The Demand for Multilingual Human Capital in the U.S. Labor Market

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Abstract: *This article presents the results of a 2014 survey of more than 2,100 U.S. employers on their requirements for multilingual employees. The survey found a*

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significant discrepancy: On the one hand, 93% of respondents "value[d] employees who…are able to work effectively with customers, clients, and businesses from a range of different countries and cultures." On the other, 66% of respondents reported identifying foreign language skills in the hiring process, 41% reported giving advantage to multilingual applicants, and only 10% of respondents indicated that new hires "needed to speak at least one language besides English." In addition, the survey revealed employer characteristics related to demand for language ability: Industries with the greatest demand were government and public administration, information services, educational services, health care, and the administrative sector. Language skills were sought in combination with other skill sets, notably customer service, sales, vendor management, and marketing. Finally, the survey identified college majors sought in conjunction with foreign language ability. The study is unique in its size; its coverage of small, medium, and large businesses; and its focus on college recruitment and hiring. The results are critical to educational programs seeking to understand the value of language in the job market

Key words: *language policy, postsecondary/ higher education, survey research, value of language learning*

Introduction

The literature contains a number of studies that have cited the need among global and transnational companies, institutions, and organizations for employees who possess "global competencies" (e.g., Brown, 2014; Grandin & Berka, 2014). Institutions of higher education as well as professional associations and organizations that focus on language policy and on the teaching and learning of languages have developed frameworks that outline such competencies, such as the Asia Society (Mansilla & Jackson, 2011) and the U.S. Department of Education (2012, 2016).

These frameworks vary in their emphases on language proficiency, cultural competence, and overseas experience; however, so far no universally agreed upon definition of such a skill set has emerged from the employment sector. Moreover, while they have generally been developed with participation from the business community, these frameworks in general have not been validated by empirical research on the demand for such skills among employers.

The current study focused on one universally recognized component of global competence, namely, the ability to communicate with colleagues and clients from different cultures, and its key enabler: language. The researchers sought to quantify the overall need for employees who have proficiency in a language other than English and to identify the specific corporate sectors and functions that directly require public and interpersonal communication in a foreign language (FL). The study also examined the hiring practices that these companies employ to meet their staffing needs. Using data from the Global Talent Survey section of the 2014 edition of the Recruiting Trends survey, administered annually by the Michigan State University Collegiate Employment Research Institute (CERI), the study specifically investigated the proportion of the 2,101 survey respondents who valued FL skills in their new hires, the types of organizations (economic sector and size) that valued FL skills the most, the corporate functions that were more likely to require FL skills, and the academic majors that were most frequently sought by employers in combination with FL skills. Unlike a number of recent studies focused on employment for "bilinguals," the current work queried employers seeking job candidates with language proficiency at some level. This approach effectively included, but did not isolate, immigrant and heritage language populations with proficiency in a home language other than English as well as native English speakers with abilities in a second language.

Literature Review

Definitions of "global competencies" have emerged in the past decade as educational policy makers have attempted to characterize and design programs of study that emphasize the set of attributes that are sought by employers, particularly in international business. For example, the U.S. Department of Education (2012), citing the Asia Society and the Council of Chief State School Officers, defined global competence as "the capacity and disposition to understand and act on issues of global significance" (Mansilla & Jackson, 2011, p. xiii). This means that students can:

1. Investigate the world beyond their immediate environment, framing significant problems and conducting well-crafted and age-appropriate research.
2. Recognize perspectives, others' and their own, articulating and explaining such perspectives thoughtfully and respectfully.
3. Communicate ideas effectively with diverse audiences, bridging geographic, linguistic, ideological, and cultural barriers.
4. Take action to improve conditions, viewing themselves as players in the world and participating reflectively (see also U.S. Department of Education, 2012, p. 6).

It is important to note that language proficiency is deemphasized in these descriptions. In contrast, the U.S. Department of Defense (2011, p. 8) defined global competencies more narrowly and included language, regional expertise, and culture. These competencies are often viewed by the U.S. Department of Defense as separable from and independent of each other. Similarly, the Interagency Language Roundtable (ILR) recently developed a set of proficiency guidelines for competence in intercultural communication (ILR, 2012) that do not include language proficiency requirements.

However, early in the development of the ILR scale in the late 1950s, Carroll and his colleagues conducted extensive observations of the tasks that were performed in other languages by U.S. diplomats (Lowe, 1988), and since that point in time, the U.S. government's language proficiency scales have addressed both language skills and cultural skills, particularly at higher levels of language proficiency. Currently, cultural skills are included in most extant language proficiency scales, including those of the ACTFL (2012), the ILR (2012), and the Council of Europe (2001). (See Lowe, 1988, for a concise history of the development of the ILR and ACTFL proficiency scales.) These proficiency scales have been developed by language educators and researchers, with some engagement with employers—in particular in the U.S. government—and they advance a different, more integrated, definition: Global competencies combine a high level of language proficiency, whether acquired in school or at home, with similarly developed levels of cultural proficiency, often enabled by extended in-country experience.

However, while researchers and policy makers will certainly continue to discuss the definition and scope of global competencies, less is known about the *demand* for globally competent professionals—that is, the educational qualifications and skills that are most sought by employers, the tasks that globally competent individuals are expected to perform, and the contexts in which such skills are required. Important studies on "bilinguals" (see Callahan & Gándara, 2014), which have used the term *bilingual* to refer to heritage speakers with a fluent language ability in both a native or heritage language and English, have offered new insights into what is often referred to as the "bilingual advantage." In fact, the 2011 Forbes Insights, a survey of more than 100 executives from large U.S. firms, as well as Porras, Ee, and Gándara's (2014) data gathered from 289 in-person and over-the-phone interviews, both provided a strong indication of corporate interest in bilingual applicants and employees, although Porras et al. was limited to a sample of California-based businesses.

Prior surveys of the business demand for language skills have tended to focus on

how senior corporate executives value these skills. For example, Moxon, O'Shea, Brown, and Escher (1998) found that other skills—technical, interpersonal, and general business acumen—were valued more highly than language and international skills and experience. Fixman (1990); Bikson, Law, CPC Foundation, and Rand Institute on Education and Training (1994); Kedia and Daniel (2003); and Daniel, Xie, and Kedia (2014) all took a similar approach: They asked executives about their attitudes toward and perceptions of international expertise, typically in the context of businesses undergoing globalization, and the desirability of international expertise among the staff of their companies. In these studies, international expertise was generally defined as the combination of overseas experience and language proficiency. While the perspectives of CEOs are certainly valuable when seeking to understand economic trends and develop business strategies, these studies shed little light on actual hiring practices. That is, regardless of the intent of CEOs, the question that is arguably most impactful with respect to the employment market is whether companies are seeking to hire, and are then actually hiring, individuals who possess these skills.

Thus, the current study focused on current employers' reported actual practices when hiring recent college graduates who possess FL skills, at any level of proficiency and however acquired. To better understand the demand for globally competent members of the work force, this study aimed to answer the following questions:

1. To what extent do companies value employees who are able to work effectively with customers, clients, and businesses across a range of different countries and cultures?
2. To what extent do these organizations specifically value FL skills in their new hires?
3. Which types of organizations (economic sector and size) value FL skills the most?
4. Which corporate functions are more likely to require FL skills?
5. Which academic majors are sought in combination with proficiency in another language in addition to English?

Methods

Background

The Recruiting Trends survey is conducted annually by CERI at Michigan State University. In 2014, CERI participated in the symposium "Humanities+" at Brigham Young University (Brown, 2014). That symposium focused on the value of language proficiency across a broad range of careers, including engineering (Grandin & Berka, 2014), diplomacy (Bernhardt, 2014), and others. One outcome of the symposium was an invitation from CERI to some of the authors of this article (Rivers and Brecht) to develop a module on linguistic and cultural capital. That module was included as part of the 2014 Recruiting Trends survey. It aimed to ascertain the level of demand for prospective employees who had high levels of language and intercultural skills and to examine the relationship between those skills and the specific positions that recruiters were seeking to fill as well as the relationship to those prospective employees' major areas of study.

The survey module was distributed to nearly 300 college and university career service centers from around the country, who then made the survey available to employers who had actively sought college talent through their career services offices within the previous 24 months. A total of nearly 5,650 human resource professionals who were seeking to fill full-time positions, internships, and co-ops responded to the survey in 2014; 2,101 of those respondents completed at least part of the language and culture module. The module can be found online at https://www.iris-database.org/iris/app/home/detail?id=york:927394.

Participants

The 2,101 participants who completed the language and culture module of the Recruiting Trends survey represented small, medium, and large companies and organizations (see Figure 1) in every state other than Vermont, as well as from the District of Columbia and U.S. territories. Nine responses were received from organizations in foreign countries. Respondents represented a variety of economic sectors, including for-profit, nonprofit, and government organizations.

Valuing Corporate Cross-Cultural and Language Competencies

The language and culture module included a range of items investigating the respondents' valuing of language and cultural skills in recruitment and hiring. This article reports on the results of a subset of these items: one item relating to intercultural ability generally, and five identifying different ways that employers prioritized language skills specifically.

The first item investigated the extent to which an enterprise valued intercultural and global communication ability:

Item 1 (valuing of employees with cross-cultural ability): As an employer, I value employees who can show they are able to work effectively with customers, clients, and businesses from a range of different countries and cultures.
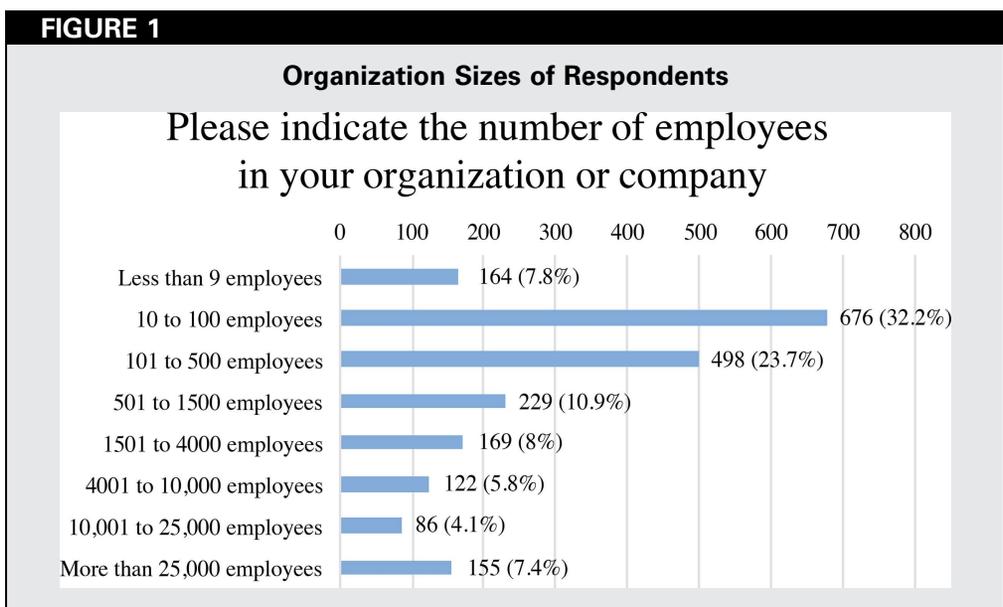
Participants were asked to choose among five response options: "strongly disagree," "disagree," "neither agree or [sic] disagree," "agree," and "strongly agree."

The next four items addressed employers' need for and documentation of language proficiency:

Item 2 (identification of FL skills): Does your organization have a recruitment strategy which identifies foreign language skills?

Item 3 (level of FL competence): Does your organization have a recruitment strategy which specifies levels of foreign language competence?

Item 4 (notation of first language competence): Does your organization have a recruitment strategy which records

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FIGURE 1

Organization Sizes of Respondents

Please indicate the number of employees in your organization or company

- Less than 9 employees: 164 (7.8%)
- 10 to 100 employees: 676 (32.2%)
- 101 to 500 employees: 498 (23.7%)
- 501 to 1500 employees: 229 (10.9%)
- 1501 to 4000 employees: 169 (8%)
- 4001 to 10,000 employees: 122 (5.8%)
- 10,001 to 25,000 employees: 86 (4.1%)
- More than 25,000 employees: 155 (7.4%)

the candidates' capability in a first language other than English?

Item 5 (multilingual advantage): Does your organization have a recruitment strategy which gives advantage to multilingual candidates?

For these four questions, survey takers were offered four response options: "yes," "no," "don't know," and "not applicable." Only "yes" and "no" responses were included in the analysis, creating a dichotomous variable. "Don't know" and "not applicable" were treated as nonresponses. The final item was:

Item 6 (FL requirement): In your organization, do new hires need to speak at least one language besides English?

It offered two response options ("yes" and "no") and for analysis was considered to be a dichotomous variable.

Organization Characteristics Variables

The survey also collected data on a number of organization characteristics. Here, four variables are reported: size, economic sector, position type, and preferred major/field of study; see the Appendix for complete lists of sectors, tasks, and majors. Organizations reported their general economic sectors by selecting a sector from the North American Industrial Classification System, as defined by the U.S. Census Bureau (2012b). Organizations were also asked to identify the type of position title options that had "a global dimension" for which they would "hire young adults with less than 5 years experience." The 12 position titles were selected through a separate pilot survey administered in March 2014 to 37 language companies by the Globalization and Localization Association and the Joint National Committee for Languages (as part of the process of developing the final survey instrument). Finally, while organizations were not directly asked from which categories of academic majors they preferred to

recruit new hires, they were asked to select individual majors from lists that were grouped by academic focus. For example, the group "Agriculture, Natural Resources, and Environmental Sciences" included majors in environmental sciences, animal sciences, food safety, and seven others; "Arts, Humanities, and Social Sciences" included performing arts/visual arts, foreign languages, history, sociology/anthropology, international relations/public policy, and 10 others. For purposes of analysis, these groups were considered as single dichotomous variables: If any major within the larger area of academic focus was selected, the group as a whole was considered to be selected.

Weighting and Analysis

The distribution of organization sizes from which survey responses were received was not representative of the distribution across the U.S. economy as reported in the U.S. Economic Census (U.S. Census Bureau, 2012a): While the 2012 census showed that 79% of companies had fewer than 10 employees, in this sample only 7.8% of the respondents were from organizations that had fewer than nine employees (n.p.).[1] Similarly, the U.S. Census showed that only 0.3% of organizations had more than 500 employees, while in this sample 36.3% of the respondents represented organizations that employed 501 people or more (2012a, n.p.). Rather than simply weighting cases according to the number of organizations of a given size in the U.S. Census, it was decided to weight cases by the percentage of employees in the census who were employed by organizations of a given size. For example, according to the U.S. Census, while only 0.3% of organizations had more than 500 employees, those organizations employed 52.7% of American workers (2012a, n.p.). Four size categories were established for weighting purposes: 9 or fewer employees, 10 to 100 employees, 101 to 500 employees, and 501 or more employees. Responses from each category

were weighted appropriately so that results would reflect more accurately the impact of employer preferences on the American workforce.

Pearson's chi-square tests were used to determine whether there was a significant relationship between organizations' recruitment or hiring practices relating to FL skills and other characteristics or hiring practices. In cases in which one cell in a contingency table had an expected value of less than five, rendering the results of a Pearson's chi-square test less reliable, significance was determined using a Fisher's exact test (two-sided). After all the tests were run, a Holm-Bonferroni correction (Gaetano, 2013; Holm, 1979) was applied to control for family-wise error, the risk of false positive results when performing multiple hypothesis tests.

Results

The vast majority of companies in the sample stated a clear need for staff who can interact with a multicultural and global clientele. However, the data in this survey were mixed in terms of the extent to which language skills were prioritized in hiring to meet this need.
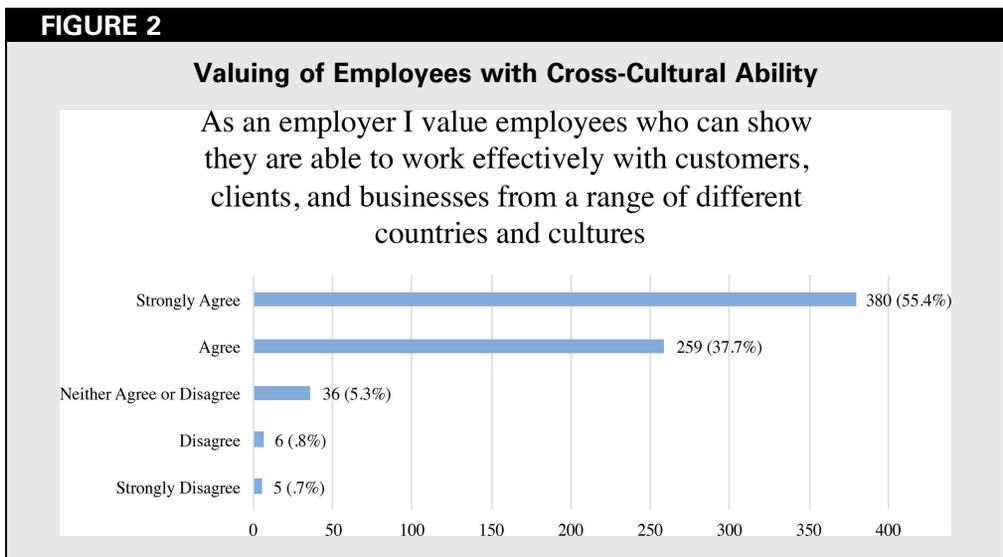
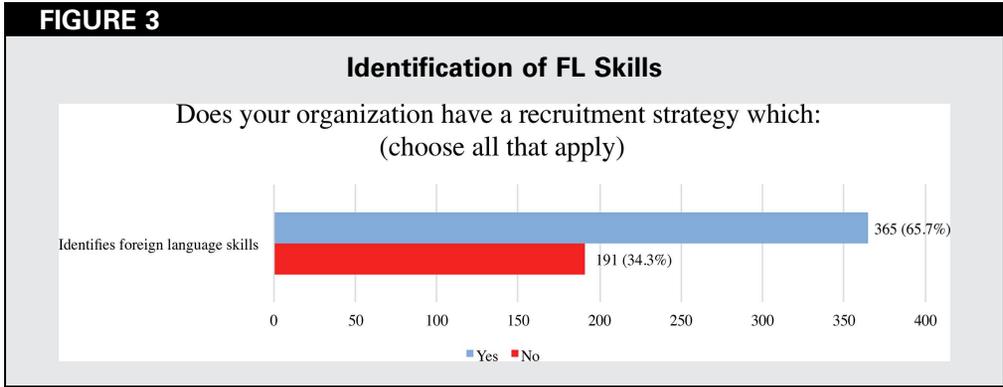## Importance of Global Competence and Language Skills

As shown in Figure 2, a large majority of the 622 respondents agreed or strongly agreed that they valued "employees who can show they are able to work effectively with customers, clients, and businesses from a range of different countries and cultures."[2] Furthermore, as shown in Figure 3, a majority of the respondents indicated that they had a recruitment policy that identified FL skills.

However, as shown in Figure 4, fewer respondents indicated that their recruitment policies specified levels of FL competence, recorded proficiency in a first language other than English, or gave advantage to multilingual candidates.[3] What is more, as shown in Figure 5, only a very small proportion of the 636 respondents who answered this question indicated that new hires needed to speak at least one language in addition to English (also see Table 1).[4]

Patterns in Recruitment Strategies by Economic Sector

Organizations in the government and public administration sector were more likely than organizations in other sectors to indicate,

FIGURE 2

Valuing of Employees with Cross-Cultural Ability

As an employer I value employees who can show they are able to work effectively with customers, clients, and businesses from a range of different countries and cultures

Strongly Agree	380 (55.4%)
Agree	259 (37.7%)
Neither Agree or Disagree	36 (5.3%)
Disagree	6 (.8%)
Strongly Disagree	5 (.7%)

FIGURE 3

Identification of FL Skills

Does your organization have a recruitment strategy which:
(choose all that apply)

Identifies foreign language skills — 365 (65.7%) [Yes], 191 (34.3%) [No]

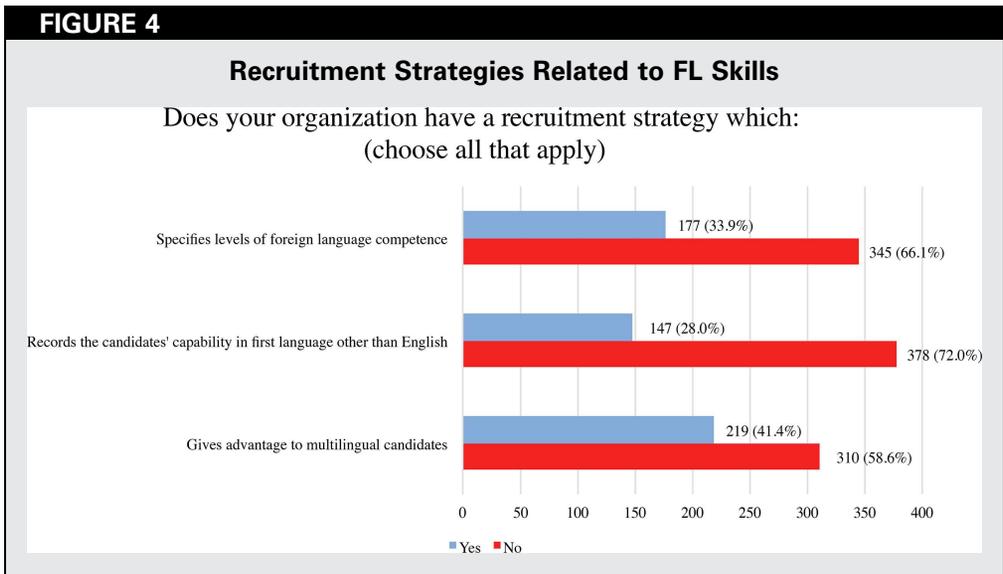(scale: 0, 50, 100, 150, 200, 250, 300, 350, 400)
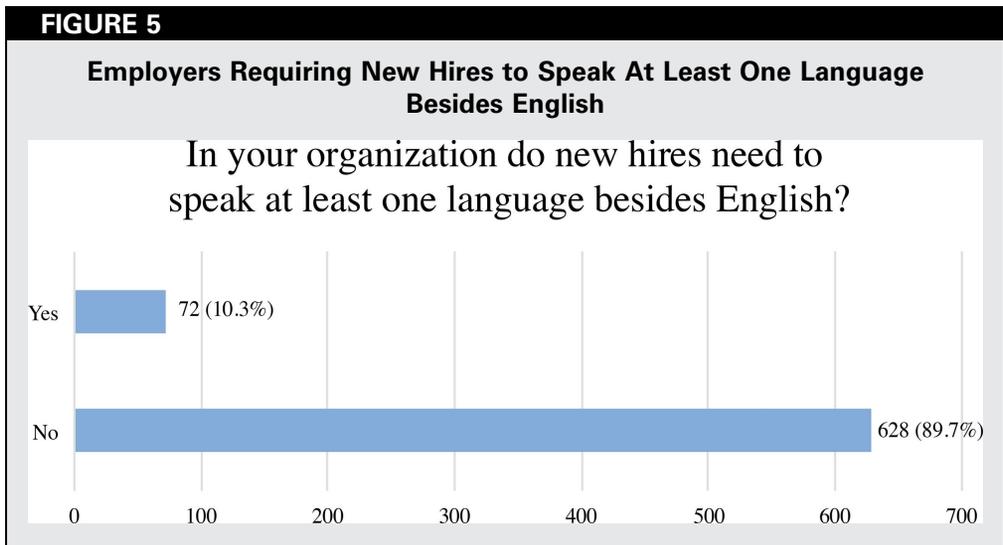
■ Yes ■ No

across several survey questions, that they paid attention to language skills in the recruitment process. Members of this sector were significantly more likely than others to report specifying levels of FL competence (62% of respondents from this sector; χ^2 (1) = 14.185, $p = 0.000$ [odds ratio 3.531])[5] and recording candidates' capability in a first language other than English (60%; χ^2 (1) = 19.048, $p = 0.000$ [odds ratio 4.333]). Members of the government sector were also more likely to report identifying FL skills (82%; χ^2 (1) = 5.005 [odds ratio 2.526]) and giving advantage to multilingual candidates (63%; χ^2 (1) = 7.114 [odds ratio 2.551]).[6]

Members of the administrative sector also indicated that they valued FL skills, with organizations in this sector more likely than others to report identifying FL skills (100% of respondents from this sector; χ^2 (1) = 4.787 [odds ratio 10.21]) and specifying levels of FL competence (71%; χ^2 (1) = 4.438 [odds ratio 4.970]) as part of the recruitment process.

Organizations in the information services sector were more likely than others to specify levels of FL competence (60% of respondents from this sector; χ^2 (1) = 4.664 [odds ratio 3.018]); organizations in the educational services sector were more likely than others to report giving an advantage to

FIGURE 4

Recruitment Strategies Related to FL Skills

Does your organization have a recruitment strategy which:
(choose all that apply)

Specifies levels of foreign language competence — 177 (33.9%) [Yes], 345 (66.1%) [No]

Records the candidates' capability in first language other than English — 147 (28.0%) [Yes], 378 (72.0%) [No]

Gives advantage to multilingual candidates — 219 (41.4%) [Yes], 310 (58.6%) [No]

(scale: 0, 50, 100, 150, 200, 250, 300, 350, 400)

■ Yes ■ No

FIGURE 5

Employers Requiring New Hires to Speak At Least One Language Besides English

In your organization do new hires need to speak at least one language besides English?

Yes: 72 (10.3%)

No: 628 (89.7%)

multilingual candidates (58% of respondents from this sector; χ^2 (1) = 3.797 [odds ratio 2.551]) and to require new hires to speak at least one language other than English (20% of respondents from this sector; χ^2 (1) = 4.4 [odds ratio 2.33]). Organizations in the health care sector were more likely than others to require new hires to speak at least one language other than English (24% of respondents from this sector; χ^2 (1) = 4.3 [odds ratio 2.9]); and organizations in the agriculture sector were more likely to specify levels of FL competence (64% of respondents from this sector; χ^2 (1) = 4.408 [odds ratio 3.50]). Sectors that were *less* likely to report documenting or preferring language skills in one or more of these ways included real estate, retail trade, finance and insurance, and the professional and scientific sector (see Table 1).

Patterns in Recruitment Strategies by Organization Size

Organizations with 10 to 100 employees were significantly more likely to report requiring new hires to speak at least one language besides English (17% of these respondents; χ^2 (1) = 6.7, $p = 0.04$ [odds ratio 2.09]). In contrast, organizations

with 4,001–10,000 employees were significantly less likely to report requiring new hires to speak at least one language besides English (1% of respondents in this sector; χ^2 (1) = 7.993, $p = 0.03$ [odds ratio 0.10]).

Organizations with 1,501–4,000 employees and those with 4,001–10,000 employees were also less likely than other organization sizes to indicate that they gave advantage to multilingual candidates in their recruiting strategies (30% of these respondents; χ^2 (1) = 4.116 [odds ratio 0.559] and 28% of respondents; χ^2 (1) = 5.123 [odds ratio 0.503], respectively). No statistically significant relationship was found between organization size and recruitment strategies that identified FL skills, specified levels of FL competence, or that recorded candidates' capability in first languages other than English (see Table 2).

Patterns in Recruitment Strategies by Global Task (Positions With Global Dimensions)

Not surprisingly, across several different survey items, organizations hiring recent graduates as linguists (translators/interpreters) were more likely than organizations not hiring recent graduates as

TABLE 1

Patterns in Recruitment Strategies by Economic Sector (Selected Sectors)

Economic sector	Identification of FL skills	Level of FL competence	Notation of L1 competence	Multilingual advantage	FL requirement
Agriculture and natural resources	90.90%	63.60%*	38.50%	53.80%	6.30%
Retail trade	70.80%	33.30%	0.00%*	50.00%	6.30%
Information services	87.50%	60.00%*	42.90%	45.50%	10.00%
Finance and insurance	59.60%	17.30%*	19.20%	35.10%	4.10%
Real estate and leasing services	41.20%*	18.80%	26.70%	36.40%	0.00%
Professional and scientific services	51.50%*	19.60%*	24.20%	30.70%*	10.40%
Administrative services	100.00%*	71.40%*	42.90%	66.70%	21.40%
Educational services	71.40%	42.40%	28.10%	57.60%*	20.00%*
Health care and social assistance	65.00%	38.90%	27.80%	33.30%	23.80%*
Government and public administration	82.10%	62.20%**	60.00%**	62.90%*	8.70%
All respondents	65.60%	34.00%	27.90%	41.40%	10.20%

Note: The table includes only sectors with notable results vis à vis the questions about language-related recruitment practices.
*These percentages were determined to be significantly different ($p < .05$) from the overall percentage in individual chi-square tests, but not significant after a Holm-Bonferroni correction. They are presented here as noteworthy, though not statistically significant, results.
**These percentages were found to significantly deviate from the overall percentage, even after a Holm-Bonferroni correction.

TABLE 2

Patterns in Recruitment Strategies by Organization Size (Selected Sizes)

Number of employees	Multilingual advantage	FL requirement
10–100	48.90%	17.10%**
1501–4000	29.70%*	7.10%
4001–10,000	27.60%*	1.20%**
All respondents	41.40%	10.30%

Note: The table includes only organization sizes with notable results vis à vis the questions about language-related recruitment practices.

*These percentages were determined to be significantly different (p < .05) from the overall percentage in individual chi-square tests, but not significant after a Holm-Bonferroni correction. They are presented here as noteworthy, though not statistically significant, results.

**These percentages were found to significantly deviate from the overall percentage, even after a Holm-Bonferroni correction.

linguists to indicate that they noted or prioritized FL skills. These organizations were significantly more likely to report having recruitment strategies that gave advantage to multilingual candidates (79% of these respondents; χ^2 (1) = 14.850, $p = 0.000$ [odds ratio 5.814]) and required new hires to speak at least one language other than English (28%; χ^2 (1) = 10.1, $p = 0.03$, Fisher's exact test [odds ratio 3.68]). These organizations were also more likely to report having recruitment strategies that identified FL skills (84%; χ^2 (1) = 3.843 [odds ratio 2.830]) and recorded candidates' capability in a first language other than English (50%; χ^2 (1) = 5.632 [odds ratio 2.726]).

Organizations that were seeking to hire recent graduates for positions in customer service were also more likely to report recruiting practices that showed that they valued language skills. These organizations were significantly more likely to report specifying levels of FL proficiency (55% of these respondents; χ^2 (1) = 24.183, $p = 0.000$ [odds ratio 3.003]) and giving an advantage to multilingual candidates (56%; χ^2 (1) = 10.061, $p = 0.026$ [odds ratio 2.027]). They were also more likely to

report identifying FL skills (76%; χ^2 (1) = 6.627 [odds ratio 1.868]) and recording candidates' capability in a first language other than English (40%; χ^2 (1) = 7.897 [odds ratio 1.929]).

Respondents who were hiring recent graduates for positions in sales and vendor management were also more likely to identify FL skills (sales: 74%; χ^2 (1) = 4.960 [odds ratio 1.625]; vendor management: 83%; χ^2 (1) = 3.972 [odds ratio 2.618]), specify levels of FL proficiency (sales: 44%; χ^2 (1) = 6.502 [odds ratio 1.720]; vendor management: 56%; χ^2 (1) = 5.954 [odds ratio 2.569]), and give advantage to multilingual candidates (sales: 50%; χ^2 (1) = 4.835 [odds ratio 1.576]; vendor management: 64%; χ^2 (1) = 6.383 [odds ratio 2.686]).

Similarly, respondents who were seeking recent graduates for positions in marketing were more likely to report recording candidates' capability in a first language other than English (38%; χ^2 (1) = 4.548 [odds ratio 1.731]). Those hiring recent graduates as project managers were also more likely to report giving an advantage to multilingual candidates (52%; χ^2 (1) = 4.396 [odds ratio

TABLE 3

Patterns in Recruitment Strategies by Global Task Recruited For (Selected Tasks)

Task	Identification of FL skills	Level of FL competence	Notation of L1 competence	Multilingual advantage	FL requirement
Linguists (translators/ interpreters)	84.0%*	50.0%	50.0%*	79.2%***	27.6%**
Project managers	69.4%	42.1%	33.7%	51.8%*	11.0%
Sales	73.5%*	43.7%*	28.6%	50.0%*	11.2%
Marketing	67.1%	37.2%	38.2%*	44.7%	12.0%
Customer service	76.1%*	55.1%***	39.6%*	55.6%***	9.2%
Vendor management	82.8%*	55.6%*	29.6%	64.3%*	20.0%
All respondents	65.60%	34.00%	27.90%	41.40%	10.20%

Note: The table includes only tasks with notable results vis à vis the questions about language-related recruitment practices.
*These percentages were determined to be significantly different (p < .05) from the overall percentage in individual chi-square tests, but not significant after a Holm-Bonferroni correction. They are presented here as noteworthy, though not statistically significant, results.
**These percentages were found to significantly deviate from the overall percentage, even after a Holm-Bonferroni correction.

1.649]). See Table 3 for further information.

Patterns in Recruitment Strategies by Field of Study

Respondents whose organizations were seeking to recruit recent graduates from the fields of social services; agriculture, natural resources, and environmental sciences; education; and arts, humanities, and social sciences were frequently among the most likely to report recruiting practices showing that they valued FL skills.

Across multiple survey questions, organizations recruiting students focusing on social services (e.g., family/community services, social work, counseling) were more likely than others to indicate that they noted or prioritized applicants' FL skills. Organizations recruiting from these fields were significantly more likely than organizations not recruiting from these fields to report identifying FL skills (81%; χ^2 (1) = 10.78, $p = 0.001$ [odds ratio 2.50]), specifying levels of FL performance (57%; χ^2 (1) = 22.699, $p = 0.000$ [odds ratio 3.134]), recording candidates' capability in a first language other than English (41%; χ^2 (1) = 7.282, $p = 0.007$ [odds ratio 4.333]), giving advantage to multilingual candidates (66%; χ^2 (1) = 22.835, $p = 0.000$ [odds ratio 3.263]), and requiring new hires to speak at least one language other than English (17%; χ^2 (1) = 6.48, $p = 0.011$ [odds ratio 2.07]).

Organizations recruiting from the fields of agriculture, natural resources, and environmental sciences (e.g., environmental sciences, animal sciences, food safety) were also more likely than others to choose responses across multiple survey items that indicated that they noted or prioritized FL skills. Organizations recruiting graduates with a focus in these fields were significantly more likely than organizations that were not to report recording candidates' capability in a first language other than English (39%; χ^2 (1) = 10.146, $p = 0.008$ [odds ratio 4.333]). They were also more likely to report identifying FL skills (75%; χ^2 (1) = 6.605 [odds ratio

1.809]), specifying levels of FL performance (42%; χ^2 (1) = 4.302 [odds ratio 1.567]), and giving advantage to multilingual candidates (50%; χ^2 (1) = 4.945 [odds ratio 1.598]).

Organizations recruiting recent graduates in education (elementary school, middle school, high school, and special education) were also more likely than others to choose responses that indicated that they valued FL skills. These organizations were more likely than others to report identifying FL skills (82%; χ^2 (1) = 11.217 [odds ratio 2.730]), specifying levels of FL performance (47%; χ^2 (1) = 6.077 [odds ratio 1.866]), recording candidates' capability in a first language other than English (38%; χ^2 (1) = 4.511 [odds ratio 1.741]), and giving an advantage to multilingual candidates (56%; χ^2 (1) = 6.963 [odds ratio 1.948]).

Respondents whose organizations were seeking recent graduates in the arts, humanities, and social sciences (e.g., performing arts/visual arts, history, sociology/anthropology, international relations/public policy) were also more likely to report several practices indicating that they prioritized FL skills. These respondents were significantly more likely to report recording candidates' capability in a first language other than English (36%; χ^2 (1) = 9.317, $p = 0.014$ [odds ratio 1.829]) and requiring new hires to speak at least one language other than English (15%; χ^2 (1) = 8.50, $p = 0.028$ [odds ratio 2.05]). They were also more likely to report specifying levels of FL competence (41%; χ^2 (1) = 6.816 [odds ratio 1.644]) and giving an advantage to multilingual candidates (49%; χ^2 (1) = 6.037 [odds ratio 1.573]).

In addition, organizations who were recruiting health services majors (e.g., nursing, medical doctors, physical therapists, health care administration) were significantly more likely to report recording candidates' capability in a first language other than English (39%; χ^2 (1) = 7.406, $p = 0.054$ [odds ratio 1.900]). They were also more likely to give an advantage to multilingual candidates (51%; χ^2 (1) 4.309 [odds ratio 1.609]); organizations recruiting

TABLE 4

Patterns in Recruitment Strategies by Field of Study Recruited For (Selected Fields)

Field of study	Identification of FL skills	Level of FL competence	Notation of L1 competence	Multilingual advantage	FL requirement
Agriculture	75.4%*	42.1%*	39.3%**	50.4%*	10.1%
Arts, humanities, and social sciences	70.3%	41.3%*	36.0%**	48.6%*	14.9%**
Communication	68.8%	36.3%	30.4%	47.4%*	12.3%
Education	82.3%*	46.6%*	38.4%*	55.6%*	11.2%
Health services	66.7%	40.2%	39.4%**	51.1%*	10.4%
Social services	80.9%**	56.8%**	40.5%**	65.8%**	17.0%**
All respondents	65.60%	34.00%	27.90%	41.40%	10.20%

Note: The table includes only fields of study with notable results vis à vis the questions about language-related recruitment practices.

*These percentages were determined to be significantly different (p < .05) from the overall percentage in individual chi-square tests, but not significant after a Holm-Bonferroni correction. They are presented here as noteworthy, though not statistically significant, results.

**These percentages were found to significantly deviate from the overall percentage, even after a Holm-Bonferroni correction.

communication majors were also more likely to give an advantage to multilingual candidates (47%; χ^2 (1) = 4.468 [odds ratio 1.471]). See Table 4 for a summary.

Discussion

Discrepancy Between Valuing Cultural Abilities and Hiring Language-Competent Graduates

The data clearly showed a discrepancy between respondents' expressed valuing of employees who possessed cross-cultural ability and respondents' specific focus on language proficiency during recruitment and hiring. More than 93% of survey respondents indicated that they valued employees who could work effectively with an intercultural and international clientele. Sixty-six percent reported that they identified FL skills in the hiring process, 41% reported that their hiring strategy gave advantage to multilingual candidates, 34% reported that they specified levels of FL competence, and 28% of respondents indicated that they recorded the candidates' capability in a first language other than English. However, only 10% of the 5,650 total human resource professionals who completed the survey indicated that their organizations required new hires to speak at least one language besides English. Given the wording of the question, it may be that some respondents interpreted this question as meaning "Do *all* new hires need to speak at least one language besides English?" and thus may have responded "no" even if they required *some* new hires to possess such skills. The very low percentage of affirmative responses may also indicate real or perceived low rates of supply: Human resource managers may believe, or have discovered through personal experience, that there is a lack of job applicants who possess the required language abilities or that their company's hiring strategies do not reward, and thus do not attract, such employees. In addition, the low rate of affirmative responses may be due to the failure of language-qualified candidates to understand the labor market; understand the

relevance of their particular academic, language, and intercultural skills; and highlight these special qualifications when applying for positions.

Organizational Characteristics

The results revealed some relationships between organization size and sector and the reported demand for FL skills. Smaller organizations, specifically those with between 10 and 100 employees, were more likely to require new hires to speak at least one language besides English, in contrast with large organizations (1,501–10,000 employees) and very large organizations (4,001 to 10,000 employees). Perhaps smaller organizations have staff who are required to engage more broadly across customer bases or different facets of the organization and its work than do larger employers. Regardless, larger organizations also reported some level of need for a language-enabled workforce, with a still-substantial number of respondents indicating that their companies gave advantage to multilingual candidates.

With regard to language and specific employment sectors, organizations in government and public administration were significantly more likely than those in other sectors to specify levels of FL competence and to record candidates' capability in a first language other than English. Sixty-two percent of government respondents (compared with 34% overall) reported specifying levels of FL competence, and 60% (compared with 28% overall) reported documenting capability in a first language other than English, likely indicating that this sector seeks highly proficient speakers of other languages, perhaps ideally native speakers. Organizations in the administrative services, educational services, health care and social assistance, agriculture and natural resources, and information services sectors were also more likely to report documenting or preferring to hire candidates who possessed FL skills, in response to at least one question. It appears that organizations involved in providing services were most supportive

of language-enabled hiring, which makes sense given the fact that services require significant personal interaction and communication, including with clients and customers from a variety of linguistic and cultural backgrounds.

Corporate Positions and Tasks

Compatible with the observations on hiring sectors that are reported above, certain corporate positions were more likely to be sought in combination with FL skills than others. Unsurprisingly, organizations that reported hiring recent graduates as linguists (translators/interpreters) were significantly more likely to report giving advantage to multilingual candidates and requiring new hires to speak a language other than English; they were also more likely to report identifying FL skills and recording candidates' capability in a first language other than English. However, in accord with our observation above concerning the service sectors, organizations that reported hiring recent graduates for positions in sales, customer service, vendor management, marketing, and project management were also more likely to report recruiting strategies that documented and prioritized FL skills.

The prevalence of language-prioritizing recruitment and hiring practices among service industries and for service positions was even more noteworthy in light of the fact that services represent more than 80% of the U.S. economy as measured by number of employees (Henderson, 2015, n.p.). For several of these service positions (sales, vendor management, project managers, customer service), a potential employee's level of FL competence was more likely to be specified than the potential employee's competence in a first language other than English, indicating that hiring native speakers of other languages was not the main priority. Interestingly, however, respondents recruiting marketers among recent college graduates were more likely to indicate that they noted first language competence in a language other than English rather than simply specifying a particular

level of FL proficiency. This may be a sign that these organizations prioritize the hiring of native speakers of other languages for marketing positions.

Ramifications for the Academic Sector

Certain undergraduate fields of study were more likely to be sought in combination with FL skills than others. Organizations that reported documenting or preferring FL skills frequently also reported recruiting students in the fields of agriculture, natural resources, and environmental sciences; arts, humanities, and social sciences; health services; and social services. Notably, even in cases where first language capability in languages other than English was documented at high rates in conjunction with particular fields of study, levels of FL competence were specified at higher rates than first language capability in a language other than English, showing that recruiting candidates with a particular *level* of FL competence was more important to these survey respondents than recruiting *native speakers* of languages other than English. Students in these fields should be made aware that FL skills will strengthen their job applications.

An Economic Framework for Interpreting the Results of the Study

The Market Forces Framework for Language provides an overall economic metaphor for viewing these results:[7]
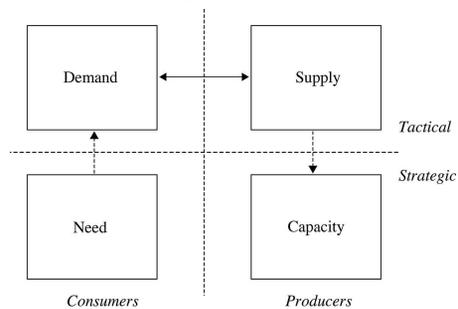
(diagram from Brecht & Rivers, 2000, p. 21)

These terms here are defined as follows: *Demand* refers to the specific tasks or interactions for which language competence is necessary or desirable.[8] *Supply* refers to the available language competencies (human and technical), their sources, and modes of their storage. While supply and demand are immediate or tactical, a national analysis of language requires more strategic considerations. Accordingly, *need* represents the perceived or latent harmful conditions that can be mitigated as well as the beneficial social marginal value that can be improved by language competence. *Capacity* is equally strategic, given the years it takes to develop language capabilities; *capacity* represents the ability of the nation or other polity to produce the supply of linguistic competence that is considered to be necessary to meet the demand.

As this framework suggests, in a functional or truly rational language market, need is viewed as the threats that a global or transnational business faces in terms of profitability, competitiveness, and an uncertain economic climate. Likewise, need represents the threats to equitable and high-quality medical care or education. The desire to meet these needs provokes on the part of business, the health care provider (health system, hospital, physician, nurse, or dentist) or educator a real demand for personnel who have the required knowledge, skills, and abilities in language and culture as well as in technical domains. If the market clears, then this demand in turn generates a supply of job candidates who possess these requisite skills. This supply of expertise is generated by an underlying capacity consisting of the education system and language service providers, who themselves are dependent on the education system.

In terms of this study, the need for language competence is abstract and global while demand is task-focused and domain-, or employer-, specific. The data suggest that employers, and maybe Americans in general, understand "need" (global security, international business, quality of care, and educational opportunity within an increasingly multilingual American population, etc.) in general terms but that employers have difficulty thinking in terms of the specific tasks that multilingual employees could undertake for the ultimate betterment of, for example, hospital and clinic patients or even of the overall success of the enterprise. The need for global marketing is clear to transnational corporations, but actual demand in terms of tasks and functions is much less so. For example, effectively marketing a product or service, caring for limited-English-proficiency patients, or ensuring appropriate educational services for children and youth requires an understanding of the criticality of interpersonal relationships; in these economic domains, high levels of intercultural competence and language proficiency are required for success. In contrast, engineers who are working in foreign countries may need a high level of cultural sophistication but may be able to successfully complete their work in spite of having relatively limited proficiency in the native language. In each instance, understanding and specifying the levels of intercultural and linguistic competence that are required for job success is critical in meeting obvious need. The data reported here continue to show a gap in employers' understanding of demand.

With regard to the supply side, graduates of language education programs constitute the primary supply of language-competence employees. The data reported above contribute to an understanding of academic domains in which language programming should be offered—an understanding that to this point has been hampered by the failure of business and other professions to define explicitly the language tasks that language-competent individuals must be able to carry out and the contexts in which individuals must be able to function effectively. It may behoove faculty and administrators across a broad range of postsecondary departments to consider the extent to which their programs prepare future graduates to effectively carry out the tasks that will be required of them and to develop more

pragmatically oriented language programming that complements traditional language and literature programs. Just as *need* is an abstraction that finds difficult resonance among employers, so too does the similarly abstract notion of national language *capacity* in the strategic planning of K–12 and postsecondary institutions. Ultimately, it is the education system that is responsible for the nation's language capacity, as the needs of business and the demands of all employers are dependent on these programs and instructional expertise.

While there are some efforts to assess the supply of language capabilities in this country, a rigorous and comprehensive study of the language capacity (skills, proficiencies, domains, and tasks) required by all five sectors (academic, government, heritage, nongovernmental organizations, and business) is needed. It is critical to know what levels of proficiency our students are achieving. The best existing data on general proficiency come from the American Councils for International Education, which has decades of proficiency data on students entering their in-country immersion programs. A summary statement by the president of the American Councils, Dan Davidson, can serve as a general indication of 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. (cited in Brecht & Rivers, 2014, p. 33)

Indeed, the research on proficiency outcomes from higher education has been remarkably consistent. For example, Brecht, Davidson, and Ginsberg (1993) found that the median speaking proficiency among students who had completed 4 years of study in Russian was Intermediate High (according to ACTFL guidelines; ACTFL, 2012); Glisan, Swender, and Surface (2013) found that the median speaking proficiency among instructor candidates across a range of languages was Intermediate High;

and Tschirner (2016) reported Advanced reading proficiency as the median attainment for language majors. In addition, research is needed on what learners can, and need, to achieve in K–12, immersion, and postsecondary programs; in short- and longer-term (1-year) study abroad programs; and in intense, rigorous, and extended language learning career-preparation programs, such as the National Security Education Program's Language Flagship initiatives (Brecht & Rivers, 2014).

Given these data, the implications for universities and for educators are clear. First, university faculty and administrators should understand the broad range of majors for whom language competence would be a distinct asset. Second, while the impact of language on the global economy has deepened in the past 15 years, the most striking change is that the language industry (translation, localization, interpreting, and other fields; see Rivers, 2015, for an overview) and the major sectors of the global economy that it serves face a substantial talent gap. The language industry continues to grow at 5–7% per year—that is, two to three times faster than the overall global economy—and is worth some $40 billion per year (DePalma, Pielmeier, Stewart, & Henderson, 2016, p. 3). Industry experts and observers expect this growth to continue, if not accelerate, due to the explosion in content, particularly from social media and its use by global companies (DePalma et al., 2016). Accordingly, there is an intense need for skilled professionals to meet this burgeoning demand for multilingual, multimodal, multidirectional communication. Among the language professionals in demand are translators and interpreters, who must possess professional levels of skills in at least two languages and must also be adept at using the kinds of technology that these professions now require. However, as shown by the results reported here, there is also demand for multilingual service professionals working in sales, marketing, customer service, project management, and vendor management. These

positions require different sets of skills in combination with linguistic proficiency. Recent college graduates who possess skills in more than one language have a range of professional opportunities open to them; the corporate tasks listed here are only those that data suggest are *most* likely to be sought in combination with FL skills, and there are many more domains and tasks for which FL skills would also be beneficial.

While the U.S. government has built its own capacity and supply system, clearly the most efficient way to meet both public and private demand is through the K–16 education system (see Brecht et al., 2013, for an extended discussion). These data give preliminary guidance to those who are involved in secondary and postsecondary language programming as they indicate the principal industry domains and duties. There are many colleges and universities that are attempting to respond to the occupational needs of language majors as well as students who major in other disciplines and also demonstrate competence in a language other than English. Nevertheless, in order for language programs across the spectrum to become "relevant," in the words of one associate dean responsible for language programming, they must undertake a set of major program modifications that (1) develop more relevant professional content, e.g., language for business, engineering, and health care; (2) encourage and incentivize students in other majors to study language; and (3) accommodate the scheduling and specific content needs of nonmajors who nevertheless seek to maximize their hiring potential by adding competencies in another language.[9]

Limitations and Future Directions

Although the findings provide a preliminary foundation on which to build an understanding of the demand for interculturally and linguistically competent citizens, a number of limitations should be kept in mind when interpreting the results.

First, a possible lack of clarity in the wording of some survey questions must be corrected in future versions of the survey. In addition, of the more than 5,650 respondents to the Recruiting Trends survey, only 37% completed all or part of the module on language and culture, and of those, only 30% answered all of the questions. While the resultant sample (2,101 who completed at least part of the module, and some 630 who completed all of it) is still robust, it will be important to explore ways to improve the response rate and the representativeness of the sample. Finally, there was no attempt in this study to define the languages that are of greatest interest to employers and the proficiency levels sought. This makes it difficult to connect the findings reported here to the recent spate of studies on "bilinguals" in the workforce (Callahan & Gándara, 2014). This is particularly important, given the fact that recent studies have shown that 28% of the U.S. population speaks a language other than English, and of those, only 32% learn their languages at school, with the balance acquiring proficiency in a non-English language at home or abroad (Rivers & Robinson, 2012, p. 372).

In addition, a range of other issues that were not addressed here should be considered in future studies:

1. First and foremost is documentation of the "supply" of language-competent individuals who are available for businesses to hire, how well the supply matches the demand from the business sector, and what specific measures the education system might undertake to produce that supply.
2. It is assumed that language proficiency upon college graduation is strongly affected by the availability and efficacy of K–12 learning. Continuing to assess students' proficiency on a national scale, particularly in light of the growth of dual-language immersion programs and the spread of measures that recognize and reward language proficiency, such

as the Seal of Biliteracy initiatives in many states, will provide information that is essential when planning continuing program offerings at the postsecondary level and ultimately estimating the supply of college graduates who bring to their future professions high levels of intercultural competence and language proficiency.

3. Professional language proficiency (i.e., ACTFL Superior-level proficiency, or ILR 3 level) is not a single, uniform target for language programming: The required level of language proficiency depends on the specific job requirements. Thus, investigating the actual linguistic and cultural requirements across a range of professions deserves significant attention. Furthermore, the findings of such studies must be used to inform instructional and assessment paradigms.

4. Language competence alone is not enough: Other skills—e.g., interpersonal and technical—and bodies of knowledge are equally important and may in fact far supersede language in the minds of employers. These also deserve significant research attention.

5. As noted above, all discussions of "language" have taken as a point of departure the understanding that global competence logically entails both linguistic and cultural knowledge and skills. However, it may still be fruitful to investigate the specific bodies of cultural knowledge and skills that contribute to success in carrying out specific tasks and positions.

6. It would also be interesting to investigate the impact of emphasizing to employers the growing body of research findings on the cognitive benefits of bilingualism—enhanced critical thinking and creative skills as well as increased flexibility and adaptability, global outlook, and teamwork skills and references—for their interest in seeking out employees who have proficiency in English and one or more other languages.

Conclusion

The demand from the business and professional communities has now become a driving force in forming language education policy and practice. While national security interests for more than half a century have reflected the value of language and cultural abilities, only in the past decade have the needs of business begun to affect attitudes toward language learning among parents, students, administrators, and language professionals. However, unlike the government agencies and offices concerned with national security, businesses continue to operate without clearly stated strategies for defining and meeting the actual demand for employees across a range of positions and levels of responsibility who are equipped with high levels of proficiency in another language in addition to English.

The current study attempted to clarify the relationships between recent college graduates' language skills and labor force requirements. Much remains to be done, but the data here indicate a disconnect between the demand for and availability of college graduates who possess strong language skills as stand-alone competencies or who demonstrate high levels of language proficiency in addition to their major or minor in another academic discipline. It is this disconnect that educational and business enterprises must address. While corporations on the one hand must understand and address the issue of global English, linguae francae, and local languages when developing their strategic language plan, the language education profession must recognize that sustained collaboration with the business community better prepares graduates who are seeking employment.

Notes

1. The survey's first category option was "less than nine employees" (in contrast to the U.S. Census Bureau's "fewer than 10 employees") but since the next option in the survey was "10 to 100 employees,"

here we treat the first category as if it read "less than 10 employees."

2. The results are weighted as described above, hence the sum of responses is higher than the 622 respondents who answered the question.

3. Percentages are the percent of respondents who answered "yes" or "no" to the particular question, and they are weighted as described above.

4. The numbers in the figure are weighted as described above (hence the sum of "yes" and "no" respondents is higher than the 636 respondents who answered the question).

5. Odds ratio is presented as an effect size. An odds ratio of 3.531 indicates that organizations in the government sector were approximately 3.5 times more likely than organizations in other sectors to report having a recruitment strategy that specified levels of FL competence.

6. Results presented without *p* values were determined to be statistically significant in individual chi-square tests, but not significant after the Holm-Bonferroni correction. They are presented here as noteworthy, though not statistically significant, results.

7. The Market Forces Framework was first proposed by Brecht and Walton (1994, 1997) and elaborated as cited here in the national security context by Brecht and Rivers (2000, p. 21), and then in the context of social justice by Brecht and Rivers (2005).

8. Grin (1999, pp. 39–40) defined supply and demand either in terms of "consumption goods and services, non-material commodities, or production factors that embody some language-related characteristics," which they called "language-specific commodities (LSCs)"; or as "some *manifestation* of language, such as the continued existence of a *linguistic environment* characterized by the presence of Welsh, Spanish or Inuktitut" (emphasis in original).

9. The Modern Language Association's ad hoc task force on language education

cited data from the National Science Foundation that only 6.1% of FL majors plan to go on to graduate study (MLA, 2009, n.p., citing National Science Foundation, 2007). VanPatten (2014, n.p.) documented that 66% of upper-division FL enrollments are neither majors or minors in that language.

Acknowledgments

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APPENDIX

Sectors, Global Tasks, and Fields of Study
Sector
Which of the following economic sector definitions best describes your company (based on your primary NAIC or SIC code)? Sectors have been listed in ascending order, based on the two-digit NAIC code.

Agriculture and natural resources (includes agricultural production, agricultural support services, and forestry)

Mining and oil/gas exploration (includes support activities for mining and drilling)

Utilities (electric power, natural gas, water supply and sewage, and steam and air conditioning supply)

Construction (residential, nonresidential, heavy, specialty trade)

Manufacturing

Wholesale trade

Retail trade

Transportation and warehousing (air, rail, water and truck transportation, pipeline transportation, support activities for transportation, postal and messenger services, and warehouse and storage)

Information services (publishing, motion pictures, broadcasting, telecommunications, Internet service providers, news syndicates)

Finance and insurance (banks, credit intermediation, mortgage and loan brokers, securities and financial investments, insurance carriers, funds and trusts)

Real estate and leasing services (real estate brokers, property managers, automotive and equipment leasing, rental centers)

Professional and scientific services (accounting firms, legal management, computer systems and services, engineering services, architectural services, scientific research, environmental consulting, marketing, public relations, media buying, veterinary services)

Administrative services (office administration, employment services, business support services)

Educational services (elementary and secondary education, colleges and universities, sports and recreation instruction, educational support services)

Health care and social assistance (ambulatory care, hospitals, outpatient, social assistance)

Arts, entertainment, and recreation (performing arts, spectator sports, agents, museums, zoos, casinos, golf courses, fitness centers)

Accommodation and food services (hotels, full-service food establishments, limited service food providers)

Nonprofit organizations (religious, grantmaking, voluntary health, human rights, environmental, civil and social organizations, professional associations)

Repair and maintenance/personal care services (automotive, electronic, commercial machinery, personal and laundry services)

Government and public administration

Not classified above: If you cannot find an appropriate definition, please check this option.

Note: NAIC = North American Industry Classification; SIC = Service Industry Classification.

Global Task

If you are hiring a young adult with less than 5 years of experience for a position with a global dimension, what types of positions would these most likely be? Check all that apply

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Linguists (translators/interpreters)
Project managers
Public relations/communications
Application developers
Localization engineers
Sales
Quality assurance
Marketing
Analysts
Customer service
Vendor management
Recruitment/HR

Fields of Study

This section contains a list of academic majors. Please indicate which academic majors you seek for your talent pool for full-time employment. Majors have been grouped by academic focus (e.g., business, engineering, and communications). We have limited the selection to majors that have been frequently selected in previous surveys. If you do not find the exact majors you seek, you will have space to add these at the end of each section. You can check as many majors as you wish.

Agriculture, natural resources, and environmental sciences
Arts, humanities, and social sciences
Business
Communication sciences
Computer science, information technology
Education
Engineering
Physical and biological sciences
Health services
Social services