak in 2010 (growing from 3,496 degrees to 9,357 over that timespan), but subsequently experienced the largest numerical loss (falling to 8,053 degrees in 2014). Over the longer term, the number of students earning degrees in other European languages has fallen by more than a third since the early 1990s. In comparison, the study of languages from Africa, Asia, and the Middle East has grown substantially since the early 1990s, and remains above or near the number of degrees conferred in 2010. Professional-Level Proficiency by Graduation: Measured Outcomes of Integrated Study Abroad in the Language Flagship Programs, 2013–2014



American students can attain advanced or professional levels of proficiency in a foreign language by the time they graduate from college by enrolling in standards-based language courses at their home university together with a year of integrated study abroad. For example, the *Language Flagship* model prepares students at twenty-five American universities to operate at a professional level in speaking, reading, and listening through intensive training at home and an overseas capstone year that brings students to Level 3. Likewise, the State Department's *National Security Language Initiative for Youth (NSLI-Y)* and *Critical Language Scholarship (CLS) Program* support over one thousand students of critical languages in overseas language study annually. Participants in the federal overseas programs come from all socioeconomic backgrounds, including students who have never before left the United States or studied the language in question. The data indicate that most students can learn a language successfully, given proper instruction and adequate support.

Number of Online Job Postings in Massachusetts Seeking Bilingual Candidates, 2010 and 2015



A handful of recent studies about state and local job markets has highlighted the need for employees with language skills. A study in Massachusetts found a sharp increase in online job postings seeking a candidate who could speak a language other than English: from 5,612 openings in 2010 to 14,561 in 2015. A similar study found that one in five job postings from some of New Jersey's largest employers (including Bank of America, H&R Block, State Farm Insurance Companies, and Crossmark, Inc.) sought bilingual employees. A separate study from the Northern Illinois University Center for Governmental Studies found "half of all employers in northern Illinois plan to hire more bilingual or multilingual college graduates within five years."

Conclusion

T his report draws on the best available data about language acquisition in the United States, culled from a wide variety of sources—from small-scale research studies to the U.S. Census—each of which provides an important perspective on questions of national importance. Existing data do not, however, provide answers to several other key questions. For instance:

- How many of the people who report proficiency in a language other than English can use it effectively in personal and professional communications?
- How many heritage students develop proficiency in their heritage languages as well as in English?
- How does a lack of language requirements, both at the K–12 and the university/college level, impact language acquisition in the United States?
- How are the nation's business, social services, and diplomatic efforts limited by the relatively small number of Americans proficient in languages other than English?
- What are the effects of language learning on education and career success?
- How is language education impacted by today's technologies and social media?

In its forthcoming report, the American Academy's Commission on Language Learning will examine these and other questions in greater detail and offer a strategic agenda for increasing the nation's capacity in international languages.

Data Sources

Page 4: The estimate of the share of the total population that speaks a non-English language at home is based on the American Community Survey. See United States Census Bureau, "Detailed Languages Spoken at Home and Ability to Speak English for the Population 5 Years and Over for United States: 2009-2013," American Community Survey, October 2015, http://www.census .gov/data/tables/2013/demo/2009-2013-lang-tables .html. Estimate of skill levels of adults eighteen and older drawn from Tom W. Smith, Peter Marsden, Michael Hout, and Jibum Kim, General Social Surveys, 1972–2014 [machine-readable data file] (Chicago: National Opinion Research Center at the University of Chicago, 2016), http://gssdataexplorer.norc.org. Skill levels for children imputed using available research.

Page 5: American Community Survey, 2008–2010 merged files as quoted in Rubén G. Rumbaut and Douglas S. Massey, "Immigration and Language Diversity in the United States," *Dædalus* 142 (3) (Summer 2013): 146.

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Page 11: Rhodes and Pufahl, Foreign Language Teaching in U.S. Schools: Results of a National Survey, 23.

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"Study of Dual-Language Immersion in the Portland Public Schools: Year 4 Briefing," November 2015, https://res.cloudinary.com/bdy4ger4/image/upload/ v1446848442/DLI_Year_4_Summary_Nov2015v3_1 _jwny3e.pdf. See also Jennifer L. Steele, Robert O. Slater, Gema Zamarro, Trey Miller, Jennifer Li, Susan Burkhauser, and Michael Bacon, "The Effects of Dual-Language Immersion Programs on Student Achievement: Evidence from Lottery Data," *American Educational Research Journal (Centennial Issue)* 53 (5) (forthcoming).

Page 13: Humanities Indicators analysis of data in Beth A. Morton, Pia Peltola, Michael D, Hurwitz et al., Education and Certification Qualifications of Departmentalized Public High School-Level Teachers of Core Subjects: Evidence from the 2003–04 Schools and Staffing Survey (Washington, D.C.: National Center for Education Statistics, 2008), 27; Jason G. Hill and Kerry J. Gruber, Education and Certification Qualifications of Departmentalized Public High School-Level Teachers of Core Subjects: Evidence from the 2007–08 Schools and Staffing Survey (Washington, D.C.: National Center for Education Statistics, 2011); and Jason Hill and Chelsea Stearns, Education and Certification Qualifications of Departmentalized Public High School-Level Teachers of Selected Subjects: Evidence from the 2011–12 Schools and Staffing Survey (Washington, D.C.: U.S. Government Printing Office, 2015).

Page 14: Humanities Indicators analysis of data in Modern Language Association, Language Enrollment Database, https://apps.mla.org/flsurvey_search (accessed March 28, 2016). Tabulation excludes enrollments in American Sign Language, which had the third-largest number of enrollments in language other than English. Page 15: Ibid.

Page 16: Ibid.

Page 17: Humanities Indicators analysis of data in National Center for Education Statistics, IPEDS [Integrated Postsecondary Education Data System] (U.S. Department of Education, Institute of Education Sciences), accessed and analyzed via the National Science Foundation's online data system, WebCASPAR, https://ncsesdata.nsf .gov/webcaspar/. For an inventory of the specific degree programs included in the broad disciplinary categories of the humanities accounted for in this indicator, see http://www.humanitiesindicators.org/cmsData/xls/NSF _CIP_Code_Catalog.xls. Geographical aggregations are based on the Modern Language Association, Language Enrollment Database, 1958-2013, https://www.mla .org/Resources/Research/Surveys-Reports-and-Other -Documents/Teaching-Enrollments-and-Programs/ Language-Enrollment-Database-1958-2013. Due to the disproportionate size in the current number of Spanish degrees, degrees in the subject are tabulated separately from the other European languages.

Page 18: Dan E. Davidson, "The Development of L2 Proficiency and Literacy within the Context of the Federally Supported Overseas Language Training Programs for Americans," in To Advanced Proficiency and Beyond: Theory and Methods for Developing Superior Second-Language Ability, ed. Tony Brown and Jennifer Bown (Washington, D.C.: Georgetown University Press, 2015), 117–150. Language Flagship partners and funders available at https://www.thelanguageflagship.org. Page 19: Partnership for a New American Economy, "Language Diversity and the Workforce: The Growing Need for Bilingual Workers in New Jersey's Economy," http://www.renewoureconomy.org/wp-content/uploads/ 2016/05/NJ-Biliteracy-Brief-1-12-15-Updated.pdf (accessed September 1, 2016); Partnership for a New American Economy, "Language Diversity and the Workforce: The Growing Need for Bilingual Workers in the Massachusetts Economy," http://www.renewoureconomy .org/wp-content/uploads/2016/06/MA-Biliteracy-Brief .pdf (accessed September 1, 2016); and Northern Illinois University, "Bilingual College Grads are in Demand, Says NIU Survey," http://newsroom.niu.edu/2015/09/16/bilingual -college-grads-are-in-demand-says-niu-survey-3/ (accessed September 1, 2016).

Humanities Indicators

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