College Admissions for L2 Students: Comparing L1 and L2 Readability of Admissions Materials for U.S. Higher Education

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College Admissions for L2 Students: Comparing L1 and L2 Readability of Admissions Materials for U.S. Higher Education

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ABSTRACT

Advancements in computational linguistics have allowed educational researchers to examine large amounts of text and assess the reading difficulty of that text for speakers whose first language is English (L1), and speakers whose first language is not English (L2). Considering L2 students exploring higher education, extant research suggests these L2 students do not access United States (U.S.) higher education at the same level as their L1 peers. Using popular measures of L1 and L2 readability, the current study analyzes admission instructions from 341 randomly-selected four-year U.S. institutions of higher education. Results suggest L2 readability is more difficult (30.9) than L1 readability (37.7) and differences in means are statistically significant (*p*=0.001) across the entire sample and each institutional sector (public, private non-profit, and private for-profit). These findings may help explain the postsecondary achievement gap experienced by L2 students in the United States.

Keywords: admissions instructions, higher education, readability, access, equity, linguistics

For decades, two separate but related bodies of research have attempted to explain why non-native English speakers do not access U.S. higher education at the same level as native English-speaking peers. One body of literature has focused on English-language learners (ELLs), or students whose native language is not English but who are learning English (Kanno & Cromley, 2013). The other body of literature has focused on students participating in English as a second language (ESL) programming and whether placement in such programming results in K-12 ESL students attaining higher levels of academic achievement and earning admission to a postsecondary institution (Callahan, Wilkinson, Muller, & Frisco, 2009; Kanno & Varghese, 2010).

A growing population, ELLs comprise nearly four million elementary and secondary students in United States (U.S.) schools, with California educating a nearly 25% ELL student population, and other states such as New Mexico, Nevada, and Texas educating a nearly 20% ELL student population (Sanchez, 2017). Although increasingly larger numbers of elementary and secondary U.S. students are ELL, these students have not been represented in U.S. higher education. A large, longitudinal body of research has demonstrated ELLs do not access U.S. institutions of higher education at the same level as their English-proficient peers or native speakers of English, as only one in eight ELLs earn a bachelor's degree (Kanno & Cromley, 2013). To explain this achievement gap, researchers have pointed to the systemic screening of ELLs from college preparatory courses in high school (Kanno & Kangas, 2014), inaccurate placement of ELLs in elementary and secondary remediation courses (Flores & Drake, 2014), a lack of culturally-responsive schooling (Lee, 2012), and an absence of college counseling in high

school (Cook, Pérusse, & Rojas, 2012). The second body of literature has focused on students participating in English as a second language (ESL) programming and whether placement in such programming results in K-12 ESL students attaining higher levels of academic achievement and earning admission to a postsecondary institution (Callahan, Wilkinson, Muller, & Frisco, 2009). In a large study of postsecondary access and achievement, Kanno and Varghese (2010) explained the majority of ESL college access research has focused on academic literacy and college composition courses and not specific linguistic hurdles facing ESL students pursuing U.S. higher education. This finding led Kanno and Varghese (2010) to assert, "Compared with other groups of underrepresented students, we know very little about the challenges involved in ESL students' access to and success in college" (p. 312).

More recently, educational linguists have adopted a different approach and interrogated the language of U.S. higher education, specifically admissions materials. In separate studies, Taylor found only 4.9% of a random sample of 325 four-year U.S. institutions translated admissions materials into Spanish (2018a) and only 9% of a random sample of 335 four-year U.S. institutions translated international undergraduate admissions materials into any other language but English (2018b). These findings suggested that two groups of prospective postsecondary students may be at a distinct disadvantage when attempting to access U.S. postsecondary information online: native Spanish speakers (Taylor, 2018a) and non-native English speakers aspiring to attend a U.S. institution as an international student (Taylor, 2018b).

Considering the persistent postsecondary access and achievement gaps experienced by ELL students (Kanno & Cromley, 2013; Kanno & Kangas, 2014) and ESL students (Callahan et al., 2009; Kanno & Varghese, 2010), this study seeks to expand upon prior work (Taylor, 2018a, 2018b; Taylor & Hartman, 2019) and delve deeper into the language of U.S. postsecondary admissions. Specifically, this study will use a catch-all term—L2 students or "students whose first language (the language to which they were exposed in the home as young children) is not English" (Ferris, 2009, p. 4)—and apply L1 and L2 readability tests to a large number of U.S. postsecondary admissions materials to learn whether admissions materials are easier to read for L1 than L2 students, possibly helping explain postsecondary access gaps. Employing the L1 Flesch Reading Ease (Flesch, 1979; Kincaid, Fishburne, Rogers, & Chissom, 1975) and the L2 Miyazaki English as a Foreign Language Readability Index (Greenfield, 1999, 2003), this study sought to answer two questions pertinent to L2 college access in the United States:

How difficult are U.S. higher education admission materials to read for L1 students and L2 students?

Are there statistically significant differences between the readability of admissions materials for L1 and L2 readers?

Answers to these questions may help explain the postsecondary achievement gap experienced by L2 students in the United States. In addition, practitioners working in postsecondary admissions offices could learn how to translate and simplify admissions materials for L2 students and their support networks, facilitating expanded access to postsecondary education in the United States.

Method

Prior work has explored the differences between admissions and financial aid communication (Taylor & Hartman, 2019) and the difficulty of a wide range of higher education communication meant for student audiences (Taylor, 2018a, 2018b, 2018c). This study will build upon this prior work by adopting many of the same methods to explore U.S. admissions instructions and how difficult these instructions are for L1 and L2 readers. The following sections detail how a sample size was identified, how data was gathered and analyzed, and how limitations were addressed in this study.

Population and Sample

This study examined admissions materials at four-year U.S. institutions of higher education: This limitation will be addressed in the limitations section of this study. Using the Integrated Postsecondary Education Data System (IPEDS) (National Center for Education Statistics, 2018), I identified 2,907 four-year U.S. institutions of higher education . As Internet information can change frequently, I decided to employ a random number generator to assign 341 institutions to the study to ensure the study could be completed in a timely manner. This sample of 341 institutions represents a 95% confidence interval, strong enough for the statistical analyses of this study. A description of this study's sample can be found in Table 1 below:

Table 1.
Description of sample, by institution type
(n=341)

Institution type	n	% of sample
Public	114	33.3%
Private, non-profit	179	52.3%
Private, for-profit	48	14.4%

Data Collection

Once a sample was identified, I extracted each institution's homepage URL (hyperlink) from IPEDS, along with the institution's type (public, nonprofit private, and for-profit private). Using institutional hyperlinks, I employed each institution's embedded search tool (i.e., Google) to locate each institution's undergraduate admissions materials. I used each institution's embedded search tool to mitigate the risk of using a web browser's search tool, whose search history and cookies could have influenced the search results.

Employing the search terms "apply for admission," "undergraduate admissions," and first-year student admissions," I located each institution's admissions materials without issue. Once I located these admissions materials , I used Readability Studio—a computational linguistics tool—to extract only the admissions materials from the webpage and calculate the word count of each set of admissions materials. The toolbar, menus, and footer information located at the bottom of the webpage was not extracted, as this information was not directly related to the process of applying for undergraduate admission. A database of admissions materials for all 341 institutions is available upon request, including all hyperlinks and linguistic data.

Linguistic Analysis

Once I gathered admissions materials, I uploaded each set of admissions materials into Readability Studio. Readability Studio is a quantitative and computational linguistics software tool to analyze large numbers and amounts of text much more quickly and comprehensively than human analyzers (Taylor, 2018a, 2018b, 2018c). I analyzed the reading difficulty of the admissions materials using one L1 readability measure—the Flesch Reading Ease (Flesch, 1979; Kincaid et al., 1975)—and the Miyazaki English as a Foreign Language Readability Index (Greenfield, 1999, 2003).

The Flesch Reading Ease (FRE) is a readability measure used to measure the L1 reading difficulty of technical information and non-fiction, developed by Rudolf Flesch (1979). The FRE is a standard used by many U.S. government agencies, including the U.S. Department of Defense, to ensure that government communication is written at levels readable by the general public (Kincaid et al., 1975). The FRE is one of the most widely used L1 readability measures in existence, having been being built into all Microsoft Word programs for decades (Microsoft, 2019). Educational researchers have also used the FRE to analyze a wide range of higher education communication, including financial aid information (Taylor & Hartman, 2019) and sexual assault reporting guidelines (Taylor, 2019c). The FRE calculates the number of words per sentence, syllables per word, and total number of sentences of a text, assigning a scaled score to a text out of 100. The FK is calculated thus: $I = (206.835 - 84.6*(B/W)) - (1.015*(W/S))$; I = index score, W = number of words, B = number of syllables, S = number of sentences (Flesch, 1979; Kincaid et al., 1975). An explanation of the FRE scale can be found in Table 2 on page 57.

Table 2.

Flesch Reading Ease Test (FRE) index score to grade-level correspondence table with text examples, adopted from Flesch (1979)

FRE	Grade-level	Text examples
90 to 100	5th grade	Comics, children's books
80 to 90	6th grade	Consumer advertisements
70 to 80	7th grade	*Seventeen, Movie Screen*
60 to 70	8th to 9th grade	*Reader's Digest, Sports Illustrated*
50 to 60	10th to 12th grade	*Time, Newsweek*
30 to 50	13th to 16th grade (college)	*New York Times, Harvard Law Review*
0 to 30	17th grade+ (college graduate)	Standard automobile insurance policies

Flesch (1979) recommended that text meant for public consumption be written at no lower than 60, what he deemed "plain English" (p. 180) or the 8th to 9th-grade reading English reading comprehension level. Speaking to Flesch's (1979) recommendation, recent research suggests the average U.S. adult reads and comprehends at between the 7th and 8th-grade level (Clear Language Group, 2019), and that only 37% of graduating high school seniors in the U.S. can read and comprehend at the 12th-grade level (National Assessment Governing Board, 2019). As a result, text scoring below 60 may not be readable for average members of the U.S. public. Greenfield (1999, 2003) developed the Miyazaki English as a Foreign Language Readability Index (MIYA) during his work with L1 Japanese students who were L2 English students attempting to learn English as a second language during college. Through empirical research, Greenfield (1999) found that traditional, L1 readability measures such as Flesch-Kincaid Grade Level Test (Kincaid et al.,1975) did not accurately measure the difficulty of English-language text for the L2 students he was working with, nor did L1 reading measures correlate with his L2 students reading assessment tasks (Greenfield, 1999). Using the Flesch Reading Ease as a model, Greenfield (2003) manipulated elements of prior readability measures to produce a readability index akin to the FRE on a 100-point difficulty scale. The MIYA is measured thus: $I = (164.935 - ((18.792*(LW)) - (1.916*(WS))$; I = index score, LW = letters per word and WS = words per sentence (Greenfield, 2003). According to Greenfield's (2003) MIYA, a score of 50 translates to a text of average difficulty for an L2 student learning English as a foreign language at the university level, analogous to Flesch's (1979) assertion that FRE scores between 30 and 50 equate to text appropriate for L1 university-level students. Although the FRE and MIYA are scaled 0 to 100, there has been no study to evaluate specifically how difficult a FRE of 50 for an L1 student would be measured against a MIYA of 50 for an L2 student. Table 3 displays this linguistic

analysis in the Findings section of this study.

Quantitative Analysis

Once FRE and MIYA scores were calculated, these scores were organized into a database and uploaded to R for quantitative analysis. A paired t-test to analyze means was used to determine if differences L1 and L2 scores were statistically significant across the entire sample (n=341) and across each institutional sector separately (public, private non-profit, and private for-profit). Performing t-tests assumes a normally distributed sample, and as a result, Shapiro-Wilk tests were conducted across the entire sample and across each institutional sector to measure the normal distribution of the FRE and MIYA scores.

Results from these tests can be found in the notes for Table 4, along with the results from the paired t-tests.

Findings

Linguistic analyses of admissions materials using the Flesch Reading Ease (FRE) and the Miyazaki English as a Foreign Language Readability Index (MIYA) can be found in Table 3.

Data in this study suggest the longest admissions materials were written by private, for-profit institutions (321.6 words), whereas the shortest materials were written by public institutions (301.6 words). Public institutions

Table 3.

Linguistic analysis of admissions materials using the Flesch Reading Ease (FRE) and the Miyazaki EFL Readability Index (MIYA), by institution type (n=341)

Institution type	Word count	FRE	MIYA
Public (n=114)			
Mean	301.6	39.5	32.4
SD	218.6	9.9	9.3
Private, non-profit (n=179)			
Mean	309.2	38.3	31.4
SD	216.5	12.1	10.4
Private, for-profit (n=48)			
Mean	321.6	31.3	25.6
SD	274.2	16.6	14.5
Total (n=341)			
Mean	308.4	37.7	30.9
SD	225.5	12.4	10.9

also composed the simplest L1 admission materials at an FRE of 39.5 and MIYA of 32.4—even though these scores are simplest across all institutions in the entire sample, these scores equate to text written between a 13th and 16th grade reading level, appropriate for L1 and L2 readers already in postsecondary education, displayed in Table 2. Private for-profit admissions materials were even more difficult for L1 and L2 students, as FRE scores of 31.3 and MIYA scores of 25.6 indicate that admissions materials for these institutions are between the 13th and 16th-grade level for L1 readers and above the 17th-grade level for L2 students. Such difficulty potentially places L2 students at a greater linguistic disadvantage when attempting to read these materials and successfully apply for admission than L1 students. Table 4 on the next page displays paired t-test results comparing means of L1 and L2 readability of admissions materials.

Results from paired t-tests suggest differences in means between FRE and MIYA scores across the entire sample are statistically significant (p=0.001), with Shapiro-Wilk tests indicating that the sample was likely normally distributed across both variables (FRE p>0.05), MIYA p>0.05). The same finding was true across public institutions (n=114), as differences in means of FRE and MIYA measures were statistically significant (p=0.001) and the sample was likely normally distributed (FRE p=0.08951, MIYA p>0.05). Paired t-tests also indicated statistically significant differences in means across both

types of private institutions (p=0.001), but Shapiro-Wilk tests indicated that the samples may not have been normally distributed. However, these limitations may be mitigated by the relative size of each private institution sample (179 private non-profit institutions; 48 private for-profit institutions).

After performing paired t-tests, I explored the effect sizes of L1 and L2 readability difficulty of all institutions and each institution type. Effect sizes between L1 and L2 readability measures could be classified as medium across all institutions (Cohen's d=0.58), medium-to-large across all public institutions (Cohen's d=0.74), medium across all private, non-profit institutions (Cohen's d=0.60), and small-to-medium across all private, for-profit institutions (Cohen's d=0.43). These results suggest it may be more difficult for L2 students to read admissions instructions than L1 students, possibly rendering it more difficult for L2 students to access U.S. higher education due to being unable to read and comprehend the admissions instructions and successfully completing an admissions application. Specifically, L2 students seeking access to public institutions may find it more difficult to read admissions application instructions than L1 students, possibly helping to explain the postsecondary access gap between L1 and L2 students in the United States.

Table 4.

Results of paired t-tests comparing means of Flesch Reading Ease scores and Miyazaki EFL Readability Index scores of admissions materials, by institutional sector

All institutions (n=341)							
Variable	Mean	SE	SD	95% CI		df	t
Flesch (L1)	37.7	.6743616	12.4	36.41549	39.06838	340	19.6975***
Miyazaki (L2)	30.9	.5927936	10.9	29.81053	32.14254		
Diff	6.8	.343465	6.3	6.089812	7.44098		

Notes: Shapiro-Wilk test for normality of Flesch Reading Ease scores=(W=0.98, p=6.43e-05), Miyazaki EFL Readability Index scores=(W=0.97, p=3.66e-07); ***p<0.001

Public, four-year institutions (n=114)							
Variable	Mean	SE	SD	95% CI		df	t
Flesch (L1)	39.5	.9273478	9.9	37.71539	41.38987	113	13.1804***
Miyazaki (L2)	32.4	.8732051	9.3	30.73494	34.19489		
Diff	7.1	.2973473	5.7	6.022344	8.153095		

Notes: Shapiro-Wilk test for normality of Flesch Reading Ease scores=(W=0.98, p=0.08951), Miyazaki EFL Readability Index scores=(W=0.98, p=0.1962); ***p<0.001

Private, non-profit, four-year institutions (n=179)							
Variable	Mean	SE	SD	95% CI		df	t
Flesch (L1)	38.3	.9070357	12.1	36.50616	40.08602	178	13.7694***
Miyazaki (L2)	31.5	.7791882	10.4	29.92605	33.00132		
Diff	6.8	.4962028	6.6	5.853205	7.811599		

Notes: Shapiro-Wilk test for normality of Flesch Reading Ease scores=(W=0.99, p=0.295), Miyazaki EFL Readability Index scores=(W=0.98, p=0.003757); ***p<0.001

Private, for-profit, four-year institutions (n=48)							
Variable	Mean	SE	SD	95% CI		df	t
Flesch (L1)	31.3	2.405966	16.6	26.53482	36.21518	47	6.0394***
Miyazaki (L2)	25.6	2.095382	14.5	21.40964	29.84036		
Diff	5.7	.952088	6.5	3.834646	7.665354		

Notes: Shapiro-Wilk test for normality of Flesch Reading Ease scores=(W=0.95, p=0.04645), Miyazaki EFL Readability Index scores=(W=0.94, p=0.02086); ***p<0.001

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College Admissions for L2 Students

Discussion

Findings of this study suggest L2 readers—specifically students whose first language is not English—may experience more difficulty in reading and comprehending postsecondary admissions materials than their L1, English-fluent peers. This difficulty may help explain the postsecondary achievement gap experienced by both ELLs and ESLs in the United States, elaborating upon Callahan et al.'s (2009) and Kanno and Varghese's (2010) work which reasoned these students may face linguistic barriers on their path toward postsecondary education. In addition, the average U.S. adult reads at the 7th-grade level (Clear Language Group, 2019) and only 37% of U.S. high school graduates read at the 12th-grade level (National Assessment Governing Board, 2019). This study's findings also suggest admissions materials may be too difficult to read not only for L2 students and their support networks, but L1, English-fluent readers as well, echoing to prior research focused on financial aid information (Taylor, 2019; Taylor & Hartman, 2019).

As a result, professionals working in U.S. higher education admissions offices need to embrace L2 text simplification strategies when composing admissions materials meant for a diverse linguistic audience. Specifically, these professionals need to consider how L2 readers process text beyond using word and sentence length readability measures to audit their content. According to Greenfield (1999, 2003), L2 readers may benefit from shorter sentences that employ a relatively small lexicon: Using common words repeatedly helps L2 students read and comprehend English-language texts, also known as lexical overlap. However, what may seem like a common word or phrase to an admissions professional may not seem common to an L2 student seeking higher education. For instance, the term "high school transcript" may seem intuitive to L1 readers and those working in admissions, yet an L2 students may come from a country where their high school or secondary school did not issue a "transcript," and instead, a "high school record" or "grades report" may be a more accurate and simpler way of referring to the appropriate document. As a result, professionals working in admissions should analyze the lexicon of their admissions texts and ensure that sentences are written in ways that include a high level of lexical overlap using simple, widely-understood language.

In addition, L2 students may experience difficulty applying for admission depending on where they apply: Every institution in this study's sample wrote their admissions

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> **"...professionals working in U.S. higher education admissions offices need to embrace L2 text simplification strategies when composing admissions materials meant for a diverse linguistic audience."**

application instructions in a different way, and while some instructions were very difficult to read, others were relatively simple. This finding also echoes prior research demonstrating that financial aid communication also varies from institution to institution and is much more difficult for L2 students to read than L1 students (Taylor, 2019). Considering both results from the paired t-tests and Cohen's d tests of effect sizes, results suggest L2 students may have more difficulty reading admissions applications instructions on public institutional websites than L1 students. This result may suggest that, although public institutions published the simpler admissions application instructions than private peers, the L2 reading difficulty of admissions application instructions across all public institutions varies less than private peers. This consistent L2 reading difficulty of public institution admissions instructions may be contributing to the higher education access gaps between L1 and L2 students. However, many different institutions share the same processes for undergraduate to apply for admission (Taylor & Hartman, 2019). As a result, practitioners should explore collaborating with similar institutions and work on standardizing the admissions application instructions, in hopes of simplifying the text that an L2 student encounters on their path to a postsecondary education. Common application systems such as the Common Application, Universal College Application, and the Coalition Application have simplified the college

application process by centralizing information and allowing students to apply to any number of institutions while completing only one application. Related research in financial aid have made similar calls for institutions of higher education to standardize their financial aid application instructions (Taylor, 2019; Taylor & Hartman, 2019). However, this study suggests that each individual institution of higher education writes admissions materials differently, possibly leading to L2 students feeling confused and assuming that different institutions require drastically different admissions materials, whereas the process is actually very similar from institution to institution: Only the text differs.

Ultimately, beyond recent findings suggesting U.S. higher education text is rarely translated into languages other than English (Taylor, 2018a, 2018b, 2018c), findings of this study assert L2 readers may be unfairly and linguistically disadvantaged when learning how to apply to an institution of higher education. Subsequently, professionals in all units working for U.S. institutions of higher education must investigate how pre-admission materials are written and embrace L2 simplification methods to render admissions materials as clear and concise as possible for a diverse audience.

Implications for Future Research

Many of this study's findings yield ample opportunity for future research into how

college admissions processes are articulated to L2 students, beginning with what types of language K-12 students are exposed to when exploring postsecondary education. Cook et al. (2012) argued that a lack of college counseling could be to blame for low numbers of ELLs accessing higher education. Building upon that work and the findings of this study, perhaps future research could address how K-12 teachers, administrators, and support staff discuss postsecondary education with their L2 students beyond mere aspirations: What is the language that is used? Do K-12 faculty and staff explain what admissions deadlines are and when they are? How many L2 students could describe what a high school transcript is and how to attain theirs? Future research could ask L2 students to read a sample of admissions materials from different institutions and explain to an audience how to complete each step in the process—researchers could uncover problematic areas and work to provide specific educational interventions to explain difficult concepts.

Although institutions may not have a monetary or competitive incentive to standardize their admissions materials alongside other institutions, future research should explore how admissions materials differ from institution to institution and whether there are best practices regarding how admissions materials can be written for L2 student audiences and their support networks. As a result, future research could perform a comparative analysis of admissions materials from a large number of institutions to learn what institutions require in common, when they require the information, and how to best convey this information to diverse language populations. Moreover, as Taylor (2018a, 2018b) and Taylor and Hartman (2019) suggested, perhaps admissions professionals could consider partnering with linguistically diverse individuals on campus—if these individuals do not already work in admissions offices—to translate admissions processes into other common languages spoken in the United States, such as Spanish, Vietnamese, Chinese, Tagalog, Hmong, and Russian. This research would require expansive and culturally-responsive collaboration across language groups which may increase access to higher education for L2 students from many different linguistic backgrounds.

Moving beyond admissions materials, it is entirely possible that L2 students may struggle to comprehend other forms of student communication, such as institutional policies, on-campus housing contracts, course syllabi, and other critical pieces of information necessary for their postsecondary success. Future research could investigate many forms of institutional communication with L2 students to better understand what L2 students do not know and how to best support this student population from institution to institution. College access is half the battle but using complex and unfamiliar language only serves to perpetuate the many equitable outcomes facing L2 students in higher education in the United States.

Conclusion

Echoing prior research (Taylor, 2019; Taylor & Hartman, 2019), this study finds that L2 students may face additional linguistic hurdles to higher education that their L1 peers may not face. From here, institutions of higher education, and their admissions and financial aid professionals, should collaborate to understand how to best communicate with all prospective students, no matter their linguistic background. Taylor (2018a, 2018b) argued that institutions ought to translate higher education communication into the languages of their prospective students—and their support networks—to improve access to higher education in the United States. However, L2 students may not reap the maximum benefit from such an intervention if that communication is overly long and complex in the first place. Mere translation may not be enough.

Ultimately, institutions of higher education should consider methods of simplifying their communication, including admissions application instructions, and then work with native speakers of non-English languages to translate this simplified content. Although decades of research has documented the access gaps between L1 and L2 students seeking higher education in the U.S. (Kanno & Cromley, 2013; Kanno & Varghese, 2010), institutions could adopt a proactive approach and simplify admissions-related content for all prospective students and their support networks. Such a movement toward simplification would signal that institutions

have acknowledged the complexity of their communication and are actively working to increase access to their institutions for all students, regardless of their linguistic identity.

Limitations

This study was limited in two primary ways: sample size and method of analysis. Linguistic and quantitative analysis of admissions materials from all types of U.S. institutions would be ideal. However, gathering admissions materials from nearly 10,000 U.S. institutions of higher education and analyzing these materials in a timely manner was not feasible. Future research could examine the L1 and L2 readability of admissions materials at two-year institutions, trade schools, and other types of institutions. In addition, there exist dozens of readability measures of which researchers can use to analyze the reading difficulty or easability of text. This study employed the FRE and MIYA, as these measures have been used extensively and are two of the only readability measures that allow for a reading difficulty comparison for L1 and L2 readers.

Future research could examine higher education materials using other readability measures and then compare those results to reading comprehension tests completed by L1 and L2 readers. However, given its limitations, this study represents the largest L1 and L2 readability study of postsecondary access materials to date, and this study should provide foundational work for how

educational linguists can investigate how postsecondary materials are written for L1 and L2 audiences. (JCA)

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