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Editor's Note: This marks the first issue of the Journal of the National College Testing Association published containing works processed entirely since my assumption as Editor in 2022 It is only fitting that the first article in this issue, *Expanding Assessment Options for Learners and Speakers of Less Commonly Tested Languages* by Linda Egnatz and Victor D. O. Santos, Ph.D., is also the first article submitted under my watch. We have a number of other submissions that are in the works and hopefully will be added to Volume 6, in the months to come. I want to thank Sara Rieder Bennett and the Editorial Board for all their help this past year as I learned the ropes. I also want to thank those that have served as reviewers and most importantly, those who have submitted works to be considered for publication. I am both honored and thankful for this opportunity to give back to NCTA.—Steve Saladin, Ph.D., Editor

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Expanding Assessment Options for Learners and Speakers of Less Commonly Tested Languages

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Global Seal of Biliteracy

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The number of students enrolled in foreign language classes at institutions of higher education in the United States has been declining since 2009, and especially since 2013, according to the latest Modern Language Association report on the topic (Looney & Lusin, 2019). Moreover, a large number of heritage languages spoken by students in the United States are either never or only rarely offered at these institutions, making it especially difficult for speakers of these languages to receive college credit for their language skills. Three practical solutions towards ensuring that these students' linguistic proficiency is recognized at institutions of higher education are presented: (1) State Seals of Biliteracy; (2) Global Seal of Biliteracy; and (3) direct partnerships with language test providers. Language proficiency is generally established via measuring four skills: two receptive skills (Reading and Listening) and two productive skills (Writing and Speaking). The plausibility of using assessment of only the two productive skills in cases where four-skill tests are not available is evaluated. Awarding foreign language college credit to speakers of all languages other than English, including less commonly taught languages, will benefit not only the students themselves but also their institutions and society at large.

Keywords: LCTLs; Seal of Biliteracy; less commonly taught languages; college credit, fairness

EXPANDING ASSESSMENT OPTIONS FOR LEARNERS AND SPEAKERS OF LESS COMMONLY TESTED LANGUAGES

The number of students enrolled in foreign language classes at institutions of higher education in the United States has been declining since 2009, and especially since 2013, according to the latest Modern Language Association (MLA) report on the topic (Looney & Lusin, 2019).1 Between fall of 2013 and fall of 2016, the total number of students enrolled in classes of languages other than English (LOTEs) decreased by 9.3%, and the number of foreign language programs reporting enrollments decreased by 5.3%, based on the sample of 2,547 institutions surveyed in the report. Based simply on the numbers above, one cannot infer that the study of foreign languages itself is decreasing among postsecondary students in the United States. Students could be resorting to other means of learning a language outside of academic institutions, especially given the easy access to free online foreign language learning opportunities through platforms such as Duolingo, Babbel, Italki, and others. For instance, the number of monthly active users of Duolingo, the most popular online language learning app, increased from five million in 2013 to 30 million in 2016 (Curry, 2022).

Nonetheless, post-secondary foreign language enrollment is decreasing, despite the important role that these institutions can play in helping students achieve higher levels of fluency in a foreign language. They are also crucial in ensuring that students' language skills can be successfully leveraged to expand access to study-abroad programs, internships, and job opportunities, as well as to enable successful participation in an increasingly global and diverse work and academic force.

¹ The next edition of the MLA report is scheduled to be published in spring 2023.

5 5	,		9	9			
	2006	2000	% Change,	2012	% Change,	2016	% Change,
	2006	2009	2006-09	2013	2009–13	2016	2013–16
Spanish	822,148	861,015	4.7	789,888	-8.3	712,240	-9.8
French	206,019	215,244	4.5	197,679	-8.2	175,667	-11.1
American Sign Language	79,744	92,068	15.5	109,567	19.0	107,060	-2.3
German	94,146	95,613	1.6	86,782	-9.2	80,594	-7.1
Japanese	65,410	72,357	10.6	66,771	-7.7	68,810	3.1
Italian	78,176	80,322	2.7	70,982	-11.6	56,743	-20.1
Chinese	51,382	59,876	16.5	61,084	2.0	53,069	-13.1
Arabic ¹	24,010	35,228	46.7	33,526	-4.8	31,554	-5.9
Latin	32,164	32,446	0.9	27,209	-16.1	24,866	-8.6
Russian	24,784	26,740	7.9	21,979	-17.8	20,353	-7.4
Korean	7,146	8,449	18.2	12,256	45.1	13,936	13.7
Greek, Ancient ²	22,842	21,515	-5.8	16,961	-21.2	13,264	-21.8
Portuguese	10,310	11,273	9.3	12,407	10.1	9,827	-20.8
Hebrew, Biblical ³	14,137	13,764	-2.6	12,596	-8.5	9,587	-23.9
Hebrew, Modern	9,620	8,307	-13.6	6,698	-19.4	5,521	-17.6
Other Languages	33,800	39,349	16.4	34,746	-11.7	34,747	0.0
Total	1,575,838	1,673,566	6.2	1,561,131	-6.7	1,417,838	-9.2

Table 1 *Language Enrollments for Fall and Percentage Change*

Number of institutions reporting in 2016: 2,547.

Note. From Enrollments in Languages Other Than English in United States Institutions of Higher Education, Summer 2016 and Fall 2016: Final Report, by D. Looney and N. Lusin, June 2019, p. 32. Copyright 2019 by the Modern Language Association. Reprinted with permission.

The percentage of students enrolled in LOTEs at post-secondary institutions in the United States in fall 2016 was 7.5% and was the lowest observed since 1986. These enrollment trends differ by language (see Table 1) and by state (see Table 2), but the overall negative trend is clear.

Most of the available courses are introductory courses, as seen in Figure 1, giving mostly beginning or still not proficient students an opportunity to improve their language skills. However, for students or heritage and native speakers of those languages who already have a more solidified level of proficiency, the opportunities to further develop their skills at these institutions of higher learning are much more limited.²

^{1.} Includes enrollments reported under "Arabic," "Arabic, Algerian," "Arabic, Classical," "Arabic, Egyptian," "Arabic, Gulf," "Arabic, Iraqi," "Arabic, Levantine," "Arabic, Modern Standard," "Arabic, Moroccan," "Arabic, Qur'anic," "Arabic, Sudanese," and "Arabic, Syrian."

^{2.} Includes enrollments reported under "Greek, Ancient," "Greek, Biblical," "Greek, Koine," "Greek, New Testament," and "Greek, Old Testament." Excludes enrollments reported under "Greek," "Greek and Hebrew," and "Greek and Latin."

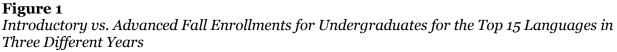
^{3.} Includes enrollments reported under "Hebrew, Biblical," "Hebrew, Classical," and "Hebrew, Rabbinic." Excludes enrollments reported under "Hebrew" and "Hebrew, Biblical and Modern."

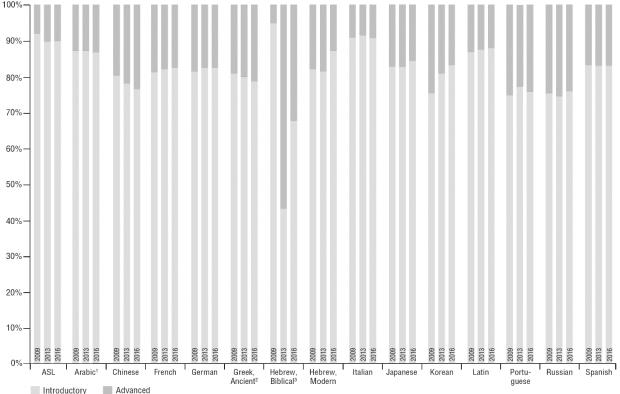
² Heritage speakers refers to those who have learned a non-dominant language at home, usually from their parents. These speakers tend to be bilingual, and the heritage language tends not to be as dominant for them as the main language spoken around them in society. Their dominant language, which they would also have learned from a young age by exposure to it in society at large, tends to be considered their native language.

Table 2State-Level Fall Language Enrollments

	3 3		% Change,		% Change,
	2009	2013	2009–13	2016	2013–16
Alabama	16,999	16,581	-2.5	14,618	-11.8
Alaska	3,612	2,327	-35.6	2,056	-11.6
Arizona	39,673	33,890	-14.6	30,053	-11.3
Arkansas	11,499	11,475	-0.2	10,063	-12.3
California	220,837	200,250	-9.3	177,233	-11.5
Colorado	25,504	21,909	-14.1	20,585	-6.0
Connecticut	19,009	17,950	-5.6	16,818	-6.3
Delaware	5,949	6,688	12.4	5,507	-17.7
District of Columbia	17,902	23,906	33.5	19,390	-18.9
Florida	56,627	52,992	-6.4	51,940	-2.0
Georgia	44,258	42,763	-3.4	45,603	6.6
Hawaii	9,657	9,985	3.4	8,198	-17.9
Idaho	7,161	7,142	-0.3	7,325	2.6
Illinois	58,767	50,372	-14.3	38,950	-22.7
Indiana	48,048	39,381	-18.0	42,522	8.0
Iowa	18,296	15,795	-13.7	15,717	-0.5
Kansas	12,453	11,027	-11.5	10,077	-8.6
Kentucky	21,333	20,530	-3.8	16,860	-17.9
Louisiana	19,372	17,007	-12.2	16,528	-2.8
Maine	4,660	4,236	-12.2 -9.1	3,994	-2.6 -5.7
Maryland	27,450	29,947	9.1	24,827	-J./ -17.1
Massachusetts		46,083	-9.1	41,652	-17.1 -9.6
	50,689				
Michigan	53,372	46,958	-12.0	38,890	-17.2
Minnesota	33,134	28,912	-12.7	25,310	-12.5
Mississippi	13,830	13,081	-5.4	12,413	-5.1
Missouri	31,434	34,507	9.8	32,081	-7.0
Montana	3,933	3,518	-10.6	3,337	-5.1
Nebraska	8,727	7,770	-11.0	6,997	-9.9
Nevada	10,754	9,455	-12.1	8,832	-6.6
New Hampshire	5,847	6,177	5.6	4,978	-19.4
New Jersey	39,081	36,926	-5.5	33,398	-9.6
New Mexico	11,133	11,836	6.3	11,547	-2.4
New York	144,870	141,436	-2.4	134,052	-5.2
North Carolina	66,001	63,301	-4.1	59,101	-6.6
North Dakota	2,998	2,507	-16.4	1,827	-27.1
Ohio	58,450	57,792	-1.1	54,890	5.0
Oklahoma	16,789	14,852	-11.5	13,253	-10.8
Oregon	31,595	28,985	-8.3	20,861	-28.0
Pennsylvania	82,269	71,211	-13.4	65,740	-7.7
Rhode Island	9,011	9,073	0.7	9,274	2.2
South Carolina	32,784	31,256	-4.7	28,906	-7.5
South Dakota	3,331	2,791	-16.2	2,330	-16.5
Tennessee	29,370	27,062	-7.9	24,578	-9.2
Texas	98,657	91,664	-7.1	84,615	-7.7
Utah	20,314	19,214	-5.4	17,140	-10.8
Vermont	6,099	5,884	-3.5	4,809	-18.3
Virginia	47,905	45,012	-6.0	41,472	-7.9
Washington	28,463	25,341	-11.0	22,696	-10.4
West Virginia	9,431	7,754	-17.8	6,233	-19.6
Wisconsin	31,132	31,730	1.9	25,457	-19.8
Wyoming	3,097	2,890	-6.7	2,305	-20.2
Total	1,673,566	1,561,131	-6.7	1,417,838	-9.2

Note. From Enrollments in Languages Other Than English in United States Institutions of Higher Education, Summer 2016 and Fall 2016: Final Report, by D. Looney and N. Lusin, June 2019, p. 46. Copyright 2019 by the Modern Language Association. Reprinted with permission.





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For less commonly taught languages (LCTLs), defined for the purposes of the MLA report (Looney & Lusin, 2019) as LOTEs that are not in the top fifteen languages taught, based on enrollments, and which are therefore grouped as Other Languages, it is somewhat harder to talk of "trends," since the number of students enrolled in classes for those languages is so low to start with and tends to fluctuate significantly from year to year. The MLA report (Looney & Lusin, 2019) notes that programs in these languages tend to be short-lived, possibly due to fluctuations in actual students interested in those languages as well as availability of faculty to teach post-secondary courses in those languages. In total, 310 LCTLs were offered

in 2009, 2013, or 2016. Seventy-eight of the LCTLs offered in either 2009 or 2013 were not offered in 2016, whereas twenty-nine of the LCTLs offered in 2016 were not offered in either 2009 or 2013. Of the 310 LCTLs, 85 were offered only in a single institution. These numbers show that programs in these LCTLs can be guite ephemeral, and it is considerably harder for advanced students or heritage and native speakers of these languages to find courses where they can continue to improve their language skills and proficiency. As an unfortunate byproduct of the absence of courses in those languages at their chosen institutions, it may also be significantly harder for students to receive credit for their language skills in those languages.

The Importance of Speaking Other Languages

In 2017, the American Academy of Arts and Sciences released a report called *America's* Languages: Investing in Language Education for the 21st Century (American Academy of Arts and Sciences, 2017). Among the key recommendations of the report were the following: (1) to increase the opportunity for advanced study of foreign languages in higher education, (2) to supplement language instruction through an increased number of public-private partnerships, (3) colleges and universities should offer credit to students who can demonstrate proficiency in LOTEs, and (4) universities and colleges should increase the opportunity for students to participate in study-abroad programs.

Having an increasing number of students with a degree/diploma from a post-secondary institution and who have demonstrated proficiency in one or more foreign languages will, according to the 2017 America's Languages report (American Academy of Arts and Sciences, 2017), have a substantial and positive impact on the United States' ability to compete in the global academic and business markets. This will arguably also give individuals with these language skills a better chance of success in life. This is something that speakers of all languages deserve, and not only speakers of the more popular, non-LCTLs that are lucky enough to have courses in their language offered at a wide range of post-secondary institutions. Ensuring that the foreign language proficiency of bilingual/multilingual and biliterate/multiliterate students is recognized through the awarding of foreign language credits in institutions of postsecondary education is an issue of equity and fairness.

It should be noted that proficiency in a foreign language can also be achieved by means other than studying that language through formal education. In fact, the United States has millions of students about to enter their studies in an institution of higher education who already possess high levels of proficiency in a language other than English. A case in point are American students who may be heritage or native speakers of other languages. According to a 2021 report by the National Center for Education Statistics (NCES), approximately 10% of students in kindergarten through 12th grade (K-12) use LOTEs at home (NCES, 2021b). Vietnamese, Haitian Creole, and Hmong, all three of which are LCTLs, were among the top ten languages spoken at home by these students.

Institutions of Higher Education and the Recognition of Students' Language Skills

The cost of higher education in the United States is among the very highest in the world (Cooper, 2019). In the 2019-2020 academic year, 85.4% of undergraduate students enrolled in degree-granting post-secondary institutions in the United States received financial aid. This is the highest percentage recorded since 2000 (NCES, 2021a).

Ensuring that all incoming students' abilities in a foreign language are recognized and valued by our colleges and universities has many advantages. Granting students credit for their higher levels of proficiency in a foreign language, as suggested by the America's Languages report (American Academy of Arts and Sciences, 2017), would allow these students to do the following: save money, focus on more important classes, graduate sooner, be able to more effectively participate in exchange programs with foreign universities, and further their academic studies and related language skills by focusing on language for specific purposes and courses that are more directly related to their chosen fields of study.

For colleges and universities, providing credit to these students through accessible and reliable means can also make those universities more attractive to prospective students. One way of allowing students to receive college credit for their language proficiency is to have them test out of specific courses offered at these institutions for a language they speak. While

that may work and be an excellent option in cases where these languages are taught at the institution, we know from the MLA report (Looney & Lusin, 2019) that only a small number of languages may be offered, making it significantly harder for speakers of many languages not offered to receive credit by testing out. This is especially true for LCTLs, which are not a focus of most college language programs. For example, just four foreign languages (Spanish, French, American Sign Language, and German) made up 76% of all the enrollments in foreign language classes in fall 2016 (Looney & Lusin, 2019).

Another way for students to earn credit for their language skills is to take advantage of standardized and validated language proficiency exams that they can take prior to starting their post-secondary studies. For example, students can earn credit at many colleges and universities by taking Advanced Placement (AP) classes in Spanish, French, Italian, German, Chinese, Japanese, or Latin (College Board, 2023). However, there are *many* languages for which there is no AP exam available, including several of the top 15 languages taught at the post-secondary level and all the LCTLs.

As a result, it is much easier for speakers and students of certain foreign languages to receive credit for their language skills than for speakers and students of other languages, especially those of LCTLs. Speakers and students of all languages, regardless of how widely offered courses in these languages may be, deserve to have their language skills recognized and, depending on their level of proficiency in each of the skills associated with that language (i.e., Reading, Writing, Listening, and Speaking), receive credit for them.

In the next sections, three different ways will be presented in which U.S. colleges and universities, as well as many foreign colleges and universities, can offer credit to students of as many languages as possible in a manner that is fair, equitable, and benefits both the students and the institution. The first is through the State

Seal of Biliteracy. The second is through the Global Seal of Biliteracy. And finally, a third reliable and defensible way to offer college credit to students/speakers of these languages would be through the direct assessment of students' language proficiency by other means, for instance through direct partnerships with test providers outside of the State Seal of Biliteracy program or the Global Seal of Biliteracy Program.

The State Seal of Biliteracy

The State Seal of Biliteracy (State SoBL) movement was started in California in 2011 (Californians Together, 2022) and quickly spread to other states with the goal of recognizing students who have "attained proficiency in English and one or more other world languages by high school graduation" (American Council on the Teaching of Foreign Languages [ACTFL] et al., 2015, p. 2). Forty-nine states and the District of Columbia now offer a Seal, Certificate, or Endorsement of Biliteracy program (Seal of Biliteracy, 2022). The Seal, which is affixed to the student's high school diploma or transcript, represents a cultural shift by both political and educational institutions that, for the first time, celebrates the value of being bilingual. Formal documentation of language skills provides bilinguals with benefits such as competency-based high school language credit for their language skills and in some cases AP or college credit. For heritage language learners, the State SoBL becomes a valuable incentive to sustain and grow their home language(s) and can lead to greater career opportunities for those learners. As an added benefit, it also serves to protect their rich cultural heritage and the identity of one or more of America's languages.

The State SoBL is generally awarded to high school seniors who meet the state's established criteria. Five states (Hawaii, Illinois, Maine, Minnesota, and Missouri) already provide college credit in their state university systems to State SoBL recipients, which research shows is a major motivation for students to attempt to earn the State

SoBL (Heineke & Davin, 2021). State SoBL recipients may also qualify for competency-based world language credits for languages not taught in their school. One study found that many English Learner (EL) students, defined as those who are acquiring English in school and who speak a first language other than English, needed the language credits earned through proficiency testing to graduate (21%) or to apply to a four-year college program (10%; Greenberg Motamedi & Jaffery, 2015).

ELs make up an estimated 10% of the K-12 student population in the United States and even greater proportions of the K-12 student population in states such as California (20%) and Texas (19%; NCES, 2021b). ELs often must meet more rigorous English proficiency requirements than English-dominant students in order to qualify for the State SoBL. This may include passing a test that includes assessment of listening and speaking skills in English as well as demonstrating proficiency in their heritage language. This and other equity and fairness issues, such as a considerable lack of access to an approved test of their home/heritage language, create barriers to

the State SoBL for many ELs (Heineke et al., 2018; Subtirelu et al., 2019).

For LOTEs, most states require that a specific proficiency level (see Figure 2) based on the ACTFL Proficiency Guidelines (ACTFL, 2012) be demonstrated through testing. The Guidelines identify five major levels of proficiency (Novice, Intermediate, Advanced, Superior, and Distinguished) and three sub-levels (Low, Mid, High) for each of the Novice, Intermediate, and Advanced levels. All states require a minimum level of proficiency (which varies from state to state) in order to obtain the State SoBL, with several states also recognizing additional levels of proficiency beyond the minimum. Most states provide schools with a list of approved qualifying assessments for LOTEs. Most State SoBL programs follow the recommendations of the 2015 State Guidelines for Implementing the Seal of Biliteracy document (ACTFL et al., 2015), which require that proficiency in LOTEs be demonstrated in four skill areas: the two receptive skills of Reading and Listening and the two productive skills of Writing and Speaking.

Figure 2Minimum Level of Language Proficiency Required for the State SoBL Across Different States



Table 3

Three Most Commonly Accepted Four-Skill Assessments for the State SOBL in the United
States, Number of and Languages Offered, and Number of States that Accept Each

Language Assessment	# Languages Offered	# States Accepting Test (some criteria not yet posted)
Avant Standards-based Measurement of Proficiency (Avant STAMP 4S) – accredited for college-credit recommendations by the American Council on Education (ACE)	14 Arabic, English, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Mandarin, Chinese, Polish, Portuguese, Russian, and Spanish	49
ACTFL Assessment of Performance toward Proficiency in Languages (AAPPL) Measure	10 Arabic, English, French, German, Italian, Japanese, Korean, Mandarin Chinese, Portuguese, and Spanish	49
Advanced Placement (AP [©]) College Board – accredited for college-credit recommendations by the American Council on Education (ACE)	7 French, German, Italian, Japanese, Latin, Mandarin Chinese, and Spanish	47

The three four-skill tests most commonly listed as approved assessments for LOTEs to earn the State SoBL are the Avant Standards-based Measurement of Proficiency (Avant STAMP 4S), ACTFL's Assessment of Performance Towards Proficiency in Languages (AAPPL), and the AP tests. Table 3 provides the number of languages each test offers and the number of SoBL states that accept the test at the time of this writing.

The challenge for users of LCTLs or less commonly tested languages is clear. The report entitled *Our Nation's English Learners* (U.S. Department of Education, 2018) notes that in the 2014-15 school year, ELs in U.S. public schools spoke over 400 languages. In Pennsylvania alone, more than 225 unique languages were reported. A visual of U.S. linguistic diversity is shown on the map in Figure 3 of each state's most spoken language, excluding English and

Spanish (Kiersz et al., 2020). Sixteen of these languages (Vietnamese, Tagalog, Somali, Dakota, Lakota, Nakota, Sioux, Hmong, Nepali, Navajo, Ilocano, Aleut, Eskimo, Haitian Creole, Pennsylvania Dutch, and Gujarati) are not assessed by any of the three major four-skill tests listed in Table 3. Of the total 22 languages depicted in Figure 3, only 3 are offered though the AP test, 6 through the AAPPL test, and 7 through the Avant STAMP 4S test.

Nine states (Florida, Hawaii, Indiana, Maryland, Minnesota, Nevada, Rhode Island, Texas, and Virginia) and the District of Columbia require that a demonstration of proficiency can only be met by testing with an approved four-skill assessment. Other states, keenly aware of the lack of four-skill test diversity, offer a variety of solutions such as portfolios or alternate evidence methods in which the

student provides samples of language use that meet the state's required proficiency criteria on the ACTFL scale. However, collecting and rating evidence for individual portfolios presents its own challenges for school districts. These issues may include a lack of standardization, lack of expert knowledge regarding test development best practices, and issues with inter-rater reliability (raters applying varying standards and introducing potential biases to the rating), all of which pose a significant threat to validity. For these alternative solutions to be effective, impartial raters must be found, trained, paid, and constantly monitored to score the portfolios, creating an extra burden to the institution. Arguably, these non-standardized and non-validated

means of assessing proficiency in these languages could do more harm than good, reducing the credibility of the State SoBL among colleges or future employers.³

Because of these issues, a growing number of states have begun to accept a standardized, validated two-skill test that measures the productive skills of Speaking and Writing for languages where a standardized, validated four-skill test is not available. Unfortunately, many school districts tasked with locating alternative solutions may determine it to be too costly and labor-intensive and decide not to offer the program. Despite the large numbers of ELs and the variety of languages they represent nationally, only a handful of states awarded the SoBL in 25 or more languages in the academic year 2018-2019 (Black et al., 2020), as seen in Figure 4.

Figure 3
Most Spoken Language, Excluding English and Spanish, Per State
Most common language spoken at home other than English or Spanish

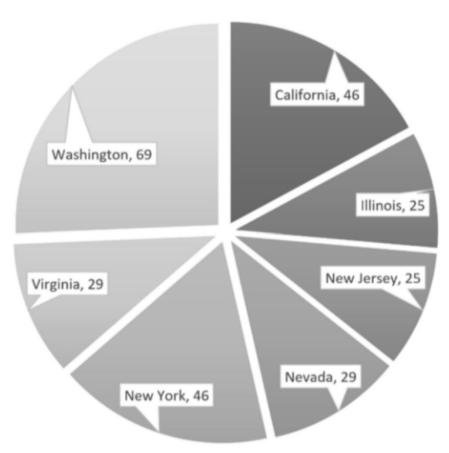


Note. From "This Map Shows the Most Commonly Spoken Language in Every US State, Excluding English and Spanish," by A. Kiersz, I. De Luce, and M. Hoff, August 2020. (https://www.businessinsider.com/what-is-the-most-common-language-in-every-state-map-2019-6). Copyright 2019 by Business Insider.

Figure 4

States that Awarded the Seal in 25 or More Languages in 2018-2019

³ Many of these potential issues may also apply to non-standardized approaches developed by internal teams at individual post-secondary institutions to assess a student's level of proficiency in a language, especially when the language in question is not offered at the institution.



Note. Adapted from *The 2018-2019 National Seal of Biliteracy Report*, by C. R. Black, A. Chou, and C. R. Hancock, 2020, p. 18. (https://sealofbiliteracy.org/doc/2020-National-Seal-of-Biliteracy-Report-Final.pdf)

The Seal of Biliteracy program often only includes public schools, since states have no statutory authority to regulate or monitor private schools. Many states also exclude public charter schools from the State SoBL programs. The unfortunate result is that in many states, students enrolled in non-publicly funded schools such as private, parochial, and home schools are excluded from the State SoBL opportunity, as are bilinguals in charter schools and non-participating public schools. Because the State SoBL is not mandated nor state-funded, many public schools that qualify do not participate.

Within the 16 states reporting in the 2018-19 academic year, only 21% of public schools opted to award the State SoBL (Black et al., 2020). Students who have learned a language outside of a traditional classroom may also be disenfranchised unless the school system provides for testing of languages not taught in the school or accepts test scores from external sources such as a community-based heritage language school. Another group not included in the State SoBL which could greatly benefit from a way to document their bilingualism are students enrolled in higher education.

The Global Seal of Biliteracy

To address the opportunity gaps left by the State SoBL programs, and "to provide an opportunity for ALL language users and students to earn recognition for their language proficiency skills" (The Global Seal of Biliteracy [GSoB], 2022, para. 1), the GSoB initiative was launched in 2018. The GSoB provides a free, unique serialnumbered language credential to anyone, anywhere in the world, who can demonstrate their language skills via approved, external proctored tests in over 130 languages. Since its inception, the GSoB has provided language credentials to thousands of bilinguals, 33% of whom were identified as current or former EL students. The GSoB, which does not have age or grade restrictions, has been awarded to students at the college, high school, and middle school levels as well as to adults in South, Central, and North America, Africa, Asia, and Europe. The GSoB encourages learners to "level up" and offers a pathway of language credentials termed Functional Fluency, Working Fluency, and *Professional Fluency* on both the ACTFL proficiency framework (Intermediate-Mid, Advanced-Low, Advanced-High, respectively) and the Common European Framework of Reference for Languages (B1, B2, C1, respectively). Criteria for earning the serial-numbered GSoB meta-credential is the same for everyone, regardless of their age or languages (The Global Seal of Biliteracy, 2022).

Language Tests Approved for the Global Seal of Biliteracy

The GSoB's independent Board of Advisors is responsible for approving tests used to determine a candidate's level of language proficiency. Guiding Principles were created with the primary goal of expanding access to credentialing. Where possible, the GSoB determined that approved tests should assess all four (4) basic language skills: Reading, Writing, Listening, and Speaking. From the beginning, exceptions were made

for LCTLs for which four-skill tests are not available or are significantly cost prohibitive. To provide access to language credentials for these bilinguals, qualified and approved tests that measure the two (2) productive skills of Speaking and Writing were approved. As previously noted, many states such as Massachusetts and Michigan have already approved the use of two (2) productive skill tests to qualify for their State SoBLs.

By allowing for these accommodations, the GSoB was able to greatly expand language credentialing to ELs, heritage language learners, and those who acquired their skills outside of participating public-school classrooms, without having to resort to alternative nonstandardized and potentially much less reliable methods of measuring language proficiency. For bilinguals not supported by their schools, the GSoB offers an individual application to provide access for all language learners.

It is important to note that the Global Seal of Biliteracy organization has stated that it strongly believes that whenever a standardized and validated four-skill assessment is available for a language, it should take priority over an equally standardized and validated two-skill assessment of that language. It is also a belief held by the Global Seal that the benefits of accepting a standardized and validated two-skill assessment such as the Avant STAMP Writing and Speaking (Avant STAMP WS) test (formerly known as WorldSpeak) or the ACTFL Oral Proficiency Interview (OPI) and Writing Proficiency Test (WPT) combination for a language that currently lacks a defensible four-skill assessment far outweigh the risks of employing less rigorous assessments or no assessment at all. Not recognizing the language skills of speakers of these less commonly assessed languages leads to questions and concerns about inequity and unfairness.

Recognizing College Students' Language Proficiency Through Seal Programs and Through Direct Assessment

Despite its many advantages and value, the State SoBL fails to cater to a substantial number of students about to enter college. Those not catered to include students not enrolled in public schools or living in states whose officially approved assessments for the State SoBL do not include the language they are proficient in. Additionally, the State SoBL usually awards only one (or sometimes two) level(s) of proficiency, with the required level varying from state to state, whereas colleges may be interested in awarding college credit based on more than one level of proficiency. Lastly, colleges may only be interested in their incoming students' foreign language skills for purposes of awarding credit and may not want to also require proficiency in English to award these foreign-language credits.

Additionally recognizing results from the GSoB significantly expands the possibilities for colleges who may want to award foreign language credit to their incoming students. The GSoB can be awarded to anyone, regardless of age, geographic area, or program enrollment, and is also available through a significantly higher number of standardized assessments and languages than is the case with the State SoBL. Nonetheless, as with the State SoBL, the GSoB is only awarded to students who demonstrate proficiency in two languages, which usually are their dominant language and a second language. This can become a potentially limiting factor for acceptance of the GSoB, since institutions of higher education may be only interested in the students' proficiency in one specific foreign language for credit purposes.

A solution that has good potential to address some of the limitations of the two Seals of Biliteracy (State SoBL and GSoB) is to give each college, whether in the United States or abroad, the freedom to decide on the level of foreign language proficiency that they require of their incoming students and start recognizing the results of standardized,

secure, and proctored language assessments already vetted by the State SoBL or the GSoB in those foreign languages. For example, in addition to already being accepted for the State SoBL and GSoB, the Avant STAMP 4S and the AP language tests have already been vetted and accredited by the American Council on Education through a strict review process, and clear recommendations are available on their National Guide regarding the number of college credits that are recommended based on each demonstrated level of proficiency.

For the purposes of awarding college credit, this solution would ensure that students are being assessed simply based on their proficiency in a specific foreign language (and not also in English or an additional second language) and would cater to as many students as possible, thus increasing equity, fairness, and access for students.

Results from Tests of Only Speaking and Writing as an Indicator of Overall Proficiency

Each of the four language skills correlates with and thus provides some information about the others (Schoonen, 2019), although the exact nature of information provided depends on the specific assessment at hand, the reliability of its scores, and how each of the four skills is measured. In general, if a test-taker can produce language at a certain level, there is good reason and rationale to believe that they can also understand language at a similar or higher level (Richards, 2015). In other words, if a test-taker achieves an Intermediate-Mid level of proficiency in Writing there is good reason to believe that they would achieve at least an Intermediate-Mid level of proficiency in Reading, given the relationship between these two skills. The same would apply to the relationship between Speaking and Listening.

This was tested in a study of 130 male and female Iranian test-takers from a variety of mother tongues and ethnic backgrounds who took the Internet-based Test of English as a Foreign Language

(TOEFL iBT). A strong positive correlation (r = .62) was detected between their Reading scores and their Writing scores (Pearson, 2018). The correlation between their Writing score and their total/overall test score also showed a strong positive correlation (r = .85), which provides some support to the idea that Writing scores can also be strongly correlated with overall proficiency scores (Pearson, 2018).

In a study of 198 international teaching assistants at Temple University in Pennsylvania, who had taken both the Listening and the Speaking sections of the TOEFL iBT test, Wagner (2016) detected a strong positive correlation (r = .60) between their Listening and Speaking scores. The researcher also detected that their average Listening score (24.04) was higher than their average Speaking score (21.74). Pearson (2018) detected a strong positive correlation (r = .71) between TOEFL iBT Speaking scores and total/overall score on the test, which once again provides some evidence that that Speaking scores can be strongly correlated with overall proficiency scores.

If post-secondary institutions were to accept the results of standardized, validated, and research-backed language proficiency tests of speaking and writing for LCTLs for which a four-skill test is not available, this would substantially increase fairness and equity for speakers of those languages.

Fortunately, Avant Assessment has language proficiency results across all four skills for hundreds of thousands of test-takers across many different languages who take the Avant STAMP 4S test each year, which provides for a large dataset to evaluate the plausibility of the assumption that a test-taker's proficiency in the productive skills of Writing and Speaking are a reliable indicator of their minimum proficiency in the receptive skills of Reading and Listening, respectively.

Research Questions

The purpose of the present study is to answer the following research questions:

Research Question 1:

Could a test-taker's Writing score be reliably used as indirect evidence (i.e., proxy) of the *minimum* Reading score the same test-taker would achieve for the purposes of awarding college credit, across various languages?

Research Question 2:

Could a test-taker's Speaking score be reliably used as indirect evidence (i.e., proxy) of the *minimum* Listening score the same test-taker would achieve for the purposes of awarding college credit, across various languages?

Research Question 3:

If a test-taker achieves a certain minimum score in *both* Writing and Speaking, could that score be reliably used as indirect evidence (i.e., proxy) of the *minimum* fourskill score the same test-taker would achieve for the purposes of awarding collected credit, across various languages?

METHOD

Materials

To answer the three research questions above, the Avant STAMP 4S language proficiency assessment, developed by Avant Assessment and accredited by the American Council on Education, was selected as the test of choice. Seven representative Avant STAMP 4S language versions were examined: Spanish, French, German, Chinese Simplified, Japanese, Russian, and Italian. These seven representative languages were deemed sufficient to assess the extent to which the results are shared across different languages. The specific languages above were chosen because they had enough test-takers to support a robust analysis and to ensure that at least one language was selected from each of the four training categories of languages I – IV defined by the U.S. government (U.S. Department of State, 2022), based on similarity to English and difficulty level.4

⁴ Category I: Spanish, French and Italian; Category II: German; Category III: Russian; Category IV: Japanese and Chinese Simplified.

The Avant STAMP 4S test is a validated, standardized, computer-adaptivetest that is aligned with the ACTFL proficiency guidelines and that assesses a test-taker's language proficiency across the four domains of Reading, Writing, Listening, and Speaking. It is an officially approved test for awarding the State SoBL and the GSoB in all states that offer the seal and is available in 14 languages at the time of this writing.

For the Reading and Listening sections of the Avant STAMP 4S, test-takers answer a suite of adaptive test questions about various passages in the target language and receive a STAMP score between 1 (Novice-Low) and 9 (Advanced-High), which is aligned with the ACTFL proficiency scale. For both the Writing and Speaking sections, test-takers must respond to three separate prompts, which are custom selected based on the test-taker's scores in the Reading and Listening sections, respectively.5 Each of their responses is scored by experienced human raters trained on the ACTFL proficiency scale and guidelines and receives a STAMP level between 1 (Novice-low) and 8 (Advanced-Mid). The combination of the STAMP levels received on the three individual prompts in each section determine the test-taker's final STAMP proficiency level for the section.

Since the Avant STAMP 4S test and the Avant STAMP WS test are built and rated to the same ACTFL standards, are developed by the same language testing company, and draw from the same pool of Writing and Speaking prompts, the results observed in the Avant STAMP 4S test are expected to hold for test-takers of the Avant STAMP WS as well, which is currently available in 27 LCTLs.⁶ Although the level of the prompts delivered in STAMP WS is

based on each test-taker's self-assessed Reading and Listening scores rather than an earned score, a response can be scored at any proficiency level, regardless of the level of the prompt, just as in STAMP 4S.

Participants

All participants in the study were students in either middle or high school who had previously taken the STAMP 4S test as part of routine assessment within their educational institution. For privacy reasons, Avant does not collect a test-taker's age, nationality, ethnicity, or gender, but STAMP 4S test-takers in middle and high-school vary in age from 12 to 18 years old in the vast majority of cases. Although nationality and ethnicity information are not directly collected, the Avant system does record the state/country of the institution that ordered the tests, and test-takers can also identify, if they so wish, what their first language is.

Test-takers selected for this research were located in 16 different countries, spanning all continents, with 98.4% of them being located in the United States. Of the test-takers who responded to the question regarding their first language, 60.53% indicated English as their first language and 39.47% indicated they spoke a different first language. Of these, some simply indicated "African language" or "Other", with the remaining choosing one of 13 languages made available in the STAMP system through a dropdown menu.

Study participants were those who took the STAMP 4S test in one of the seven aforementioned languages between April 2019 and April 2021, had a valid score in each of the four skills (Reading, Writing, Listening, and Speaking) and achieved a minimum score of STAMP 5 (Intermediate-Mid) on both Writing and Speaking (the productive skills). The reason for using

⁵ For example, if a test-taker scores in the Intermediate range of proficiency in Reading (STAMP 4–6), they will come across 3 Intermediate-level prompts in Writing. The same applies to Speaking prompts, vis-à-vis Listening scores. Test-takers always have the chance to go above and beyond in their response regardless of the level of prompt and can receive any possible score.

⁶ Once a prompt is originally developed in English by Avant's team, each prompt goes through a process called *prompt adaptation* for use in STAMP 4S and STAMP WS tests of other languages. During this adaptation process, each prompt is translated into the new language and small modifications are made, when necessary, to ensure the adapted prompt is culturally appropriate to the language in question. This process helps ensure prompt comparability across STAMP 4S and STAMP WS tests and languages.

⁷ The STAMP 4S database also includes test results from test-takers who did not test in all four skills.

Intermediate-Mid as the minimum score in Writing and Speaking for the analysis is because that is the minimum proficiency level recognized by either the State SoBL or the GSoB (State SoBL Intermediate-Mid = GSoB Functional Proficiency). The number of test-takers who met the selection criteria above were:

Spanish -> 51,921 test-takers French -> 4,534 test-takers German -> 1,501 test-takers Chinese Simplified -> 4,126 test-takers Japanese -> 1,178 test-takers Russian -> 1,252 test-takers Italian -> 810 test-takers

Procedures

For Research Question 1 and 2, the percentage of test-takers that had a Reading score at least as high as their Writing score and that had a Listening score at least as high as their Speaking score were calculated. For Research Question 3, the percentage of test-takers who managed to achieve a minimum score in both Reading and Listening as they did in both Writing and Speaking was calculated for three levels of proficiency (minimum scores of STAMP 5/Int-Mid, STAMP 6/Int-High, and STAMP 7/Adv-Low were chosen due to the importance of these levels for both the State

SoBL and the GSoB). It should be noted that this study does not attempt to use Writing/Speaking scores to predict exact Reading/Listening scores, respectively, but merely to assess the likelihood that the receptive skill scores will be at least as high as the productive skill scores. For this reason, it was decided that conducting a regression analysis would be inappropriate for the goals of this study.

RESULTS

Research Question 1: Could a testtaker's Writing score be reliably used as indirect evidence (i.e., proxy) of the minimum Reading score the same test-taker would achieve for the purposes of awarding college credit, across various languages?

As can be seen in Table 4, the percentage of cases in which test-takers' Reading score was at least as high as their Writing score ranged from a low of 83.66% in Chinese Simplified to a high of 99.13% in French, with a weighted average across the seven languages of 93.53% of the test-takers attaining a Reading score that was at least as high at their Writing score.

Table 4 *Percentage of Test-Takers with Reading Scores at Least as High as their Writing scores.*

STAMP 4S Language	Percentage of Cases where	
	Reading Score >= Writing Score	
Spanish	93.84	
French	99.13	
German	94.87	
Chinese Simplified	83.66	
Japanese	86.92	
Russian	98.88	
Italian	91.60	
Overall	93.53	

Even for a language such as Chinese Simplified, with a more complex, logographic writing system, the vast majority of test-takers achieved a Reading score that was at least as high as their Writing score. The results above provide support for the hypothesis that Writing Scores can be reliably used as indirect evidence of the *minimum* Reading score that test-takers of either the Avant STAMP 4S or the Avant STAMP WS would achieve for the purposes of awarding college credit across several languages. Appendix A includes further useful statistics on the percentage of test-takers who would achieve a Reading score no more than one sub-level below their Writing score.

Research Question 2: Could a test-taker's Speaking score be reliably used as indirect evidence (i.e., proxy) of the minimum Listening score the same test-taker would achieve for the purposes of awarding college credit, across various languages?

As can be seen in Table 5, the percentage of cases in which test-takers' Listening score was at least as high as their Speaking score ranged from a low of 78.09% in Japanese to a high of 97.44% in Russian, with a weighted average across the seven languages of 88.51% of the test-takers attaining a Listening score that was at least as high as their Speaking score.

Table 5 *Percentage of Test-Takers with Listening scores at Least as High as their Speaking Scores.*

STAMP 4S Language	Percentage of Cases where	
	Listening Score >= Speaking Score	
Spanish	89.24	
French	86.32	
German	82.67	
Chinese Simplified	82.86	
Japanese	78.09	
Russian	97.44	
Italian	95.43	
Overall	88.51	

The results above provide support for the hypothesis that Speaking Scores can be reliably used as indirect evidence of the *minimum* Listening score that test-takers of either the Avant STAMP 4S or the Avant STAMP WS would achieve for the purposes of awarding college credit across several languages. Appendix A includes further useful statistics on the percentage of test-takers who would achieve a Listening score no more than one sub-level below their Speaking score.

Research Question 3: If a test-taker achieves a certain minimum score in both Writing and Speaking, could that score be reliably used as indirect evidence (i.e., proxy) of the minimum four-skill score the same test-taker would achieve for the purposes of awarding collected credit, across various languages?

As can be seen in Table 6, the percentage of test-takers who achieve the same *minimum* score in both Reading and

Listening as they do in both Writing and Speaking varies from a low of 79.11% in Japanese (minimum of STAMP level 7 across all four skills) to a high of 99.76% for Russian (minimum of STAMP level 6 across all four skills). The average (weighted) percentage of test-takers who manage to achieve the same minimum score in both

Reading and Listening as they do in both Writing and Speaking, across the seven languages, is 92.58% for a minimum score of STAMP level 5 (Intermediate-Mid), 92.21% for a minimum score of STAMP level 6 (Intermediate-High), and 88.48% for a minimum score of STAMP level 7 (Advanced-Low).

Table 6Percentage of Test-Takers Who Achieve the Same Minimum Score in Both Reading and Listening as They Do in Both Writing and Speaking

STAMP Score Obtained in Both Writing and Speaking	Percentage of Test-Takers Who Also Achieved Same Minimum Level in Both Reading and Listening
Minimum STAMP 5 (Int-Mid)	Spanish (n = 51,921): 93.25
	French (n = 4,534): 89.78
	German (n = 1,501): 92.05
	Chinese Simp. (n = 4,126): 84.82
	Japanese (n = 1,178): 92.96
	Russian (n = 1,252): 99.28
	Italian (n = 810): 95.43
	Overall (<i>n</i> = <i>65,322</i>): 92.58
Minimum STAMP 6 (Int-High)	Spanish (n = 24,767): 92.45
, ,	French (n = 1,370): 92.62
	German (n = 656): 88.99
	Chinese Simp. (n = 1,727): 87.49
	Japanese (n = 669): 92.23
	Russian (n = 430): 99.76
	Italian (n = 246): 95.12
	Overall (<i>n</i> = 29,865): 92.21
Minimum STAMP 7 (Adv-Low)	Spanish (n = 3,386): 90.25
William STAWI 7 (Adv-Low)	French (n = 125): 92.00
	German (n = 148): 83.67
	Chinese Simp. (n = 466): 83.47
	Japanese (n = 415): 79.11
	Russian (n = 85): 94.11
	Italian (n = 38): 89.47
	Overall (n = 4,663): 88.48

DISCUSSION

The existence of the State SoBL in 49 U.S. States and the District of Columbia at the time of this writing is something to be widely celebrated. It serves as a major step towards recognizing the importance of *all* languages and their speakers and the importance of bilingualism and biliteracy for the individual and for society. It also helps to acknowledge that biliteracy and fluency in another language is an asset to be celebrated. As is frequently the case with many well-intended policies, however, the State SoBL still has several challenges that need to be overcome to fulfill its true potential.

One of the current challenges associated with the State SoBL is that it is implemented with different standards in different states. Whereas some states only accept a small number of standardized fourskill assessments as a means to demonstrate proficiency and biliteracy in the language, others accept alternative methods of "meeting the qualifications," including seat time, portfolios, and other substantially less reliable means of validating a student's proficiency in the language. Other states, such as Massachusetts, accept a standardized and validated two-skill assessment of Writing and Speaking such as the Avant STAMP WS in order to award the State SoBL to as many qualified students as possible, thus increasing the linguistic and demographic diversity of State SoBL recipients and decreasing the costs these states and their districts would incur if they had to produce their own assessments for LCTLs that do not currently benefit from the existence of a standardized and commercially available four-skill test. Even if states and districts could afford to produce their own assessments, there is no guarantee that the result would be a reliable, fair, unbiased, and accessible test. Maintaining the high quality and validity of an assessment is a major effort and one towards which testing organizations must dedicate a substantial amount of human and financial resources on an ongoing basis.

Just as states such as Massachusetts have increased accessibility to the State SoBL through their acceptance of rigorous and reliable two-skill assessments when a four-skill assessment is not available, the GSoB has accomplished a very similar goal since its inception in 2018 by accepting validated two- or three- skill assessments of languages such as Bulgarian, Gujarati, Norwegian, Filipino, Swahili, Tamil, Ukrainian, and many others when a fourskill assessment is not available. By awarding its seal to students not only from public schools, but also in private schools, colleges, and students being homeschooled, the GSoB has been a major force in bringing increased equity and access to speakers of as many languages as possible, without compromising the rigor that qualifying assessments must show.

The acceptance of validated, reliable, and commercially available two-skill assessments of proficiency and biliteracy in a language would allow many U.S. states to quickly increase access to the State SoBL and therefore make the Seal more equitable, provided that the data from these potential two-skill tests support the decisions to be made based on their scores. The acceptance of such scores would also allow many post-secondary institutions of education to award college credit to speakers of LCTLs that do not benefit from a validated, four-skill assessment currently available in the market.

The results of the present study of 65,322 test-takers across seven representative languages, including character-based languages, offer a strong rationale for individual colleges to accept a two-skill test such as the Avant STAMP WS for the purposes of awarding college credit when a standardized and validated four-skill test is unavailable or simply impractical. An average of 93.53% of test-takers in the State SoBL range had a Reading score at or above their Writing score across the seven languages, and an average of 88.51% had a Listening score at or above their Speaking score in the study. Moreover, an average of 92.58% of the test-takers, across the seven

languages, who achieved at least a STAMP level 5 in both Writing and Speaking also achieved at least a STAMP level 5 in both Reading and Listening. An average of 92.21% of the test-takers who achieved at least a STAMP level 6 in both Writing and Speaking also achieved at least a STAMP level 6 in both Reading and Listening. An average of 88.48% of the test-takers who achieved at least a STAMP level 7 in both Writing and Speaking also achieved at least a STAMP level 7 in both Writing and Speaking also achieved at least a STAMP level 7 in both Reading and Listening.

By accepting a two-skill assessment of productive skills such as the Avant STAMP WS for awarding college credit in languages that do not yet benefit from a validated, four-skill assessment, these postsecondary institutions would not be trying to identify a test-taker's exact level of proficiency in Reading and Listening, but simply assessing whether their Writing and Speaking scores would allow them, with a high level of certainty, to make a judgment as to whether their Reading and Listening skills would meet the minimum requirements for being awarded college credit. Despite the reliable results shown through the present research, it must be noted that use of the productive scores as a proxy for the *minimum* receptive score testtakers would receive may lead to a few false positives. However, it is our belief that the benefits concerning equity and fairness of doing so far outweigh this possibility, especially given the fact that the majority of false positives (i.e., cases in which the receptive score would be below the respective productive score) constitute cases in which the receptive score is only one STAMP level below the productive score. One possible way of addressing such false positives would be to set the minimum required proficiency scores one sub-level higher for Writing and Speaking in case of two-skill tests, but such a decision could potentially lead to even further disadvantages for test-takers of these languages. The percentage of test-takers who score one sublevel lower or at least as high in the receptive skills as they do in the

productive skills can be found in Appendix A.

Study Limitations

A limitation of the present study is the fact that the evidence provided herein supporting the use of productive scores as a predictor of minimum receptive scores only applies to cases in which both the Writing and Speaking scores for STAMP are at least a STAMP level 5 (Intermediate-Mid). In the future, it would be interesting to also analyze the extent to which results may hold for other STAMP score profiles. A second limitation is that the results are based on the use of a single assessment, namely the STAMP assessment. While they provide evidence of the rigorous procedures employed by Avant Assessment in the development of its tests, and while they support the assumption that productive scores in Writing and Speaking are a reliable indicator of a student's minimum Reading and Listening skills for those students that scored at least a STAMP 5 on both Writing and Speaking, these results may not necessarily generalize to other assessments beyond STAMP. While the data from other two-skill assessments might also support the assumption that productive scores in Writing and Speaking are a reliable indicator of a student's minimum Reading and Listening skills, it is ultimately up to different test providers to show that their own test results and data would support the use of their two-skill assessments for the purposes of awarding a State SoBL, GSoB, and college credit.

Recommendations

It is our hope that, in the absence of a validated four-skill assessment of language proficiency, well-supported two-skill assessments of language proficiency become increasingly accepted for awarding State and Global Seals of Biliteracy as well as college credit, thus significantly increasing the equity and fairness of these initiatives while also motivating a higher number of language testing organizations to develop assessments in less commonly taught/tested

languages that do not yet benefit from a two-skill assessment such as the Avant STAMP WS. This will hopefully bring us closer to ensuring that the goal of the Seal, namely to "recognize a student who has attained proficiency in English and one or more other world languages by high school graduation" (Seal of Biliteracy, 2022, para. 1) applies to as many students as possible

who are about to start or who are already in college, including as many ELs as possible, giving them an additional reason to sustain and grow their linguistic and cultural assets.

We further hope that the present research encourages other language test developers to conduct similar studies on their own assessments and across a wide range of proficiency ranges and languages.

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GLOSSARY

English Learners (ELs)

A diverse group of students aged 3-21 whose native language is not English and who have English proficiency limitations in terms of their Reading, Writing, Speaking, and/or Listening skills, thus affecting their ability to fully participate in English-medium educational environments at the elementary or secondary level.

Global Seal of Biliteracy (GSoB)

An initiative created to provide an opportunity for all language users and students to earn recognition for being able to demonstrate they are bilingual and biliterate at specific levels of language proficiency, regardless of age, geographical location, or whether they are enrolled in a public school or not. It acts as a way to expand the reach of the State Seal of Biliteracy (see entry 'State Seal of Biliteracy' below).

Heritage Language

A language learned in addition to one's primary/dominant language, usually spoken at home by family members who are native speakers of that language.

Heritage Language Learners

Students currently studying a heritage language (see entry above for 'Heritage Language').

Less Commonly Taught Languages (LCTLs)

A language that is not one of the most commonly taught languages at institutions of primary, secondary, or post-secondary education. The definition of exactly which languages are considered LCTLs varies from organization to organization, with some, such as the Center for Advanced Research on Language Acquisition and the National Council on Less Commonly Taught Languages using the term to refer to languages other than English, French, German, and Spanish. The Modern Language Association (MLA), on the other hand, reserves the term, as seen in this paper, for languages not included in the top 15 most enrolled languages in institutions of post-secondary education.

Productive Skills

In the context of this study, the language skills of Writing and Speaking.

Receptive Skills

In the context of this study, the language skills of Reading and Listening.

State Seal of Biliteracy (State SoBL)

A state-by-state policy initiative to recognize a public-school student who has attained proficiency and literacy in English and one or more other language by high school graduation.

APPENDIX

Table A1Percentage of cases where Reading score is either 1 Sub-level below, at, or above Writing Score for each of the seven languages.

	Percentage of Cases where		
STAMP 4S Language	Reading Score is either 1 Sub-Level or >= Writing Score*		
Spanish	97.97		
French	99.84		
German	99.46		
Chinese Simplified	94.06		
Japanese	97.18		
Russian	99.76		
Italian	98.88		
Overall	97.91		

^{*} The percentage of test-takers who had a Reading score exactly one sub-level below their Writing score across the seven languages were: 4.13% (Spanish), 0.71% (French), 4.59% (German), 10.4% (Chinese Simplified), 10.26% (Japanese), 0.88% (Russian), and 7.28% (Italian).

Table A2Percentage of cases where Listening score is either 1 Sub-level below, at, or above Speaking Score for each of the seven languages.

STAMP 4S Language	Percentage of Cases where Listening Score is either 1 Sub-Level or >= Speaking Score*
Spanish	96.12
French	94.06
German	95.93
Chinese Simplified	96.02
Japanese	94.38
Russian	99.84
Italian	98.14
Overall	96.03

^{*} The percentage of test-takers who had a Reading score exactly one sub-level below their Writing score across the seven languages were: 6.88% (Spanish), 7.74% (French), 13.26% (German), 13.16% (Chinese Simplified), 16.29% (Japanese), 2.4% (Russian), and 2.71% (Italian).