By Dr. Richard Brecht

*Languages for ALL?: The Anglophone Challenge*

*With Martha Abbott, Dan E. Davidson, William P. Rivers, Robert Slater, Amy Weinberg, and Anandini Yoganathan*

**Contributors:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Martha Abbott</td>
<td>Executive Director, American Council on the Teaching of Foreign Languages</td>
</tr>
<tr>
<td>Dr. Henk Haarmann</td>
<td>Area Director, University of Maryland Center for Advanced Study of Language</td>
</tr>
<tr>
<td>Mr. Walter Bacak</td>
<td>Executive Director, American Translators Association</td>
</tr>
<tr>
<td>Mr. Tom Haines</td>
<td>Senior Language Authority, Defense Intelligence Agency</td>
</tr>
<tr>
<td>Dr. Michael Bunting</td>
<td>Area Director, University of Maryland Center for Advanced Study of Language</td>
</tr>
<tr>
<td>Mr. Brad Hull</td>
<td>Interim Executive Director, National Association of State Boards of Education</td>
</tr>
<tr>
<td>Dr. Dan E. Davidson</td>
<td>President, American Councils for International Education</td>
</tr>
<tr>
<td>Mr. Joseph Lo Bianco</td>
<td>Immediate Past President, Australian Academy of the Humanities</td>
</tr>
<tr>
<td>Dr. Robert De Keyser</td>
<td>Professor, University of Maryland</td>
</tr>
<tr>
<td>Ms. Gail McGinn</td>
<td>McGinn Associates</td>
</tr>
<tr>
<td>Dr. Catherine Doughty</td>
<td>Area Director, University of Maryland Center for Advanced Study of Language</td>
</tr>
<tr>
<td>Mr. Rafael Nevarez</td>
<td>Office of International Affairs, U.S. Department of Education</td>
</tr>
<tr>
<td>Dr. Paola Giuli Dussias</td>
<td>Associate Professor, Pennsylvania State University</td>
</tr>
<tr>
<td>Mr. Glenn Nordin</td>
<td>Foreign Language and Area Advisor, OUSD(I)</td>
</tr>
<tr>
<td>Dr. Joseph Lo Bianco</td>
<td>Immediate Past President, Australian Academy of the Humanities</td>
</tr>
<tr>
<td>Mr. Hans Fenstermacher</td>
<td>CEO, Globalization and Localization Association</td>
</tr>
<tr>
<td>Dr. Jared Novick</td>
<td>Associate Research Scientist, University of Maryland Center for Advanced Study of Language</td>
</tr>
<tr>
<td>Ms. Mollie Benz Flounacker</td>
<td>Associate Vice President for Federal Relations, American Association of Universities</td>
</tr>
<tr>
<td>Mr. Andre Pellet</td>
<td>President, Experis, Inc.</td>
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<tr>
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</tr>
<tr>
<td>Dr. Amy Weinberg</td>
<td>Executive Director, University of Maryland Center for Advanced Study of Language</td>
</tr>
<tr>
<td>Mr. Isaac Quinones</td>
<td>Office of Senator Sherrod Brown</td>
</tr>
<tr>
<td>Dr. William P. Rivers</td>
<td>Executive Director, Joint National Committee for Languages – National Council for Language and International Studies</td>
</tr>
<tr>
<td>Mr. Glenn Nordin</td>
<td>Foreign Language and Area Advisor, OUSD(I)</td>
</tr>
<tr>
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Foreword by Amy Weinberg

The University of Maryland Center for Advanced Study of Language (CASL) is very pleased to host the Languages for All? initiative with its co-sponsors from the American Councils for International Education, the American Council on the Teaching of Foreign Languages (ACTFL), the British Academy, the DLI Foundation, and the Joint National Committee for Languages—the National Council for Languages and International Studies (JNCL-NCLS). I sincerely thank our co-sponsors for contributing to the writing of this white paper with CASL’s founding director, Dick Brecht. As mentioned in the report, the U.S. Government has long recognized the requirement for its workforce to achieve advanced language proficiency. Our research center is devoted to breaking down barriers to cost-effective and efficient language learning. We have discovered that overcoming language learning challenges requires the most sophisticated research from cognitive, computational, and instructional science. We are fortunate to be located at a university that puts language science high on its list of research priorities. Applying these discoveries effectively has required working with the best practitioners to understand both what works given real-world constraints and what is possible when we bring interdisciplinary scientists and leaders from industry, government, and education together. We have been fortunate to work with visionary policy makers to make the changes needed to enable language requirements to be met in cost effective ways. This report adopts the same rigorous call for evidence and seeks to establish a partnership with research and policy leaders from the K–16 and industrial arenas in order to insure our nation’s preparedness and prosperity.
Preface

This white paper is intended to serve as the basis for a national and international dialogue on language in the United States and other English-speaking countries. It presents evidence to help fuel a discussion of whether access to a second language is to be available to all or only to more privileged learners. It is an opening salvo in a strategic effort, the next step of which is an international forum devoted to the reactions to the white paper by national and international experts and leaders with language responsibilities. As such, this study is meant to be representative, not comprehensive. The evidence and examples of good practice, for example, are highly selective and not meant to convey an overall assessment of the field. The intent is to provide enough information and data so that leaders and managers at the forum and beyond can engage in the effort more effectively.

The international forum component of the Languages for All? initiative will take place on September 30, 2013, and will provide reactions of leaders and managers that, together with this white paper, will result in a national report to be released in the winter of 2013–14. This report is about language in the 21st century and not a reiteration of arguments from the past.

Contributors to this white paper are not responsible individually or collectively to the content, but without question they provided guidance, insights, and data. All responsibility for this document belongs to its authors and not to any organization with which they are affiliated.
Acknowledgements

The authors and contributors would like to thank the fine CASL Communications staff for all their assistance in the planning and execution of the entire ENLIGHTEN initiative and international forum on September 30, 2013, as well as the editing and preparation of the white paper.

We are also particularly grateful to the organizers of the expert working groups, who compiled much of the data and interpretations presented: Marty Abbott, Mike Bunting, Dan Davidson, Donald Fischer, Gregg Newby, Renee Meyer, Bill Rivers, and John Robinson. Finally, we are grateful to the University of Maryland and CASL for its expert and financial support: Patrick O'Shea, University of Maryland Vice President of Research; Amy Weinberg, CASL Executive Director; and Ellen Walsh, Government Director at CASL.
Introduction

A deep and persistent malaise afflicts language education in Australia, regrettably shared with other English-speaking nations, and the expressions of concern, even frustration, at the fragility of languages suggests a public refusal to accept this state of affairs. —Joseph Lo Bianco

A growing number of today’s politicians, journalists, academicians, and business leaders cite the national benefits of a multilingual society, while more and more educators, psychologists, physicians, sociologists, and—most importantly—parents insist that a second language is of major benefit to the health and well-being of this nation’s children. Yet, despite this rising chorus of testimony, our education system seems unable to find the will or the resources to effectively and efficiently make foreign language education an essential part of our children’s preparation for life in the 21st century.

This inconsistency is reflected in recent, major studies that tout the need for language, while language study is given scant notice or simply omitted from some of the newest U.S. national education plans and policies that are in fact receiving generous budget support (e.g., Common Core, National Education Technology Plan, ConnectED, etc.).

This inconsistency rises to the level of a national educational dilemma, as it inevitably poses questions like the following:

- Is the neglect of foreign language instruction in national education policy due to the perception that it’s just not that beneficial to our nation and our children? After all, English is our native language, so why bother, especially when we have a science, technology, engineering, and mathematics (STEM) problem that has to be addressed?

- Or is the neglect because of a common assumption that it is just too hard and takes too long to learn a second language, so only the smartest among us can master this skill and only elite institutions can provide the instruction?

For decades, English-speaking countries around the world have wrestled with the question of whether English is enough. In the United States, particularly since 9/11, national security considerations have argued strongly for more language abilities, at least as far as those parts of government with national security responsibilities are concerned. While the efforts of the Department of Defense (DOD) and the Intelligence Community (IC) on behalf of language have
contributed to efforts in language education, the PK-16 education system itself has not made language an essential part of the curriculum.

This report is intended to sharpen our understanding of the needed-but-neglected dilemma and to examine the evidence for the feasibility of bringing language study back into the heart of the education system by asking the questions: Are this country’s schools capable and willing to provide to all of our children access to the distinct advantages of a second language? If so, how? If not, why not?

To this end, we direct this document to our nation’s leaders, educators, and managers who make the decisions about language education at the national, state, and local levels. Its purpose is not advocacy, but understanding. Is the ambition of a second language for all Americans realistic or futile, now or in the foreseeable future? Again, if so, how? If not, why not?

This document is meant to be a summary statement, provocative by force of its clarity and succinctness. Elaboration and full documentation are reserved for the accompanying website, where feedback is also solicited.

Questions? Reactions?
Join us live on September 30, 2013, at #LFA2013
Comment at http://languagesforall2013.blogspot.com
Email at languagesforall2013@gmail.com
Visit www.casl.umd.edu/languagesforall
Why Raise the Language Question, Again, at This Time?

An Emerging Consensus

For perhaps the first time in the history of the United States, there is now broad agreement that multilingualism is important, if not critical, to our nation’s well-being, as well as to the personal success of its residents. This agreement is reflected in the general and growing acceptance among the population of this country that learning a second language should be part of K–12 education.

In the 2000 Global Social Survey, 76 percent of respondents agreed or strongly agreed that children in the United States should learn a second language fluently before they finish high school. In the 2008 survey, 80 percent of respondents also expressed agreement with this statement. Similarly, in 2000, 64 percent of respondents believed that learning a foreign language was as valuable as learning math and science in school. Slightly more respondents (68 percent) agreed with the same statement in the 2008 survey.5

This acceptance among the general population of the importance of language for U.S. society is underscored by numerous studies, reports, and Congressional testimony citing the nation’s political, social, and economic needs, as well as a constant flow of articles in the press about language.6 In addition to the reports previously cited, see Congressional hearings of committees on Intelligence, Armed Services, and Homeland Security); numerous GAO reports on DOD, DOS, DHS, IC; IC and DOD summits (CIA, P&R); and the numerous statements of national figures emphasizing the need for language in the United States, including President Obama and Secretary of Education Duncan.

This consensus can be summarized as targeting three general benefits of a multilingual America:

- Equal access to global resources critical to personal and professional success, including jobs, science and technology, people and places, and innovative products and services—which more and more come from abroad.

- A language-competent domestic public and private workforce meeting the needs of a diverse society by ensuring an effective service industry.

- Guaranteed equal access for all Americans to federal, state, and local medical and social services, voting rights, and high-quality education.
Add to these a newly recognized benefit of bilingualism. Research has shown that bilingualism is correlated with significant cognitive advantages (e.g., better working memory and executive control). These attributes are critical in other domains of learning, including math and English. While this benefit is now well established for children raised in a two-language environment, an ongoing study in Portland, OR, public schools is addressing the question of whether the same benefits accrue to children learning a second language in school. This study is currently investigating the correlation between immersion language learning and the broader academic outcomes of children in grades 1 through 12. Evidence for the general benefits of natural bilingualism should impact the hiring of heritage speakers, while the evidence from the Portland study of “acquired bilingualism” may provide critical motivation for total and dual-language immersion in inner city schools.7

**Evidence of National Needs and Explicit Demand**

Opinion polls and advocacy efforts are good indicators of a shifting attitude toward language in this country, but documented needs and actual demand are the true measure of change.8

**Federal Needs.** The developments described above reflect a real and evolving need for multiple language abilities in today’s world, both on the national and on the personal level. In the United States the traditional rationale for federal support of language education and training has focused on national security, beginning with the Second World War and subsequent National Defense Education Act of 1958. To this end, the U.S. Government has built an elaborate recruitment and language training system for defense, diplomacy, and intelligence needs. While a series of Government Accountability Office (GAO) reports and Congressional hearings cite linguistic deficiencies across the government, the existing budget situation will dictate that meeting the needs of DOD, IC, Department of State (DOS), and Department of Homeland Security (DHS) will now depend on major improvements in quality and efficiency like those detailed below. There is little reason to expect this to change for the foreseeable future.

In addition to overt national security (diplomatic, intelligence, and military) applications, government needs actually extend to approximately 80 departments, agencies, and offices dealing with social and economic issues, including the departments of Commerce (DOC), Justice (DOJ), Health and Human Services (HHS), and organizations like Centers for Disease Control and Prevention (CDC), Federal Bureau of Investigation (FBI), USAID, etc.9 “National economic competitiveness” has also received federal attention, but without any accompanying significant investment of resources. The evidence for this real and continuing demand for language-competent federal employees can be found in any department’s website where recruitment needs are specified.
**State and Local Government Needs.** The justification for investment in language education and services must be expanded to state and local governments with responsibilities for accommodating domestic demographics, specifically the over 60 million speakers of a language other than English (LOTE) at home. National, state, and local government services to speakers of LOTEs are guaranteed by Title VI of the Civil Rights Act of 1964, as elaborated by Presidential Executive Order 13166, “Improving Access to Services for Persons with Limited English Proficiency,” issued in the summer of 2000 by President Clinton. Every federal agency has in place plans to ensure access for limited English proficiency (LEP) individuals, coordinated by the DOJ. For example, HHS has issued standards and guidelines concerning access to health care industry services.

**Industry Needs.** Comprehensive and reliable data on the demand for language services is difficult to ascertain, as national security, industrial propriety, and individual privacy issues must be respected. However, a clear indicator of the growth of demand for language services can be found in data concerning the expansion of the language services industry itself. The $15 billion U.S. language industry is experiencing an 8 percent to 10 percent growth rate per year, due to the explosion in content, particularly from social media and the use thereof by major industry clients. Naturally enough, this growth has led to a talent gap in the industry, which has clear and mounting needs for:

- Translators and interpreters, with professional levels of skills in at least two languages and expertise with modern technology that these professions now require, and
- Linguistically and culturally skilled professionals in all supporting business disciplines, including information technology, project and program management, customer relations, and business operations.

*Big multinational companies recognise the importance of language skills. McKinsey counts more than 130 languages spoken across the management consultancy, and offers a bursary to those who wish to learn another language before joining. Unilever estimates that up to 80 of the consumer products group’s 100 most senior leaders speak at least two languages. Standard Chartered seeks out bilinguals for its international graduate training scheme.*

Because industry is concerned with the U.S. education system’s inability to sustain capacity in foreign languages, an industrywide task force on the labor needs has been convened by the Globalization and Localization Association, with representation from major language service providers and customers such as Google, eBay, ManPower, and others.
James Foreman-Peck of Cardiff Business School has assessed the cost to the UK economy of under-investment in language skills as “the equivalent of between a 3 and 7 per cent tax on British exports.” A recent study by the British Academy on “the state of the nation” concluded that the UK was entering a “vicious circle of monolingualism.”

Consequences of Emerging Consensus and Rising Demand

Jobs. It is logical to assume that the expansion of the language services industry presumes a growing language-enabled work force. While there are data documenting this labor market worldwide, U.S.-specific data like the following from the UK do not exist:

The 2012 CBI Employer survey, based on responses from 542 companies, found that nearly three quarters of UK private sector employers see a need for—or at least a benefit in having—foreign language skills in their business.

The employment advantages of a working second language are very clear to industry in general, but the higher education system appears to be dismally uninformed in this regard. To compete in what a Vice President for Deloitte has called the “global war for talent,” graduates from our universities and professional schools must be able to practice their professions globally, and a critical advantage for job applicants is language ability.

Language Learning Opportunities. Another reflection of the growing need for language ability across U.S. society is the strong and strengthening demand for language learning opportunities that are challenging the educational system’s predominance in this area. This demand is reflected in the reaction of educational leadership in 23 states to grant secondary school credit for language competence acquired outside of the K–8 system, for instance, in heritage community schools, by living abroad, in after-school programs, and by home schooling. STARTALK, a DOD-funded program for children across the country to spend some summer time getting to know a language, is producing strong demand from parents to offer school instruction so these children can continue their study throughout the school year (In the six years of its existence, STARTALK has enrolled approximately 30,000 young students in its programs.)
### Impact of STARTALK at the Program Level: 2011

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<th>Question</th>
<th>Yes</th>
<th>Percentage</th>
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<tr>
<td>Have school-based or university language programs been started in your community (your school, district, university, or city/region) as a result of your STARTALK program?</td>
<td>34</td>
<td>26%</td>
</tr>
<tr>
<td>Have after-school, community, or heritage programs been started in your community as a result of your STARTALK program?</td>
<td>28</td>
<td>22%</td>
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<td>Has academic year enrollment in your institution’s world language program increased as a result of a STARTALK program?</td>
<td>55</td>
<td>42%</td>
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### Survey of STARTALK Student Participants

**Did you continue to study your STARTALK language after the program?**

77% responded “yes”

Further evidence of the growing interest of Americans of high school age (their families and school districts) in language and international study may be found in the growing popularity of the National Security Language Initiative for Youth (NSLI-y), now in its fifth year of operation. Sponsored by the DOS and administered by the American Councils for International Education in cooperation with U.S. and overseas exchange partners, NSLI-y provides full scholarships on the basis of an annual national competition for intensive, overseas study for 626 qualified high school and gap year students from across the United States for the study of Arabic, Chinese (Mandarin), Hindi, Korean, Persian (Tajiki), Russian, and Turkish, annually. The 2013–14 NSLI-y program accepted just under one in five of the eligible applicants (19 percent), receiving 3,285 applications for the 626 positions in the program.

In general, the shift in attitude indicated in the General Social Survey as well as the growing grass roots demand for second language services and education portend a major cultural shift away from a monolingual English-speaking society to one more typical of multilingual nations around the world. In fact, the data appear to indicate a generational shift toward a more diverse and cosmopolitan populace that increasingly supports the teaching and learning of foreign languages at all levels and that demands ever-expanding language services.

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In 2008, 87 percent of 18-24 year olds and 88 percent of 25-34 year olds supported taking a foreign language in high school and 81 percent of 18-24 year olds and 78 percent of 25-34 year olds thought foreign language was as valuable as math or science.  

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This evidence suggests stronger grassroots recognition and acknowledgement of this shift toward a multilingual society than leadership in education, including language education, traditionally have acknowledged. These attitudes and behaviors indicate that policy makers and educators have a foundation on which to support this shift to a multilingual society and a plurilingual citizenry through enhanced foreign language education within the broader American population as core components of 21st century education and citizenship.

Assessing the Supply System

Failure of the Education System

In the face of this need for language as reflected in the demand for jobs and language learning opportunities, it is fair to ask why the education system is not stepping up to the task of providing language learning opportunities to many more, if not all, students in K–12 and beyond. The latest data on enrollments define the challenge:

<table>
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<th>Grade range</th>
<th>Students enrolled</th>
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<td>K–12</td>
<td>18%</td>
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<tr>
<td>7–12</td>
<td>32%</td>
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<tr>
<td>13–16</td>
<td>8%</td>
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More broadly, in the first approximation of the supply of language-enabled residents of the United States, the General Social Survey shows that approximately 25 percent of the general population claims to speak a second language, with 10 percent claiming to speak the second language well.17 (Compare this to the United Kingdom where “…39 percent of the UK adult population claims to be able to speak at least one language, besides their mother tongue, well enough to have a conversation. This compares to an average of 54 percent across 27 European countries.) In both the U.S. and the UK, the speakers of LOTEs represent a major portion of the percent that claims proficiency. The U.S. education numbers and the GSS numbers are remarkably consistent: a small portion of Americans take a second language and can use it, while usable ability is heavily dependent on the heritage communities.

This picture represents a major economic cost across government and industry. Specialized language education programs created by the government (e.g., the Defense Language Institute Foreign Language Center [DLIFLC], Foreign
Service Institute [FSI]) would be more efficiently directed at higher level skills and special purposes if the education system produced a pool of graduates with even basic skills in critical languages from which to recruit. The 2013 RAND report on the federal language workforce recommends “recruiting military personnel who are already proficient or nearly proficient in a foreign language” as an obvious solution to the military and intelligence demands. Of course, recruiting from the graduates of the education system is logical, but the fact that the government has set up its own language education system is a strong argument that at the present time it is not feasible.

By the same token, industry is forced to rely even more on the education system, as it is a rare business that has the resources to run its own language school. The work around employed by business, then, is to use language technology or recruit proficient language speakers from domestic heritage communities and from abroad.

In fact, nations around the world, even Anglophone ones, generally assume that language learning is the responsibility of their education systems. Why, then, especially now, the failure of the U.S. system to do likewise?

Today in the United States the apparent answer to this question is this: There are other, more pressing priorities—principally English, math, and STEM. Foreign or world languages are not tested as part of the Common Core (http://www.corestandards.org/), and they are relegated to “well-rounded education” in the budget allocation of the U.S. Department of Education (ED). Again, in the view of ED, this prioritization is not because language is deemed unimportant; it is just not as critical to the nation as these other disciplines. Therefore, strained resources, precious seat time in the nation’s schools, and competition for credit hours in higher education remain the major impediments to the promotion of language programs at all levels of the education system.

To the exclusion of languages, these priorities are in part driven by a lack of understanding on the part of administrators, teachers, students, and parents of the growing language jobs market. The expanding language services industry depends on a workforce skilled in language. While colleges and universities are aware of the stiff competition for job placement their graduates face, it is apparently challenging to accommodate a global economy that increasingly requires linguistic and cultural skills.

**Failure of Public Relations**

Another impediment to accepting language as part of the core education in this country is the common perception that language is a difficult subject, best left to the highly gifted and to those districts and institutions that have the resources to serve them. This perception is joined by the weak understanding of the
educational and social benefits of language among educators and the public. The reality of potential employment opportunities lost challenges this disregard for language, and our current understanding ignores the social benefits and cognitive advantages of a multilingual society.

**Failure of Leadership**

Another major obstacle to prioritizing language in the education system is the contemporary preoccupation with national reform efforts. In the recent *Gallup-Education Week* Superintendents Panel survey, more than 80 percent of the 12,000 district superintendents around the country between March and April of 2013 agreed or strongly agreed that “rising demand for assessments from the state and federal level” would be a challenge for their school districts, while over 70 percent agreed that funding would be.¹⁹

The fact that foreign language is not in the Common Core makes it very difficult for superintendents, principals, teachers, school boards, and parents to focus on this aspect of education.

Finally, because the language education system, from pre-K to professional school, is uncoordinated and the levels are unarticulated, many students become frustrated and unmotivated to continue learning a foreign language. This problem extends to the integration of heritage community students, whose language ability is rarely appreciated and enhanced through programming aimed at their strengths and challenges.

**The Solution: Languages for All**

It would certainly fly in the face of history to suggest that there is a solution to the language problem in the United States. Nevertheless, it is not a question whether a solution exists; it does: language as an integral part of education for all children. Rather the question is whether such a radical (for the United States) solution is feasible at this time and in the present context. The notion of language as an integral part of elementary and secondary education is not rare in this world of diverse domestic societies and globalized communities. Most countries in this world are multilingual, with citizens who have abilities in more than one language and abilities that fit a broad range of demand.

For the United States, universal language education could comprise:

- exposure to language and appreciation of its role;
- usable skills for domestic interaction and international travel;
high-level skills enabling global professional practice; and

- expertise underlying language education and the production of language technologies.

These components of universal and equal access to language education in the United States can be represented as a broad-based pyramid:

![Pyramid Diagram]

Plurilingual Citizens.

The only way to have broad appreciation of the role of language and culture, as well as to ensure a constant supply of professional and expert language capabilities, is to have policies that essentially broaden the base and sharpen the points of this pyramid. To do this, policies would need to ensure that all students in pre-K and elementary school study basic communication skills in some foreign language. Following this initial exposure, secondary schools would provide a majority of learners with usable skills. Colleges and universities could then graduate global professionals, who later bolster their skills through graduate education to become language experts.

But what would induce an Anglophone country to adopt a policy that would make it feasible? Why would anyone believe that this is possible now, under current political and economic conditions?

**Feasibility of Universal Access**

**Availability of Evidence**

Is universal and equal access to second language learning feasible at this time in the United States? Underlying many of the obstacles to universal access is the failure to explicitly and rigorously assess whether the quality and the cost of language learning has improved sufficiently over the past decade to shift the discussion from whether language should be offered to how to take advantage of these improvements. Very simply, are the cost and quality of language learning
making universal and equal access a reality for the first time in our society?  

The remainder of this report explores the availability of evidence that might answer these questions.

**Unprecedented Resources**

Language learning has at its disposal a range of unprecedented resources and practices that are dramatically changing its quality, cost, and availability. These resources include advances in cognitive science, second language acquisition, and language learning technology.

*Advances in Cognitive Science*

This is an exciting time in language science because of the variety of research approaches and techniques that have been developed to investigate the mechanisms of learning and performance, and the ways in which evidence from many different subdisciplines is beginning to converge. Perhaps the most prominent scientific breakthroughs are occurring in the areas of neuroscience and cognitive psychology, where research has increased understanding of the nature of competent performance and the principles of knowledge organization that underlie people's abilities to learn foreign languages.

While this science has yet to be translated into the classroom and into technology-mediated education, its promise is truly revolutionary. For example, functional connectivity in networks of brain regions important for language learning and its cognitive control (a) predict individual differences in language learning success, (b) reveal neurophysiological changes in the strength of the connections due to language learning, and (c) suggest what psycholinguistic mechanisms are important for language learning. By understanding the neural markers of language aptitude, proficiency, and performance, it will be possible to design neural-inspired methods to improve language learning and evaluate whether gains are above and beyond what can be achieved without such methods. However, this type of empirical evaluation remains to be done. Such methods for improving language learning can be neural (e.g., brain stimulation with tDCS or rTMS) or behavioral, and research on the efficacy of these is still in the basic science stage. While no translational studies transferring such methods to actual language pedagogy have been done, such studies are already being designed and piloted. Continuing down this path, there is evidence that changes in the brain occur rapidly during second language learning, even when there is no behavioral evidence that any learning is taking place. Accordingly, it may someday be possible to rely on neural markers to determine the efficacy of a learning innovation, which would save time and resources by not depending on generating a significant “n” over a long time period of empirical study.
The major insight of cognitive science into language learning may well be that late second language learners can acquire new grammatical features and that even subtle aspects of a second language may be acquired late in life.

In the fields of cognitive psychology and second language acquisition (SLA), more than most, differences between basic and applied research are clear. Fundamentally, most sponsored cognitive research is motivated by scientific questions rather than practical pedagogical ones, given the traditional funding sources of the National Institutes of Health (NIH) and the National Science Foundation (NSF). The realities of the differences between cognitive psychology and SLA in training and goals make the necessary collaboration challenging. Nevertheless, more and more of these collaborations are taking place, which promises significant breakthroughs in language acquisition in the not-too-distant future.

An example of the necessary collaboration is the connection between technology advances and cognitive science. It is very feasible to generate a list of cognitive principles that may be leveraged through social media and that may explain any benefit of social media use on language learning. What appears to be lacking is interdisciplinary (cognitive, SLA) research that evaluates this. Examples of some relevant cognitive principles:

- Better working memory support when blogging (than speaking)
- Training the comprehension system as a by-product of producing language in social media, since the comprehension system is automatically engaged as a feedback system during production
- Immediate and detailed error feedback, which is guaranteed in the meaning negotiation that takes place in online dialogues, debates, and exchanges via social media.

Although it was previously thought that very subtle aspects of a second language could never be acquired, there is new evidence suggesting that immersion experience can result in language processing that is very similar to language processing in native speakers, suggesting that immersion or immersion-like experience is necessary for advanced proficiency.

Finally, there is another major development in cognitive science that promises to affect the acceptance of second language programming: the cognitive advantages of bilingualism. An abundant amount of research demonstrates this advantage for “natural bilinguals,” that is, the children of two parents speaking different languages. The literature here is clear: it is not a matter of how well one knows the language, but rather the constancy of its use. Research now is focusing on bilingualism acquired within education programs or environments, like dual-
language immersion programs in elementary school or heritage after-school, or Saturday schools in the nation’s heritage communities. If the advantages of this acquired bilingualism can be conclusively demonstrated, the motivation of parents for putting their children in elementary language immersion programs could dramatically change the picture of language education in America.

The advantages of this bilingualism has been summarized nicely in Bilingualism Matters:

- Bilingualism does not mean perfect, balanced fluency in two languages from birth. Bilinguals are people who know, and use regularly, more than one language.
- Early exposure to two languages does not disadvantage children and may bring benefits, such as flexible thinking. The cognitive benefits apply from childhood to old age.
- No languages are “more useful” or “less useful”; what matters is having more than one language in the brain.
- Starting early is good for developing cognitive ability, but proficiency and number of languages matter more than age of first exposure to the second language.
- “Late” bilinguals who are proficient in their second language also have cognitive advantages.

While not yet definitive, there is evidence that can be cited:

*Overall, Reading and Math scores of students in two-way dual language education are higher for all students regardless of race/ethnicity, socioeconomic, limited English proficiency (LEP) or special education status. In most cases, by middle school, two-way dual language students, regardless of subgroup, are at least a grade ahead in Reading and Math achievement compared to non-dual language students.*

**Conclusion:** While cognitive science offers great promise for designing and structuring language learning, its effect is not yet extended into language programs on the ground.

**Advances in the Field of Second Language Acquisition**

A major advance in the field of SLA has been the recognition that, like other complex cognitive abilities such as mathematics, language is best learned experientially (learning by doing) rather than didactically (language as object). Just as with math and science, the shift has been away from memorization of bodies of content (e.g., paradigms and “drill and kill”) to intensive cognitive engagement (e.g., task-based language learning, language for specific purposes,
language immersion). While memorization and drilling resulted in knowledge about language (grammar rules and vocabulary lists), which could sometimes be mustered in halting, effortful language use, cognitive engagement during experiential learning results in fluent, automatic real-life second language use. This research has resulted in improved immersion experiences by tailoring learner preparation and integrating student goals into an enriched of the cultural and linguistic demands of different immersion settings.34

Another major advance in SLA was the empirical discovery that the developing second language of learners is very much like the developing first language of children, that is to say, systematic. This is important because systematicity provides a window on progress being made and enables teachers to know precisely when (and when not) to intervene. For example, the notion of learnability, which espouses that teaching should not be too far in advance of development, has been documented in scientific research. A related notion that also follows on from systematicity is psycholinguistic opportunity, which means that learners should be provided with instruction (e.g., feedback on error) at exactly the moment when they need this information, for instance when engaged in real language use rather than hours or days, or even weeks or months, in advance of using their second language for real purposes.

The net result of these two major advances is time savings and increased success, given that time is no longer wasted on “up-front” language instruction that is beyond the grasp of learners and often not relevant to the language learning needs at hand, nor to the eventual language use needs.

In addition, there is a promising new development that joins cognitive science and SLA: Aptitude by Treatment Interaction (ATI). Here, language learning and teaching are tailored to the cognitive profile of each learner as determined by behavioral and neural measures, so that learners can proceed along the path to proficiency more effectively and efficiently. For example, learners with strong attentional and memory resources can be expected to deal with abundant and rapid authentic language input, while other learners will need more scaffolding. This is an important argument against the all-too-common assumption that aptitude for language learning should be the deciding consideration for students and parents. Language learning can be available to practically everyone, if it is matched to the strengths and challenges of the learner. This research can also influence age-related choices. For example, implicit learning techniques have been found to be more appropriate for children across the board given developmental constraints and for adults at higher proficiency levels, while adults at lower proficiency levels benefit to varying degrees with explicit instruction.35

Results of deep research into language learning to inform practice are available at CASL’s website, www.casl.umd.edu.
Conclusion: Advances in Cognitive Science point the way to more direct tracking of learner state and learner progress, which can also target more individualized instruction. This research is still at the basic stage and progress will await more interdisciplinary focus.

Conclusion: Second language acquisition research has made great strides in the past decade, but outside of ATI, a great leap forward is not expected. And, ATI is just now only developing.

**Advances in Technology**

Education is undergoing a revolution in the way it is being delivered, with a dramatic infusion of technologies, both instructional and informational. Language learning takes advantage of, or even needs, these innovations perhaps more than any other educational discipline.

Language ability incorporates three modes: interaction with collocutors using both speaking and listening skills; one-way presentations through speaking and writing; and comprehension through reading and listening. Behind these different modes and skills is an understanding of the culture of the target language, without which successful communication is impossible. This knowledge and skill set are dependent on three basic language learning activities: access to rich target language input and authentic cultural materials (video, audio, and written texts); interactivity tasks using the target language; and rich feedback enabling noticing and correcting of the learner’s own target language.

Language learning involves knowing and performing, including interacting with others, presenting and comprehending using speaking, listening, reading and writing skills. These knowledge and performance skills require a deep understanding of the cultural setting in which they are used, some of which can be explicitly learned, others of which require long periods of implicit acquisition. The learning process requires rich input in multiple modes, production and interaction with individuals or group audiences, and immediate or delayed feedback. Until the development of Internet, this input and interaction depended on classrooms and immersions, which necessarily placed severe restrictions on the time-on-task needed to reach usable proficiency. Now, with the Internet and available learning and informational technologies, there is no limit on exposure to learning opportunities other than a learner’s waking hours.

With this understanding, the case for the use of technology in language instruction is clear. Through the World Wide Web, the student can interact with authentic language, access a wide assortment of languages and dialects within languages, experience the culture of the country being studied, communicate directly with citizens of other countries, and work individually, with classmates, or with groups in the country being studied. The opportunity to be on-task is ubiquitous; the task of instruction is to make the opportunities fruitful.
It is important to realize that technology may be viewed as a magic bullet for education, but even its most ardent supporters and developers, like Bill Gates, do not underestimate the role of the teacher:\(^{36}\)

There’s an ample body of evidence that teaching is the single greatest in-school factor in a student’s achievement. This is something that teachers have known instinctively for a long time, but now we have the data to confirm it. Teachers want to help their students succeed, but most of them don’t get the support or tailored feedback they need. That’s also backed by research and extensive conversations the foundation has had with teachers. We feel that investing in innovative solutions to these problems is the best way for our foundation to make a positive impact. –Bill Gates

Technology is defined in this case as using what is applicable to the teaching and learning task that is offered through existing hardware, software, and the Internet. It encompasses the individual-oriented, look-for-information aspect of Web 1.0, the networking aspects of Web 2.0, and the emerging big data analytics and algorithm-generated offerings emerging in Web 3.0. Whatever is used to communicate, teach, and learn is here and is being used by students in very innovative and efficiency-enhancing ways. In the foreign language area, technology is being used to bring true reality into the classroom—street interviews, YouTube videos, interactive systems such as Skype and GoToMeeting, speech comparison and parsing, mobile applications for smartphones, and social media technology, to name a few.

**Evidence.** The question of whether there is evidence that technology helps learning is akin to questioning whether stone tablets, illuminations, the printing press, the radio, television, and computers (text, then audio, the video, then platform independent browsers), Facebook, Twitter, blogs, wikis, et al., have made a difference in communication. Concretely, though, technology is influencing graduation rates and costs of delivery.

**Increasing Graduation Rates.** A prime example of technology’s effectiveness is the DLIFLC. Dr. Donald Fischer, the recently retired Provost of the DLIFLC (and the Commandant of the DLIFLC in the early 1990s) has asserted that state-of-the-art technology has played a major role in the success of the Institute. In reviewing the history of DLIFLC’s performance, Dr. Fischer views the influx of technology as a significant factor in the graduation rate—from about one graduate per four students in 1989 to about two graduates per three students at the end of fiscal year 2012. This is an increase from approximately 27 percent to approximately 62 percent in spite of major changes in languages offered and the difficulty of the languages.\(^{37}\)
A search of the Internet on the impact of technology on learning in general and language learning in particular reveals many studies and metastudies of the topic. There seems to be little question as to the efficacy of technology for language learning, although more studies are needed to investigate the specific benefits of the specific technologies involved.38

*Lowering Costs.* Thanks to the development of platform-independent browsers, type of system and previous investment are not obstacles to providing language materials. The infrastructure applied to teaching STEM and language arts can be used to support teaching foreign languages. Adding foreign languages to curricula means getting more output out of the information infrastructure. The only barrier to using technology to teach languages or other disciplines is not having technology available in the school system—a national issue not related to foreign language teaching—which is now being addressed by the administration’s new educational initiatives (e.g., National Education Technology Plan, ConnectED).

Costs of delivery are low to non-existent. Resources such as YouTube, Google Docs, Google Hangout, and Skype provide interactivity in addition to material delivery at no cost. There are free programs that could be made available to schools and colleges. The DLIFLC’s website at www.dliflc.edu has numerous resources for the beginning and advanced language learner. There is a HEADSTART program that contains 22 languages, providing listening, reading, speaking, and writing experiences to the learner. These 80- to 100-hour programs could easily support two semesters of college work or a year of high school language instruction. For the novice to superior linguist, over 6,000 learning objects to practice listening and reading are available at no cost in the Global Language Online Support System (GLOSS). Telephone conversations among native speakers are available in Arabic and Spanish. Language Survival Kits and Cultural Orientations are available at no cost in nearly all major world languages.

The government has other rich collections of resources that could be made available to schools and universities; for example, resources are available at the Joint Intelligence University and on the Foreign Service Institute and National Foreign Language Center (NFLC) websites.

Industry also makes available at no or low cost a myriad of language learning tools and programs that are currently used by thousands of learners, and this access is only at the early stages of development and access (e.g., Duolingo, Livemocha, Transparent Language, Babbel, BBC Languages, Busuu, etc.).

With modern technologies, languages can be taught as cheaply as any other subject. Learning materials have gone beyond textbooks in effectiveness while being cheaper than textbooks and infinitely easier to update, revise, replace, and distribute. Further, computers, tablets, and smartphones are already ubiquitous
and can be provided to students at costs less than the textbooks and traditional materials now provided to students.

**Big Data.** The emergence of “big data” in recent years offers promise and pitfalls with regard to education. However, in the foreseeable future it will be possible to track (anonymously, of course) tens of thousands of learners achieving a range of success in language abilities and to catalogue thousands of learning opportunities. On the basis of these data, one could determine patterns of successful acquisition in pursuit of learners’ goals and thus establish a fine-grained taxonomy of learners and successful paths. Such insights could be shared with new learners in hopes of making more effective and efficient their life-long language ladder. One of the principal reasons to be optimistic in this regard is the existence of thousands of learning objects and content objects housed at places like the DLIFLC, NFLC, SCOLA, National Distance Learning University (NDLU), etc.

**Conclusion:** Technology is changing the way languages are learned. It is bringing effective and efficient learning to many more, if not all, Americans.

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**Best Practices in Education**

The following best practices in language education have been identified, and are meant to serve as examples of the state of the art today and models for promulgation in the future. These practices have to be understood within the context of overall language enrollments in the system as noted above. Accordingly, “best practice “in fact represents by definition a limited part of a minimal number of language learners in the U.S. formal education system.

**Pre-kindergarten through 12 (PK–12)**

Pre-kindergarten, elementary, and secondary schools across the country provide the base of the language proficiency pyramid. The PK–12 language teaching and learning sector can now provide a rich array of effective program models and classroom practice, encouraging research results, and incredible innovation taking language learning beyond the confines of the classroom walls.

**Language Program Models and Classroom Instruction**

One of the most effective modes of providing usable language skills at the PK–12 level is language immersion programming. Successful exemplars of dual-language immersion programs beginning at the elementary level with articulated sequencing though grade 12 can be found in states like Utah and Delaware as
well as school districts in Portland, OR, Glastonbury, CT, and Lexington, SC. Such programs provide unprecedented opportunities to involve children from inner city schools, heritage communities, and middle class neighborhoods in collaborative efforts to improve first language skills, provide second language abilities, and strengthen overall academic performance through cognitive enhancement.

New studies are showing that a multilingual brain is nimbler, quicker, better able to deal with ambiguities, resolve conflicts and even resist Alzheimer’s disease and other forms of dementia longer. All of this is prompting public schools to implement language-immersion programs for kids as young as kindergarteners, as I report in the new issue of TIME; nowhere is that more evident than in Utah, where 20 percent of all public schools offer K-12 dual-language instruction, with students taking half their classes every day in English and half in either Spanish, French, Mandarin or Portuguese. To date, representatives from 22 other states have gone to Utah to learn more about the program.39

A reflection of the efficacy of late immersion learning is the use of target language in the classroom at the high school level. An example of a program like this that is demonstrating the effectiveness of this disciplined approach is to be found at Greensburg Salem High School in the Pittsburgh suburbs where students and teachers use the target language exclusively and the results are impressive in the language gains that the learners make during their four years in high school. When assessed using the American Council on the Teaching of Foreign Languages (ACTFL) oral proficiency interview (OPI), many students were rated at the intermediate high or even advanced low levels.

Immersion like learning opportunities are available to individual learners outside of the classroom in ways that are attractive and effective in providing significant exposure and “time-on-task,” so critical in language learning. We have already mentioned STARTALK, a seven-year-old program aimed at children and designed to spread awareness of and instruction in languages outside of the traditional Spanish, French, and German stalwarts. A true “seeding” initiative, STARTALK programs are spread across 50 states.

At the secondary school level, the National Security Language Initiative for Youth (NSLI-y) is now in its fifth year of operation. Pre- and post-program OPI measurements of NSLI-y participants in the 2012 summer program are reflected in the chart below. These show rapid proficiency growth. Note that just over half of the participants have any training in the language prior to the overseas study experience.
Finally, there are summer camps a plenty, like Concordia Language Villages, which offer courses for youth ages 2 to 18, for families, for adults and for language educators.

Other school districts have managed to implement well-articulated Foreign Language in the Elementary School (FLES) programs that are currently able to produce students who are at or are approaching the advanced level of language proficiency. Glastonbury, CT and Lexington, SC are two examples of programs that set benchmarks for students and assess their language competence along the proficiency continuum at key points in the PK-12 sequence.

Innovative Ways to Engage PK–12 Learners

Seal of Biliteracy. A major new initiative across the country is the Seal of Biliteracy on high school diplomas in a number of states, including California, Florida, Illinois, Massachusetts, New York, Texas, and Florida. This recognition of proficiency in English and another language is a major step forward in motivating students to study a second language. The procedures for awarding the Seal of Biliteracy in California are as follows:

The State Seal of Biliteracy (SSB), AB 815 (Brownley, Chapter 618, Statutes of 2011), became effective January 1, 2012, and provides recognition to high school students who have demonstrated proficiency in speaking, reading, and writing in one or more languages in addition to English. Each school district, county office of education (COE), or direct-funded charter school that confers the SSB is required to maintain appropriate records in order to identify students who have met the established criteria for the award and to affix the SSB insignia to the diploma or transcript of each qualifying student. In
the first year of the program, nearly 11,000 insignias were awarded to qualifying students in approximately 100 districts and 17 charter schools.\textsuperscript{40}

**School credit for language competence.** Another language incentive at the state level is the awarding of secondary school credit for language competence, no matter how it is acquired. This kind of program, being implemented currently in 23 states, indicates market forces at work involving, to this point, unrecognized language assets in the country. It also points to the fact that, in recognition of the difficulty of making room for language in K–8 programs, parents are finding ways to move their children along the path of language learning.

**Technology.** Children of the PK–12 system are particularly attuned to technology. The North Carolina Virtual Public School and Middlebury Interactive, an industry-university partnership, are engaging learners using hybrid learning—a combination of in-class and online learning. These programs, among many others, are taking advantage of technology to make languages available across the country. In fall 2013, the following languages are offered: Arabic, Japanese, Latin, Mandarin Chinese, Spanish, Russian, French, and German.

NC Virtual Public School is a leader in virtual learning for students. Nearly 50,000 secondary students across the state are enrolled in courses from over 150 Advanced Placement, Honors, Traditional, Credit Recovery, and Occupational Course of Study Blended course offerings. ...By virtue of our online course delivery, students from all areas of our state now have access to courses and highly qualified teachers in subjects that they may not have available at their local school.\textsuperscript{41}

Such innovative technology-supported language learning programs are providing students with significant exposure and “time-on-task,” which is critical in foreign language learning. The most encouraging aspect of these virtual classes is the engagement of the language learners in new learning environments that are active 24/7. However, far too many language teachers fail to take advantage of these innovations, partly because of the uneven availability of Web 2.0 and partly because their students are far ahead in everyday use of technology. Further, too many teachers rely on how they were taught vice the way our young children are used now to learning. Virtual classes are game-changers, but it is unclear whether they will cure the anemic PK–12 enrollments until and unless language is made a regular part of the PK–12 curriculum.

**Conclusion:** PK–12 language education has seen important advances in language learning and is, arguably, leading the way in technology and standards application. However, first, technology access is limited, as noted by the Obama initiatives. Second, language is not a priority in the education system, which limits enrollment advances and innovation. The
Higher Education

In view of the limited enrollment numbers above, across the country, many colleges and universities have outstanding language programs that are taking students to a high level of linguistic and cultural performance. These programs are the result of efforts of those faculty and administrators who lead their fields, in taking full advantage of science, technology, best practices, standards and assessment, and partnerships with national associations. However, until recently, there has been no concerted effort at this level to “raise the river,” so to speak—that is, to work collectively and broadly to change the face of language learning across higher education in the United States.

Reaching the Professional Level by Graduation

Research in adult second language acquisition and a renewed focus on best practices across the government and higher education language training communities are serving to inform a new generation of foreign language undergraduate and overseas curricula over the past decade. First, undergraduate learning is no longer focused primarily on preparing students for graduate school and academic careers in language and literature. In fact, universities now are providing greater support for second language learners who may not be majoring in the language at all. Second, there is greater emphasis on functional proficiency (linguistic and cross-cultural) for students that have been supported by the increased use of generally recognized external testing instruments (such as the ACTFL or Interagency Language Roundtable [ILR] OPI) both within and outside the academy. Programs have responded by expanding the availability of intensive and immersion offerings during the academic year and summer terms, respectively.

The Language Flagship Program funded by the Defense Language National Security Education Office (DLNSEO) is the most visible embodiment of the new trend. This relatively inexpensive federal initiative has demonstrated on 25 different campuses across the United States, primarily public institutions, how the combination of innovative curricular offerings, smart technologies, overseas immersion programming, external accountability for results, and raised expectations of students, faculty, and administrators can produce professional level speakers (ILR level 3 and above for speaking, reading, and listening) across 10 critical languages.

For example, the percentage of Arabic and Russian Flagship students over the last three academic years who achieved ILR 3/3/3 (i.e., ILR 3 in speaking, reading, and listening) or higher is 45 percent (48 students); and the percentage
who achieved 2+/2+/2+ or higher in each modality is 76 percent (81 students). For the most recent 2012–13 capstone year the Arabic program had 25 out of 28 students (89 percent) achieve ILR 3 in oral proficiency and 12 students (43 percent) achieve ILR 3/3/3 or above. For the most recent 2012–13 Russian capstone year, 94 percent (15 out of 16 students) achieved ILR 3/3/3 or above.42

The Flagship and similar strong foreign language programs have laid to rest the long-standing myth that foreign language study in U.S. higher education cannot produce professional-level literacy. Given the fact that this program enrolls students from multiple disciplines across the campus, the Flagship data show that the opposite is true, that the curricular resources are available, and that high-level outcomes are possible not just for a narrow group of linguists, but for students in any field of study.

Finally, there is a budding movement to diffuse cutting-edge innovation in higher education language learning, which is known as the Partnership for Language in the U.S. (PLUS). Thirty-eight universities have agreed to meet in October 2013 to discuss the formation of a coalition whose members will be distinguished by high-level and rigorous standards ensured by peer evaluation. This may be a sign of movement outside of the federally funded teaching foreign language (TFL) for dramatic change in language learning at the higher education level.

The Internationalization of Community Colleges

Another example of the growing presence of language and global focus in higher education is the strong momentum for the “internationalization” of community colleges, as witnessed by the growth of the Community Colleges for International Development (CCID), currently at approximately 150 domestic and international institutional members, and the International Programs and Services office of the
American Association of Community Colleges (AACC). Language teaching and learning are an integral part of internationalization.

**Conclusion:** There are strong indications of innovation in higher education language learning and teaching. However, the number of universities and colleges that are increasing investment in language is small, and the articulation with community colleges is rare. Future growth of these programs can be aided by recognition of the linguistic and cultural components of the labor market, presumably in partnership with industry. This understanding and integration is taking place slowly, but it is in need of some strong impetus.

**Beyond the Formal Education System**

**Government**

Evidence for the success of language programming outside of the formal education system is sparse because efforts here are usually not measured by standard metrics. However, government language education system in the defense, diplomacy, and intelligence spheres are the exception as they consistently and rigorously track student outcomes.

For example, the DLIFLC, the primary source of language training in the DOD, documents student outcomes across almost two dozen languages, including the hardest for English speakers to learn. From 2007 to 2012, the DLIFLC has provided the following:

- Over 9,000 2/2/1+ qualified linguists to the field
- 2,884 2+/2+/2 qualified linguist to the field
- 950 3/3/2 qualified linguists from the Basic Course Program

The measures for success in the last two years include not only 2/2/1+ *proficiency*, but also what is now termed *production*—a number that shows the percentage of students from the entering classes who graduate with 2/2/1+, regardless of attrition:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Proficiency Results</th>
<th>Production Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>77.3%</td>
<td>61.0%</td>
</tr>
<tr>
<td>2013</td>
<td>86.4%</td>
<td>66.1%</td>
</tr>
</tbody>
</table>

These data demonstrate that a disciplined and accountable program can reliably take high school graduates to significant proficiency levels in specified periods of instruction. To be sure, this success is due to a range of factors, including low student–faculty ratios, superior technology, students selected by language aptitude, native-speaking teachers, constant formative assessment and mentoring, and intensive course work. On the other hand, DLIFLC works mostly with high
school graduates, military-dictated scheduling, languages rarely taught to Americans, and a stressful environment for learners who must succeed or be reassigned or released from service. In sum, we take these data as evidence that language training for adults has grown in effectiveness, utilizing all emerging advantages while overcoming significant challenges.

On the civilian side, the FSI is likewise rigorous in its accountability, while accomplishing a quite different mission. The FSI prepares future diplomatic personnel, including ambassadors to the “3-level and beyond,” a minimum level required to execute the duties of high level negotiations in all the nations of the world. DLs challenge of teaching language 2-level language in the basic course to 19 year olds is matched by the FSI task of taking more mature learners to professional levels of proficiency in all four skills of speaking, listening, reading and writing.

Industry

The language industry provides a full range of services in support of adult language learning, in particular supplementing the government language education system, and is relied upon heavily for continuing sustainment and enhancement of language skills. Industry language training providers are required to document their success, but these data are proprietary. However, many companies have rigorous standards and output data, and part of their appeal is their willingness and ability to share such data. An example of this kind of company is Transparent Language, which has supports offices and agencies across the government as well as the general education system.

Industry provides manifold language learning opportunities for the adult general public who want to begin language study or enhance abilities learned in school and college. The language industry is rife with schools, programs, courses, and software of variable quality and cost. As an individual, a learner can find instruction, games, native-speaking partners, news broadcasts, and street interviews, managed by programs designed specifically for the language learner (e.g., Duolingo, Livemocha, SCOLA, etc.) Opportunities for language learning outside the formal education system abound, but their appropriateness, quality, and cost must be considered. To help manage this growing flood of opportunities, ASTM International and the International Organization for Standardization (ISO) have major efforts in the language area.

Finally, industry is also providing new tools to teachers of online language learning classes. For example, the Gates Foundation is creating a simple aid to help teachers find useful applications and websites from all over the world. As Bill Gates puts it in an interview:}
It’s probably no surprise that I am a big believer in the ability of technology to enhance education in a big way. But it hasn't yet had the kind of impact that I think it can. One reason is that teachers have a hard time finding the applications and websites that will work for them and their students. They waste a lot of time—and sometimes their own money—trying to find just the right product. With Graphite, teachers can search for these products in a variety of ways (by subject, grade level, cost, etc.) and also see what other teachers and education experts thought of each one. The idea is to help teachers connect with the best available technology that’s going to help them do their best work.

**Conclusion:** Private industry is expanding to meet the growing demands for language services. The market will clearly favor companies that can provide high quality and low cost, thus taking advantage of breakthroughs in science, technology, and best practice. If education can find a way to partner with industry, reform and access will be accelerated significantly.

**Baselines, Standards, and Assessment**

Any claim for effectiveness of instruction and learning, particularly asserting significant change, has to be supported by hard data. The language education field is particularly adept in this regard, as it has established standards and rigorous assessments that have been in place for decades. Ideally, one must define, however tentatively, a baseline assess change. While modest claims can be made here, the final conclusion will be that more needs to be done to establish rigorous baselines and document change across the entire language enterprise, particularly in the formal education sector.

In the government sector, the history of output in DLIFLC and FSI are sufficiently documented to set a baseline at any point in time in the last two decades. In education, this is a far more difficult assignment because of the lack of secure testing instruments in reading and listening. On the PK-12 level, the absence of the National Assessment for Educational Progress (NAEP) for language makes assessment of outputs impossible at this time.

For higher education, the picture is somewhat mixed. While a good number of institutions test their graduates (e.g., Brigham Young University), there is no amalgamation of data sources that would suggest outputs of the system. However, there are some data available from American Councils for International Education that suggest an output baseline for higher education. The American Councils has the entering scores for most students taking part in its overseas language programs, which can serve as a good proxy for the level of
proficiency obtainable at the host institution prior to an overseas semester ($N = 785$) or academic year ($N = 236$) (junior year abroad; senior semester or year away).

Here are the latest results of the American Councils research:\(^46\)

1. **Speaking Score** after a minimum of six semesters of study or equivalent: Mean is 4.58 (S.D. 1.55) for semester students; 4.78 (SD 1.70) for academic year students, where 5.0 = Intermediate Low.

2. **Reading Score** after a minimum of six semesters of study or equivalent: Mean is 7.03 (SD 2.27) for semester students; 7.43 (SD 2.46) for academic year, where 7.0 = Intermediate High.

3. **Listening Score** after a minimum of six semesters of study or equivalent: Mean is 5.72 (SD 1.57) for semester students; 5.80 (SD 1.47) for academic year, where 6.0 = Intermediate Mid.

A summary statement by the president of the American Councils can serve as a general baseline for the output of language programs in higher education:

> "Without study abroad, our non-Flagship programs have fairly consistently produced Intermediate-Level speakers, readers and listeners in the target language."\(^47\)

Additional research confirms these findings. Using the Defense Language Proficiency Test (DLPT) plus ACTFL OPI scores (telephonic) to measure proficiency before and after study abroad for third and fourth year students at the U.S. Military Academy ($N = 498$) in seven languages (Arabic, Chinese, French, German, Portuguese, Russian, and Spanish), the resulting baselines and gain patterns are absolutely consistent with the American Councils studies.\(^48\)

Importantly, these data provide a baseline against which to evaluate the best practice in higher education, which we can take as the output of the DLNSEO’s Language Flagship Program. The larger issue concerns the changes that Flagship and some other institutions have instituted in the past few years to change this baseline picture, which is amazingly unchanged from the time of John Carroll’s study of a half century ago.\(^49\) The conclusion? We are capable of significantly improving the effectiveness of language education in our nation’s colleges and universities. More importantly, it appears that the output of our higher education system is able meet the workforce requirements of professional level language ability, but at this stage only in select institutions.\(^50\)
Summary Findings and Recommendations

We now list tentative answers to the questions we set out to answer in this white paper.

Q. Is this time different for language in the United States?
A. Yes, without question.

Data and testimony of experts show expanding demand for language services in private industry, growing demand for language learning opportunities, and increasing demand for a full range of language skills in the DOD and IC.

Q. If so, is universal access to language learning required?
A. Yes, if we understand it as the “logical” solution.

A full range of skills, from exposure to true expertise, is required to meet current and projected demand. In addition, the cognitive advantages of dual language use as applied to education for the young and the challenges of age are clear.

Q. Is universal access feasible?
A. Yes, technically, given advances in technology.

The availability of language learning opportunities inside and outside the formal education system in multiplying every day and includes the explosion of technology-enabled language learning and use opportunities on the Internet.

Q. Is high-quality universal and equal access feasible now?
A. No, given less-than-universal good practice and still “promise” of cognitive science.

The problem is the lack of universal access to the Internet in educational and social settings, as well as the not-quite-ready-for-prime-time quality of cognitive research.

Q. Is universal access feasible in the next five years?
A. Possibly, if we prepare now.

The optimistic answer in E is based on the near-term promise of science, technology, and best practice.

Q. Are there reasonable measures that can be taken that will enhance the possibility in that span of time?
A. Yes, and that is the reason for the recommendations below.
RECOMMENDATIONS

PUBLIC RELATIONS

A public awareness campaign on the personal, societal and educational benefits of language education.

In spite of the evidence in the preceding sections, no commodity succeeds unless it is useful and available. With regard to language, it is not clear that its usefulness is universally recognized among the American public; nor is it clear that its availability is appreciated. Accordingly, the first recommendation is to remedy this situation through a major public relations campaign focused less on advocacy as much as on evidence. This campaign would also be responsible for promoting and promulgating existing standards that assure quality.

MECHANISMS

A mechanism across the “Language Enterprise” that documents what language learning resources exist, where they are, and how they can be accessed, together with standards and assessments that guarantee efficiency and effectiveness.

The rationale here is simple: no matter what the demand and how adequate the supply, the system fails if the “market does not clear,” i.e. if they cannot get together. This effort would include coordinating “pipelines” and creating synergies.

Barriers

An investigation into the barriers at every level of the education system that are inhibiting the spread of language learning and teaching.

For example, a major hurdle for transferring the insights of cognitive science into language programming has been communication between language scientists and language practitioners. Few programs in the United States provide formal training in both, so findings from the language sciences typically do not inform classroom practices. Even when teachers are aware of these findings, oftentimes it appears to be difficult to see how they would translate in the language classroom. One recommendation is to create Dual Title PhD programs that train language scientists about educational needs and vice versa. Forging partnerships between education, psychology and language departments of higher education institutions with the goal of creating these dual title programs might be one way to address this issue.\textsuperscript{51}
Evidence

- A research agenda that fills the gaps in evidence regarding universal access to language education.
- To be successful, any argument for universal access has to be based on solid evidence.

Demonstrations

- A national program of dual language immersions demonstrating that learning languages can not only be effectively and efficiently integrated into a major part of the PK-12 system but also represent a powerful approach toward closing the achievement gap.
- A possible mechanism is inclusion in a new Elementary and Secondary Education Act (ESEA) reauthorization that supports learning innovations at the PK-12 level, including total and dual language immersions across the breadth of this country.

Conclusions

Anglophone countries’ constant struggle with the language problem is well documented. The Australian language picture is described up by Dr. Lo Bianco in the following manner is a perfect summary of what this white paper has revealed and a fuller version is worth repeating here:

Second language education is a subject of continual public debate in Australia, reflecting a widespread perception that the cultivation of bilingual skills among young Australians serves economic, cultural and intellectual needs. However, this positive appreciation of the importance of language learning translates to low school completion rates in second languages, high rates of attrition from university language programs and a decline in the number of languages taught, their duration, spread and level of seriousness. A deep and persistent malaise afflicts language education in Australia, regrettably shared with other English-speaking nations, and the expressions of concern, even frustration, at the fragility of languages suggests a public refusal to accept this state of affairs.
The list of issues cited in the February 2013 British Academy study represents another accurate summary of the elements shared by the United States and United Kingdom, substituting country names where appropriate:

- United Kingdom is suffering from a growing deficit in persons with foreign language skills when their global demand continues to expand;
- The range and nature of languages taught is insufficient for current and future demand;
- Language skills are needed at all levels in the workforce, not simply by the internationally mobile elite;
- A weak supply of persons with language skills is pushing down the demand and creating vicious circle of monolingualism; and
- LOTEs spoken by British school children represent a valuable future source of supply – if they can be developed appropriately.52

The United Kingdom can be said to recognize this as an education issue, in need of support from government and industry. The United States, at risk of great oversimplification, could be said to recognize language as a national security issue and is at great pain to make it an education one.
Endnotes


11 While the focus now, rightly so, is on China, the future will not be limited to one area or a few languages. For example, the Arctic is quickly attracting the interest of the major oil companies, as it is projected to hold 20 percent of global estimates of unexplored hydrocarbon potential. There are 60 major deposits of oil and gas, of which 43 are located in Russia. See Naim, Moises, “The New Arctic: How to Interpret It. And How to Rethink It,” *Oil Magazine*, No. 21, p. 13 (2013), About Oil.


numbers for elementary since most states don’t collect it. The CAL study showed about 25% of elementary schools had programs.


18 Cf, United Kingdom reinstated language requirements for elementary school children.

19 The 2,586 superintendents who responded are not a nationally representative mix; most lead districts serving between 200 and 500 students. Gallup Poll and Education Week, “Gallup-Education Week Superintendent Panel-Inaugural Survey Findings: Superintendents See the Value of Education beyond High School and Many Believe the Common Core Standards Will Create Consistency,” p.1-11 (2013), Gallup, Inc.

20 Is the provision of language learning expanding to the point of becoming “commoditized”? Quality wise, is the provision of language learning now a class of goods or services for which there is demand, but which is supplied without significant qualitative differentiation across a market.[3] With regard to cost, is it true that its price is determined as a function of its market as a whole, given the immense effect of technologies in the production and delivery of the service and product.

21 Cf. CASL’s Aptitude-by-Treatment Interaction (ATI) project (http://www.casl.umd.edu/ati) and Tailored Language Training (TLTI) (http://www.casl.umd.edu/node/2094).


24 Guili Dussias, comment at Working Group, 2013.


27 Lee Osterhout, comment at Working Group, 2013.


37 The assertions are based an attrition rate of about 40%—therefore, 60% students remaining on course completion. Then, there was a graduation rate of about 43% in 1990, which leads to a production rate estimate of approximately 25% (.60*.43 = .258 or about 26%).


42 For more detailed data on the immersion component of the Flagship program, see Davidson, Dan E., “Study Abroad: When, How Long, and with What Results? New Data from the Russian Front,” Foreign Language Annals, 43 (1), p.6-26 (2010), American Council on the Teaching of Foreign Languages. (Specifically, see Tables 6, 8, and 10.)


44 American Councils for International Education has established a shop with the goal of producing reliable and valid tests across a range of languages in reading and listening.

45 Comment on NAEP Spanish.

46 Davidson, Dan E., “Study Abroad: When, How Long, and with What Results? New Data from the Russian Front,” Foreign Language Annals, 43 (1), p.6-26 (2010), American Council on the Teaching of Foreign Languages. (Specifically, see Tables 6, 8, and 10.)

47 Dan Davidson, personal communication, 2013.


49 Davidson asserts (personal communication): “The instruments he used would no longer pass muster today, but he was certainly correct in his assessment of the levels.” See also Carroll, John B., “A model of school learning,” Teachers College Record, 64, 723-733, 1963.
A new effort is underway to involve many more colleges and universities in standards-based, accountable models of language learning. Cf. Partnership for Languages in the United States (PLUS) under The Language Partnership Group, http://languageflagshippartnership.org/.

Guili Dussias, comment at Working Group, 2013.