7-2-2019

Six Easy Steps: Do Aspiring College Students Understand How to Apply for Financial Aid?

Zachary W. Taylor
University of Texas at Austin, zt@utexas.edu

Follow this and additional works at: https://ir.library.louisville.edu/jsfa

Six Easy Steps: Do Aspiring College Students Understand How to Apply for Financial Aid?

Six Easy Steps: Do Aspiring College Students Understand How to Apply for Financial Aid?

By Zachary W. Taylor

In 2009, President Obama called for a simplification of the Free Application for Federal Student Aid (FAFSA), resulting in the average family completing the FAFSA in 20 minutes. Yet, during the 2013-2014 college application season, nearly 900,000 Pell Grant-eligible high school graduates did not complete the FAFSA, leaving $2.9 billion in Pell Grant funds unclaimed (Sen-Gupta, 2015). Subsequently, researchers have investigated the hurdles of FAFSA completion, however, no extant research has examined whether institutional financial aid application instructions are readable, an element of the application process which seems logical to scrutinize. This study examines financial aid application instructions of 300 randomly-selected U.S. institutions to answer the primary research question, "At what reading comprehension level do institutions compose financial aid application instructions?" Findings indicate 75% of financial aid application instructions are unreadable by high school graduates of average reading comprehension ability, with 41% of instructions written at or above a 14th-grade reading comprehension level. Implications for practitioners and future research are addressed.

I n 2009, President Obama proposed simplifications of the Free Application for Federal Student Aid (FAFSA), including eliminating irrelevant questions, providing instant estimates of Pell Grant and loan eligibility during the application process, and incorporating college- or university-specific information into the application to better inform student borrowing (U.S. Department of Education, 2009). In 2010, an online Internal Revenue Service (IRS) data retrieval tool (DRT) was embedded into the application, making it easier for students and their parents and/or guardians to complete the FAFSA (NASFAA, 2017). However, four years later, the U.S. high school graduating class of 2013 included nearly 825,000 Pell Grant-eligible students who did not complete the FAFSA, therefore leaving over $2.9 billion in Pell Grant money unclaimed (Sen-Gupta, 2015). In no uncertain terms, successfully completing the FAFSA was a lingering problem in the world of postsecondary financial aid.

In another attempt to remedy this problem, President Obama again proposed further simplification of the FAFSA process in 2015, including an earlier application window to compensate for parental tax filing deadlines and the necessity for current financial documentation (Office of the Press Secretary, 2015). These improvements worked wonders, as the National College Access Network reported a 74% increase in completed FAFSA applications from high school seniors from February 2016 to February 2017 (Turner, 2017). However, in March 2017, the IRS—in conjunction with the U.S. Department of Education—

Zachary W. Taylor is a PhD student in the Department of Educational Leadership and Policy at The University of Texas at Austin.

disabled the application-embedded IRS data retrieval tool as "part of a wider, ongoing effort at the IRS to protect the security of data," and "a precautionary step following concerns that information from the tool could potentially be misused by identity thieves" (U.S. Department of Education, 2017, para. 3). Complicating matters is that each state has varying priority financial aid deadlines (NASFAA, 2019), meaning that students who are looking to apply to in- and out-of-state institutions must negotiate these deadlines and potentially prioritize institutions with later deadlines to compensate for the IRS data tool outage. Carrie Warick, Director of Policy and Advocacy with the National College Access Network, neatly summarized the problem facing thousands of students and their families: "They just can't wait for it [the DRT] to work, and the online data tool will be unavailable for several weeks" (Turner, 2017, para. 11).

The IRS DRT outage appropriately demonstrates the apparent fragility of the financial aid application process: this systemic fragility represents a significant hurdle to college access for thousands of students in the United States. The simple removal of a data retrieval tool could determine whether a student attends college during the 2017-2018 academic year. This is especially disheartening, as many of the students affected are low-income and first-generation, precisely the population that funding structures such as the Pell Grant were created to serve (The Pell Institute, 2017). Despite the removal of the IRS DRT, the National Association of Student Financial Aid Administrators (2017) released a statement, asserting that, "For students, it is important that they know they can still complete a FAFSA without the IRS DRT," and that "No student should be deterred from completing a FAFSA despite the loss of the IRS DRT," (NASFAA, 2017, para. 5). Here, well-informed and prepared students and their families are much more likely to complete the FAFSA given a catastrophic event such as the IRS DRT outage. As a result, student financial aid administrators on college campuses across the country must ensure that their financial aid application instructions and procedures are as clearly defined and as simple to follow as possible. Unfortunately, for the purposes of financial aid application instructions, no extant research has examined a seemingly commonsense element of the financial aid application process: the readability of the instructions.

Research Questions

Longitudinal research has demonstrated that the average U.S. adult possesses a 7th- to 8th-grade level of reading comprehension, and 43% of all U.S. adults are functionally literate, meaning they have basic or below-basic literacy skills levels and only possess a reading comprehension level high enough to function in U.S. society (Clear Language Group, 2019). Additionally, the 2015 National Assessment of Educational Progress Report found that only 37% of high school graduates read at a 12th-grade level and are sufficiently prepared to read and comprehend first-year college-level materials (National Assessment Governing Board, 2016). Given these statistics—that the average U.S. adult reads below an 8th-grade level and that the average high school graduate reads at or below the 12th-grade level—it is pertinent to examine the readability of institutionally-authored financial aid application instructions. In this study, I examine the financial aid application instructions of 300 randomly-selected U.S. institutions of higher education (public and not-for-profit private, two- and four-year) to explore the following research question: At what reading comprehension level do U.S. institutions compose financial aid application instructions?

A Brief History of Readability

Beginning in the 1920s, literacy researchers developed discovered several methods that combined word choice with sentence length and structure to predict the readability difficulty of a given text by grade level. A few decades later, writers and literacy researchers like Rudolf Flesch, Edgar Dale, and Jean Chall generated readability formulas that were subsequently used to establish journalism (Clark, Kaminski, & Brown, 1990), legal (Milne, Culnan, & Greene, 2006), insurance (Walfish & Watkins, 2005), and other industry standards (Loughran & McDonald, 2014). However, two of the largest enterprises which have heavily used readability

measures since their marketplace introduction are the United States Department of Defense and the healthcare industry (DuBay, 2004).

Since the 1950s, those wishing to join the United States Armed Forces must successfully complete a literacy test. Later in the 1970s, a computer input error resulted in the false recruitment of nearly 200,000 candidates in the lowest literacy category, however, Congress decided to retain these candidates and create military literacy programs, leading to the educational enrichment and subsequent promotion of service people across multiple branches of the Armed Forces (DuBay, 2004). Ultimately, the adoption of readability tests to measure military communication began in the late 1970s when the United States Department of Defense began using the Flesch-Kincaid and Dale-Chall measures to ensure that their publicly-disseminated information was written at or below the 8th-grade reading level (Caylor, Sticht, Fox, & Ford, 1973). The readability of military documents was thoroughly researched in subsequent years (Carver, 1974; Fry, 1986; Johnson, 1972; Kniffin, 1979; McClure, 1987; Sticht, 1970; Sticht & Zapf, 1976).

In addition to military purposes, readability tests have been implemented by the healthcare field for decades for a variety of purposes. In recent years, healthcare-related readability studies have focused on the readability of wellness services literature, primarily that literature documenting the services received and rendered by the patient, such as the examination of doctor-to-patient e-communications (Mirsky, Tieu, Lyles, & Sarkar, 2016), privacy policies (Ermakova, Fabian, & Babina, 2015), healthcare guidelines (Meillier, Patel, & Al-Osaimi, 2015), cancer information (Ibrahim et al., 2016; Weiss et al., 2016), and the integration of healthcare materials into social media platforms and websites (Lopez, Blobel, & Gonzalez, 2016; Sadah, Shahbazi, Wiley, & Hristidis, 2016).

Considering the widespread adoption of the Common Core State Standards across the K-12 spectrum (Common Core State Standards Initiative, 2016a) and its suggestions for complex, nonfiction texts and academic language materials throughout this spectrum (Common Core State Standards Initiative, 2016b), recent research has focused on the readability of K-12 textbooks and curricular materials (Begeny & Greene, 2014; Hiebert & Mesmer, 2013; Lo, 2014; O'Leary, 2011; Stein & Nagro, 2015; Webre, 2011; Williamson, Fitzgerald, & Stenner, 2013).

Of postsecondary readability research, a small body of work has addressed textbooks. One study found that 52% of students in a two-year institution in Missouri had reading comprehension abilities below the grade-level readability of textbooks used in their courses across disciplines (Cline, 1973). Shepherd, Selden, and Selden (2011) learned that first-year postsecondary students with high ACT reading comprehension scores were not proficient readers of postsecondary-level mathematics textbooks. Another study examined the readability of public speaking textbooks and found that readability levels of twenty-two nationally-published textbooks were composed above the 15th-grade level, more difficult than a first-year student ought to expect to comprehend (Schneider, 2011). Ultimately, it seems the recent emphasis on readability levels in the K-12 arena has influenced postsecondary readability research, as the last few decades of postsecondary readability research have focused on one element of the postsecondary experience—textbooks—and little else.

Only recently has the readability of postsecondary content been addressed in Taylor's (2017a, 2017b, 2018a, 2018b, 2018c, 2018d) studies. Examining international graduate student admissions materials, Taylor (2017b) found these materials were written two or three grade levels above the threshold of minimum TOEFL reading scores for admission to the institution. In the study, Taylor reasoned international graduate students must test into the 11th- or 12th-grade reading comprehension level for admission per minimum TOEFL scores, but these students were then required to read and comprehend admissions instructions written at the 13th or 14th-grade reading level. Other studies have found articulation agreements between two- and four-year institutions to be written above the 16th-grade reading level (Taylor, 2017a) and

emergency response communication from a public flagship university to be written above the 13th-grade reading level and only disseminated in English (Taylor, 2018b). Examining student-focused content, undergraduate admissions materials were found to be written above the 13th-grade level (Taylor, 2018a), international undergraduate admission materials near the 14th-grade level (Taylor, 2018c), and sexual assault reporting instructions above the 15th-grade level (Taylor, 2018d).

Ultimately, decades of research in multiple fields outside of higher education has successfully argued that readability is an important field of literacy studies. To this point, no extant research examines the readability of financial aid application instructions composed by postsecondary institutions. It is therefore important to examine postsecondary student financial aid materials to learn whether these materials are appropriate for their intended audiences.

Data, Sample, and Methods

Sample

The population of interest for this study is all public and private, for-profit and nonprofit, two- and four-year colleges and universities, representing a sampling frame of 7,357 institutions in the United States. Public and private nonprofit four-year institutions receive the largest percentages of federal assistance in nearly every aid category, including Pell Grants, federal work-study assistance, Perkins Loans, direct subsidized loans, direct unsubsidized loans, Parent PLUS Loans, and Grad Plus Loans, accounting for 58% of all federal aid distribution across all institutional types (Baum, Ma, Pender, & Welch, 2016). However, it is important to examine two-year institutions and for-profit institutions to serve a larger percentage of the postsecondary student population. Therefore, this study examines both public and private, for-profit and nonprofit, and two- and four-year institutions in the United States.

A sample size of 300 institutions was established, given the time necessary to locate each institution's student financial aid application instructions, extracting the text therein, and calculating four readability measures per text. To reduce bias and increase generalizability, simple random sampling technique was used. Once all institutions were identified using the Integrated Postsecondary Education Data System (IPEDS), I sorted each institution by type and assigned each institution a consecutive number. Then, a random number generator was used with the parameters of 1 to 7,357 to assign 50 institutions of each type to the study: Public nonprofit four-year, private nonprofit four-year, private for-profit four-year, public nonprofit two-year, private nonprofit two-year, and private for-profit two-year institutions. It should be noted that the original random sample for private for-profit two- and four-year institutions included several institutions that have closed since 2016. These institutions were not included as part of the random sample, as I randomly selected a different institution of these types that were still open and still providing financial aid application instructions to their current and prospective students.

All data was extracted directly from each institution's .edu, .net, .com, or .org web domain using Readability Studio, a quantitative linguistics software program. Data was initially gathered for public and private nonprofit four-year institutions in March and April of 2017; other institutional data was gathered in August and September of 2017. Data was cross-checked for accuracy again in September 2017, as all public and private nonprofit four-year institutional data was reviewed to ensure currency. Institutionally-authored financial aid application instructions were located using each institution's embedded search tool on their website, using the search phrases "apply for financial aid" or "financial aid application." By employing these search phrases, I located financial aid application instructions for all 300 institutions included in this study. A database of the institutions included in the study, the URLs of financial aid application instructions, readability measures, and word counts can be provided upon request.

Readability Measures

Because the evaluation of college- and university-authored materials is a new field of inquiry, no readability tests specifically targeting such documentation currently exists. Therefore, this study aims to best triangulate the readability of each webpage by employing several commonly-used nonfiction readability tests in tandem and then averaging their results akin to Taylor's (2017a, 2017b, 2018a, 2018b, 2018c, 2018d) foundational studies. Furthermore, I also performed word count analyses, as literacy research suggests that a longer text written at a certain grade level is more difficult to read than a shorter text at the same grade level, suggesting the phenomenon of reader fatigue (Benjamin, 2012). The readability measures included in this study are the Automated Readability Index (Kincaid & Delionbach, 1973), the Flesch-Kincaid Grade Level Test (Kincaid, Fishburne, Rogers, & Chissom, 1975), the Gunning-Fog Index (Gunning, 1952), and the SMOG Index (McLaughlin, 1969). The measures and their definitions are listed below, adopted from Taylor's studies.

The Automated Readability Index (ARI). The ARI is a measure of readability difficulty that calculates the grade level of narrative text, examining the average word and sentence length of a given selection of text. The use of the ARI for this study's purpose is validated by its appropriateness for adult-level textual analysis, given the ARI's implementation by the Army National Guard and other branches of the United States Department of Defense. ARI is measured thus: $G = (4.71 * (RP/W)) + (0.5 * (W/S)) - 21.43$, where G = grade level, W = number of words, RP = number of strokes (characters and punctuation less sentence terminating punctuation i.e. periods), and S = number of sentences (Kincaid & Delionbach, 1973).

The Flesch-Kincaid grade level test (FKGLT). The FKGLT calculates the grade level of technical documents and nonfiction based on sentence length and syllable count. The use of FK for this study's purpose is validated by its longitudinal use—over forty years—by the United States Navy in its evaluation of the reading levels of entry-level and experienced naval cadets. FK is measured thus: $G = (11.8*(B/W)) + (.39*(W/S)) -15.59$, where G = grade level, W = number of words, B = number of syllables, and S = number of sentences (Kincaid, Fishburne, Rogers, Chissom, 1975).

The Gunning-Fog index (GFI). The GFI) calculates the grade level of a document based on numbers of sentences and complex words, defined as words that contain three or more syllables except for proper nouns, words made three syllables by adding the inflections "-ed" and "-es," and compound words composed of simpler words, i.e. horsepower = "horse" + "power." The use of the GFI for this study's purpose is validated by its widespread use across a variety of disciplines for over forty years (Schlief & Wood; 1974; Wong, 1999). GFI is measured thus: $G = .4*(W/S + ((C/W)*100))$, where G =grade level, W = number of words, C = number of complex words, and S = number of sentences (Gunning, 1952).

The simple measure of gobbledygook (SMOG). The Simple Measure of Gobbledygook Readability Formula (SMOG) is a measure of readability difficulty that calculates the grade level of any document at least 30 sentences in length based on the number of complex words and total sentences. A complex word is defined as one with three or more syllables, with complex sentences featuring a semicolon counted as two sentences. The use of the SMOG for this study's purpose is validated by its widespread use across a variety of disciplines for over forty years, especially the healthcare field where complex jargon (gobbledygook) is commonly used to describe medical conditions. SMOG is measured thus: $G = C$ per 30 sentence passage, where G = grade level, and C = number of complex words (three syllables or more) using SMOG's proprietary conversion table (McLaughlin, 1969).

A matrix comparing the readability elements of each measure can be found below.

Matrix comparing elements of each readability measure

Readability measure	Textual elements analyzed
Automated Readability Index	Words, keystrokes, sentences
Flesch-Kincaid	Words, syllables, sentences
Gunning-Fog	Words, complex words, sentences
SMOG	Complex words, sentences

Limitations

The primary limitation of this study is sample size: There are over 7,000 institutions of higher education in the United States, and this study only focuses on 300. I also decided to analyze fifty institutions of each type, even though the number does not represent an equal sample from each population, as there are many more private institutions than public institutions. Furthermore, I did not examine alternative forms of institutionally-authored financial aid application instructions, such as videos, emails, or physical documents posted on campus. However, recent research has suggested that aspiring college students and their families are more likely to consult Internet sources for information on how to access postsecondary information before any other source (Burdett, 2013), rendering institutional web information a pertinent source of text data for analysis across institution types.

Furthermore, future research should address institutional characteristics as they relate to readability levels: Comparing an institution's acceptance rate, Carnegie classification, or percentage of students receiving a federal grant to the readability of their student financial aid applications could serve as a starting point. In addition, future research should examine the readability of the FAFSA itself, even though the FAFSA application displays different data and text depending on user input. However, an examination of the readability of the FAFSA would provide financial aid professionals a reference point when composing and publishing their institution's financial aid application instructions or the institutional application itself.

Results

The results from the readability measures of financial aid application instructions for 300 postsecondary institutions in the United States can be found in Table 1.

Table 1

Readability levels of financial aid application instructions of a random sample of 300 postsecondary institutions in the United States

	Readability level (by grade)
Average readability (n=300)	13.6
Public, nonprofit, two-year (n=50)	12.7
Average ARI	12.5
Average FKGLT	12.9
Average GFI	11.1
Average SMOG	14.3
Private, nonprofit, two-year (n=50)	14.1
Average ARI	14.1
Average FKGLT	14.2
Average GFI	12.4
Average SMOG	15.4
Private, for-profit, two-year (n=50)	13.6
Average ARI	13.5
Average FKGLT	13.5
Average GFI	13.9
Average SMOG	13.6
Public, nonprofit, four-year (n=50)	13.3
Average ARI	14.6
Average FKGLT	12.6
Average GFI	11.9
Average SMOG	14.1
Private, nonprofit, four-year (n=50)	13.6
Average ARI	14.8
Average FKGLT	12.9
Average GFI	12.1
Average SMOG	14.4
Private, for-profit, four-year (n=50)	14.5
Average ARI	14.7
Average FKGLT	14.5
Average GFI	13.1
Average SMOG	15.7

The results from readability range, word count, and percentile analyses of financial aid application instructions of a random sample of 300 postsecondary institutions in the United States can be found in Table 2.

Table 2

Readability highs and lows, word counts, and percentiles of financial aid application instructions of a random sample of 300 postsecondary institutions in the United States

Average (n=300)	
High readability level (grade level)	19
Low readability level	7.6
Range readability level	11.4
Average word count (# of words)	1,015
High word count	47,859
Low word count	44
Range word count	47,815
Public, nonprofit, two-year (n=50)	
Readability level: high, low	(18.1), (8.2)
Word count: average, high, low	(2,531), (47,859), (205)
Private, nonprofit, two-year (n=50)	
Readability level: high, low	(19), (7.7)
Word count: average, high, low	(718), (8,812), (79)
Private, for-profit, two-year (n=50)	
Readability level: high, low	(19), (10.2)
Word count: average, high, low	(436), (1,189), (59)
Public, nonprofit, four-year (n=50)	
Readability level: high, low	(18.4), (7.6)
Word count: average, high, low	(706), (2,411), (47)
Private, nonprofit, four-year (n=50)	
Readability level: high, low	(17.2), (10)
Word count: average, high, low	(614), (2,359), (97)
Private, for-profit, four-year (n=50)	
Readability level: high, low	(18.6), (8.7)
Word count: average, high, low	(1,089), (9,029), (44)
% of financial aid application instructions written:	
at or below 10th-grade reading level	4%
at or below 11th-grade	16%
at or below 12th-grade	25%
at or below 13th (1st yr. undergraduate)	40%
at or below 14th (2nd yr. undergraduate)	59%
at or below 15th (3rd yr. undergraduate)	75%
at or below 16th (4th yr. undergraduate)	82%
at or below 17th (1st yr. graduate)	89%
at or below 18th (2nd yr. graduate)	96%
at or below 19th (1st yr. doctoral)	100%

The Readability Levels of Financial Aid Application Instructions

This study answers the research question: U.S. institutions compose student financial aid application instructions above the 13th-grade reading level, far surpassing the reading comprehension level of the average U.S. adult and exceeding the reading comprehension levels of over half of U.S. high school graduates. However, the findings in Table 1 indicate that the readability levels of financial aid application

instructions vary depending on institution type. Overall, public institutions composed financial aid application instructions at lower readability levels than their counterparts, as public nonprofit two-year institutions composed instructions at the 12.7th-grade reading level, whereas private nonprofit two-year institutions composed instructions at the 14.1st-grade reading level.

It is also notable that the SMOG index registered the highest readability levels across all institution types. The high SMOG levels—which measures word choice complexity based on the number of three-syllable words per sentence—indicate that financial aid application instructions often feature diction that is too difficult for readers below the 14th-grade reading comprehension level. Across all institution types, private for-profit four-year institutions and private nonprofit two-year institutions composed the most difficult financial aid application instructions at the 14.5th- and 14.1st-grade reading level. SMOG levels for these institutions were also the highest in the data set, registering at the 15.7th- and 15.4th-grade reading level. Although sentence structure readability measures such as the ARI, FK, and GFI registered readability levels above the 11.1st-grade reading level across all institution types, data in this study suggest that difficult vocabulary contributes to the high readability levels of financial aid application instructions more than complex sentence structure does.

The information featured in Table 2 regarding the range of readability across institution types is also notable. The most difficult financial aid application instructions across all institution types were written at a 19th-grade reading level, whereas the simplest financial aid application instructions were written at a 7.6th-grade reading level, representing a range of 11.4 grade levels of reading comprehension. Readability ranges were also pronounced across institution types, as every sample of institution type in this study had a readability range of at least 7.2 grade levels of reading comprehension. This range speaks to the notion that different types of institutions either require students to perform drastically different procedures to apply for financial aid, or these institutions employ drastically different language to communicate with their current and prospective students. This phenomenon is most apparent in private nonprofit two-year institutions, as these institutions composed instructions with a range of 11.3 grade levels of reading comprehension (Table 2).

Furthermore, across types, institutions tend to include a wide range of information in their financial aid application instructions, as one institution used only 44 words in their instructions, whereas another included a 47,859-word PDF file as the sole source of financial aid application instructions on their entire website. However, it should be noted that the readability of the 47,859-word PDF registered at the 17.2nd-grade reading level, rendering this particular set of financial aid application instructions an outlier in the data in terms of both readability level and word count. Including the 47,859-word PDF, the average word count for public nonprofit two-year institutions is 2,530: without the PDF, the average word count drops to 1,605. However, even with this PDF removed from the sample, it is important to note that public nonprofit two-year institutions composed the longest financial aid application instructions at 1,605 words, nearly twice as long as their private nonprofit counterparts and nearly four times as long as their private for-profit counterparts. Yet, public nonprofit two-year institutions compose financial aid application instructions that are easier to read (12.7th-grade reading level in Table 1) than both private nonprofit and for-profit two-year institutions (14.1st- and 13.6th-grade reading levels in Table 1). Therefore, the data in this study suggests that public nonprofit two-year institutions—although they compose the wordiest financial aid application instructions—are able to compose financial aid application instructions in the most readable fashion across all institution types. However, public nonprofit two-year institutions composed their instructions at the 12.7th-grade reading level which still far exceeds the reading ability of the average U.S. adult at somewhere between the 7th- and 8th-grade reading level.

It should also be noted that private for-profit two-year institutions composed the shortest average financial aid application instructions—436 words—yet these institutions composed these instructions at the

13.6th-grade reading level. Therefore, it is important to emphasize that shorter financial aid application instructions are not necessarily more readable than longer ones. Moreover, average word count of financial aid application instructions was 1,015 words across institution types. In context and across all institution types, the data in this study suggest that postsecondary students must read and comprehend a 1,015-word document composed at the 13.6th-grade reading level to successfully apply for federal financial aid, not to mention the process required to complete the FAFSA. Considering average readability level (Table 1) and word count (Table 2), the most difficult financial aid application instructions were written by private for-profit four-year institutions at the 14.5th-grade level and 1,089 words in length. As a result, future research could address institutional processes associated with procuring financial aid at private, for-profit four-year institutions to explore why their financial aid application instructions may be longer and more complicated.

Finally, the percentiles of the readability of financial aid application instructions across institution types was informative. Only 40% of financial aid application instructions examined in this study were written at or below the 13th-grade reading level, far above the reading comprehension abilities of the average U.S. adult. Moreover, the data in this study suggests that there are sizable percentages of institutions composing financial aid application instructions between the 10th and 15th-grade reading levels. There were consistent 10-20% jumps between the 10th and 16th-grade reading levels, as financial aid application instructions written above the 17th-grade reading level were rare in this study (11%). However, it is important to emphasize the consistent, unreadable nature of financial aid application instructions across institution types in this study, especially considering the average U.S. adult's reading ability: the 7th- to 8th-grade level.

Discussion and Conclusion

One institution's financial aid application instructions perfectly summarize the findings of this study. This institution featured a banner on the top of their financial aid webpage which read, "Six Easy Steps." After analysis, this institution's financial aid application instructions were written above the 14th-grade reading level and was nearly 2,000 words in length. In short, this institution's "Six Easy Steps" are not quite as easy as they seem or as the institution would lead one to believe.

Ultimately, this study reveals that the average U.S. adult likely cannot read and comprehend how to apply for financial aid at any type of institution, and these individuals would likely encounter more difficult financial aid application instructions at private institutions than public institutions. Moreover, data in this study suggests that the average high school graduate and aspiring college student likely cannot read and comprehend how to apply for financial aid, either. Because the FAFSA is user-responsive, which means the readability of the document changes depending on user-inputted information, determining the reading level of the FAFSA is extremely difficult and varies from user to user. However, it is entirely possible that both the difficulty of the FAFSA and the difficulty of institutional financial aid application instructions contribute to students' inability to successfully complete the FAFSA and attend a postsecondary institution.

Beyond the fact that the average U.S. adult reads at the 8th-grade level and 63% of high school graduates read below the 12th-grade level (Clear Language Group, 2019), the difficulty of financial aid application instructions in this study is especially problematic for two groups of college students: English-language learners and students with reading disabilities, such as alexia, dyslexia, or those with reading comprehension difficulties. These two groups of students are at a distinct linguistic disadvantage when they enter college, thus, composing financial aid application instructions above the 12th-grade reading level seems inappropriate and unnecessarily burdensome for these populations. However, a recent study from Taylor and Bicak (2019) found that many returning adult students were unfamiliar with many financial aid jargon terms, such as FAFSA, entrance counseling, and data retrieval tool. As a result, many different student populations may be affected by overly complex financial aid communication.

Although word count does not correlate with reading comprehension level, an axiom of linguistic research holds that passage length (word count) is related to reading stamina (Benjamin, 2012). Here, the more words contained in each passage, the more difficult each passage is to comprehend. It is therefore interesting to note that one institution in this study used a mere 44 words to instruct a prospective student how to apply for financial aid. Inversely, another institution used 47,859 words to outline the same or a similar process. Granted, this study only examines financial aid application instructions posted to institutional websites, yet the depth of information offered by some institutions compared to the dearth of information offered by others begs discussion and reflection by practitioners and financial aid researchers alike.

Finally, this study demonstrates that financial aid professionals across institution types—or those charged with composing financial aid application instructions—have overlooked a simple element of the financial aid process: the average aspiring college student's ability to read and understand how to apply for financial aid. Although the formal and informal institutional processes for applying for and receiving financial aid can be complicated, the instructions for completing the financial aid application do not need to be. When a prospective college student explores the higher education marketplace, the student is likely to engage with an institution using the Internet to inform their choice of where and when to apply (Burdett, 2013). One of the most crucial postsecondary processes—applying for financial aid—and data in this study suggests that this process is being made more difficult by institutions of all types and their financial aid application instructions on their websites.

Yet information on an institutional website is not the last source of financial aid information for current and prospective students. A recent report from New America echoes many of the findings of this study. In the report, a team of eight researchers analyzed thousands of financial aid award letters and found these letters often "lack[ed] consistency and transparency" (Burd et al., 2018, para. 2). Of the key findings of the report, the researchers asserted that financial aid award letters included "confusing jargon and terminology" (para. 5), "vague definitions and poor placement of work-study" (para 9), and "no clear next steps" for students to take after they receive their letter (para. 10). Considering the New America report, Taylor and Bicak's (2019) financial aid jargon study, and the study at hand, researchers and practitioners should explore all facets of the financial aid process—beyond the application instructions—to learn if these facets are understandable and informative for their intended audiences.

Akin to President Obama's simplification of the FAFSA, policy makers and financial aid professionals should standardize the readability levels of financial aid application instructions to ensure that prospective college students are provided clear, concise instructions on how to apply for aid. At the institutional level, financial aid offices should linguistically audit all communication materials addressing prospective and current students, keeping in mind that the average U.S. adult reads between the 7th- and 8th-grade level. Interdepartmental communication between institutional units can be filled with complex communication habits and plentiful education jargon, but crucial information addressing a potentially inexperienced and/or less-educated audience should be written at readable, accessible levels. And institutions of all types do not need to become sociolinguists or radically change their written communication protocols: many readability measures are freely available to assist institutions when composing their materials at readable levels, such as the Flesch-Kincaid Grade Level Test embedded in all Microsoft Word software packages or the website www.readabilityformulas.com, which provides free readability measures of any user-inputted text using the same commonly-used readability measures as I used for this study.

Ultimately, this line of inquiry—the composition and readability of university-authored materials—represents an incredible opportunity for future research. Making postsecondary content more readable is good for all students and can be accomplished through communication, collaboration, and attention to detail. Financial aid research already indicates that aspiring college students from marginalized backgrounds

encounter enough resistance when attempting to finance their education: the readability of financial aid application instructions should not add to this resistance.

Nexus: Connecting Research to Practice

- Financial aid practitioners should perform readability audits of all materials meant for a prospective or current student audience to ensure that all materials are readable. If these professionals do not audit their materials, it is likely that the average U.S. adult cannot read and comprehend the material.
- Institutions should determine the depth of information necessary for an aspiring student to successfully apply for financial aid. Financial aid practitioners should only include the most pertinent information on their websites, while removing any extraneous information which does not assist in or inform the financial aid application process.
- Financial aid practitioners should differentiate financial aid application materials by using embedded video tutorials, images, and interactive figures to illustrate the financial aid application process. Aspiring students learn in a wide variety of ways, and modern technology allows financial aid professionals to differentiate financial aid materials in multiple modes to reach and teach a diverse group of learners.

References

Baum, S., Ma, J., Pender, M., & Welch, M. (2016). *Trends in Higher Education Series: Trends in student aid: 2016*. Retrieved from https://trends.collegeboard.org/sites/default/files/2016-trends-student-aid_0.pdf

Begeny, J. C., & Greene, D. J. (2014). Can readability formulas be used to successfully gauge difficulty of reading materials? *Psychology in the Schools*, *51*(2), 198-215.

Benjamin, R. G. (2012). Reconstructing readability: Recent developments and commendations in the analysis of text difficulty. *Educational Psychology Review*, *24*(1), 63-88. doi:10.1007/s10648-011-9181-8

Burd, S., Fishman, R., Keane, L., Habbert, J., Barrett, B., Dancy, K., . . . Williams, B. (2018, June). *Decoding the cost of college*. Retrieved from https://www.newamerica.org/education-policy/policy-papers/decoding-cost-college/

Burdett, K. R. (2013). *How students choose a college: Understanding the role of internet based resources in the college choice process* (Doctoral dissertation). Available from ProQuest database. (UMI No. 3590306)

Carver, R. P. (1974). Two dimensions of tests: Psychometric and edumetric. *American Psychologist*, *29*(7), 512-518. Retrieved from http://psycnet.apa.org/journals/amp/29/7/512/

Caylor, J. S., Sticht, T. G., Fox, L. C., & Ford, J. P. (1973, March). *Methodologies for determining reading requirements of military occupational specialties* (Research Report No. 73-5). Retrieved from http://files.eric.ed.gov/fulltext/ED074343.pdf

Clark, G. L., Kaminski, P. F., & Brown, G. (1990). The readability of advertisements and articles in trade journals. *Industrial Marketing Management*, *19*(3), 251-260. doi:10.1016/0019-8501(90)90017-P

Clear Language Group. (2019). Readability: What is readability? Retrieved from http://www.clearlanguagegroup.com/readability/

Cline, T. A. (1973). Readability of community college textbooks and the reading ability of the students who use them. *Journal of Reading Behavior*, *5*(2), 110-118.

Common Core State Standards Initiative. (2016a). Standards in your state. Retrieved from http://www.corestandards.org/standards-in-your-state/

Common Core State Standards Initiative. (2016b). Key shifts in English language arts. Retrieved from http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/

DuBay, W. H. (2004, August). *The principles of readability*. Retrieved from https://eric.ed.gov/?id=ED490073

Ermakova, T., Fabian, B., & Babina, E. (2015, March). *Readability of privacy policies of healthcare websites.* Paper presented at Internationale Tagung Wirtschaftsinformatik, Osnabrück, Germany. Retrieved from https://www.researchgate.net/publication/268981590_Readability_of_Privacy_Policies_of_Healthcare_Websites

Fry, E. (1986). The varied uses of readability measurement. *Annual Meeting of the International Reading Association*, pp. 1-14. Retrieved from https://eric.ed.gov/?id=ED267384

Gecit, Y. (2010). The evaluation of high school geography 9 and high school geography 11 text books with some formulas of readability. *Educational Sciences: Theory and Practice*, *10*(4), 2205-2220.

Gunning, R. (1952). *The technique of clear writing.* New York, NY: McGraw-Hill.

Hiebert, E. H., & Mesmer, H. A. (2013). Upping the ante of text complexity in the common core state standards: Examining its potential impact on young readers. *Educational Researcher*, *42*(1), 42-1. doi:10.3102/0013189X12459802

Ibrahim, A. M., Vargas, C. R., Koolen, P. G., Chuang, D. J., Lin, S. J., & Lee, B. T. (2016). Readability of online patient resources for melanoma. *Melanoma Research*, *26*(1), 58-65.

Jitendra, A., Nolet, V., Gomez, O., & Xin, Y.P. (1999, April). *AERA: An analysis of four middle school geography textbooks: Meeting the needs of students with learning problems* (Research Report No. 143). Retrieved from https://eric.ed.gov/?id=ED433271

Johnson, K. H. (1972). *An analysis of the relationship between readability of Air Force procedural manuals and discrepancies involving non-compliance with the procedures* (Master's thesis). Retrieved from http://www.dtic.mil/docs/citations/AD0750917

Kincaid, J. P., & Delionbach, L. J. (1973). Validation of the automated readability index: A follow-up. *Human Factors*, 15(1), 17-20. http://dx.doi.org/10.1177/001872087301500103

Kincaid, J. P., Fishburne, R. P., Rogers, R. L., & Chissom, B. (1975, February). *Derivation of new readability formulas (automated readability index, fog count, and Flesch reading ease formula) for Navy enlisted personnel* (Research Report No. 8-75). Retrieved from http://www.dtic.mil/dtic/tr/fulltext/u2/a006655.pdf

Kniffin, J. D. (1979). The new readability requirements for military technical manuals. *Technical Communication*, *26*(3), 26-3.

Lo, L. (2014). Readability of individualized education programs. *Preventing School Failure*, *58*(2), 96-102. doi:10.1080/1045988X.2013.782532

Lopez, D. M., Blobel, B., & Gonzalez, C. (2016). Information quality in healthcare social media – an architectural approach. *Health and Technology*, *6*(1), 17-25. doi:10.1007/s12553-016-0131-9

Loughran, T., & McDonald, B. (2014). Measuring readability in financial disclosures. *Journal of Finance*, *69*(4), 1643-1671. doi:10.1111/jofi.12162

McClure, G. (1987). Readability formulas: Useful or useless? *IEEE Transactions on Professional Communication*, *30*(1), 12-15. doi:10.1109/TPC.1987.6449109

McLaughlin, G. H. (1969). Clearing the smog. *J Reading*, *13*(3), 210-211. Retrieved from https://eric.ed.gov/?id=EJ012666

Meillier, A., Patel, S., & Al-Osaimi, A. M. (2015). Readability of healthcare literature for hepatitis b and c. *Digestive Diseases and Sciences*, *60*(12), 3558-35562.

Milne, G. R., Culnan, M. J., & Greene, H. (2006). A longitudinal assessment of online privacy notice readability. *Journal of Public Policy & Marketing*, *25*(2), 238-249. Retrieved from http://journals.ama.org/doi/abs/10.1509/jppm.25.2.238?code=amma-site

Mirsky, J. B., Tieu, L., Lyles, C., & Sarkar, U. (2016). Readability assessment of patient-provider electronic messages in a primary care setting. *Journal of the American Medical Informatics Association*, *23*(1), 202-206. doi:10.1093/jamia/ocv087

NASFAA. (2017, March 9). NASFAA statement on IRS data retrieval tool outage. Retrieved from https://www.nasfaa.org/nasfaa_statement_on_irs_data_retrieval_outage

NASFAA. (2019, May 11). State financial aid programs. Retrieved from https://www.nasfaa.org/State_Financial_Aid_Programs

National Assessment Governing Board. (2016). *The nation's report card*. Retrieved from https://www.nationsreportcard.gov/

Office of the Press Secretary. (2015, September 13). Fact sheet: The President's plan for early financial aid, improving college choice and helping more Americans pay for college. Retrieved from https://obamawhitehouse.archives.gov/the-press-office/2015/09/14/fact-sheet-president%E2%80%99s-plan-early-financial-aid-improving-college-choice

O'Leary, S. (2011). The inclusive classroom: Effect of a readability intervention on student engagement and on-task behaviour within two mixed-ability science classrooms. *Science Education International*, *22*(2), 145-151. Retrieved from https://eric.ed.gov/?id=EJ941676

The Pell Institute. (2017). Pell grants. Retrieved from http://www.pellinstitute.org/pell_grants.shtml

Sadah, S. A., Shahbazi, M., Wiley, M. T., & Hristidis, V. (2016). Demographic-based content analysis of web-based health-related social media. *Journal of Medical Internet Research*, *18*(6). doi:10.2196/jmir.5327

Schlief, M., & Wood, R.W. (1974). A comparison of procedures to determine the readability level of non-text materials. *Reading Improvement, 11*(2), 57-65. Retrieved from https://search.proquest.com/docview/1994304744?pq-origsite=gscholar

Schneider, D. E. (2011). Assessing the readability of college textbooks in public speaking: Attending to entry level instruction. *Communication Teacher*, *25*(4), 246-255. doi:10.1080/17404622.2011.601727

Sen-Gupta, G. (2015, January 12). Students leave over $2.9 billion in free college money on the table. Retrieved from https://www.nerdwallet.com/blog/loans/student-loans/fafsa-college-money-left-on-table/

Shepherd, M. D., Selden, A., & Selden, J. (2011, April). *Possible reasons for students' ineffective reading of their first-year university mathematics textbooks* (Research Report No. 2011-2). Retrieved from http://files.eric.ed.gov/fulltext/ED519031.pdf

Stein, M. L., & Nagro, S. (2015). The readability and complexity of district-provided school-choice information. *Journal of Education for Students Placed at Risk*, 199-217. doi:10.1080/10824669.2015.1042105

Sticht, T. G. (1970, October). *Literacy demands of publications in selected military occupational specialties* (Research Report No. 25-70). Retrieved from https://eric.ed.gov/?id=ED044615

Sticht, T. G., & Zapf, D. W. (1976, September). *Reading and readability research in the armed forces* (Research Report No. 76-4). Retrieved from http://eric.ed.gov/?id=ED130242

Taylor, Z. W. (2017a). Inarticulate transfer: Do community college students understand articulation agreements? *Community College Journal of Research and Practice*, 1-5. doi:10.1080/10668926.2017.1382400

Taylor, Z. W. (2017b). Speaking in tongues: Can international graduate students read international graduate admissions materials? *International Journal of Higher Education*, *6*(3), 99-108. doi:10.5430/ijhe.v6n3p99

Taylor, Z. W. (2018a). ¿Comprehenderán mis amigos y la familia? Analyzing Spanish translations of admission materials for Latina/o students applying to 4-year institutions in the United States. *Journal of Hispanic Higher Education*, 1-15. doi:10.1177/1538192718775478

Taylor, Z. W. (2018b). Comprehension in a crisis: Evaluating the readability and translation of emergency response messaging. *Journal of Student Affairs*, *27*, 83-91. Retrieved from https://sahe.colostate.edu/wp-content/uploads/sites/10/2018/03/SAHE-Journal-2018.pdf

Taylor, Z. W. (2018c). Intelligibility is equity: Can international students read undergraduate admissions materials? *Higher Education Quarterly*, *72*(2), 160-169. doi:10.1111/hequ.12155

Taylor, Z. W. (2018d). Unreadable and underreported: Can college students comprehend how to report sexual assault? *Journal of College Student Development*, *59*(2), 248-253. doi:10.1353/csd.2018.0023

Taylor, Z.W., & Bicak, I. (2019). What is the FAFSA? An adult learner knowledge survey of student financial aid jargon. *Journal of Adult and Continuing Education*, *25*(1), 94-112. doi: 10.1177/1477971418824607

Tinkler, S., & Woods, J. (2013). The readability of principles of macroeconomics textbooks. *Journal of Economic Education*, *44*(2), 178-191. doi:10.1080/00220485.2013.770345

Turner, C. (2017). Applying for college aid just got harder. Retrieved from https://www.npr.org/sections/ed/2017/03/15/520181124/applying-for-college-aid-just-got-harder

U.S. Department of Education. (2009, June 24). Making college more affordable
by simplifying the student financial aid application (FAFSA). Retrieved from
http://www2.ed.gov/finaid/info/apply/simplification.html

U.S. Department of Education. (2017, March 9). Internal revenue service (IRS)
and U.S. department of education office of federal student aid (FSA) statement about the IRS data
retrieval tool (DRT). Retrieved from https://www.ed.gov/news/press-releases/internal-revenue-
service-irs-and-us-department-education-office-federal-student-aid-fsa-statement-about-irs-data-
retrieval-tool-drt

Walfish, S., & Watkins, K. M. (2005). Readability level of health insurance
portability and accountability act notices of privacy practices utilized by academic medical centers.
Evaluation & The Health Professions, *28*(4), 479-486. doi:10.1177/0163278705281080

Webre, E. C. (2011, February). *What's new in children's literature for the
children of Louisiana? A selected annotated bibliography with readability levels (selected) and associated Louisiana
content standards*. Retrieved from http://files.eric.ed.gov/fulltext/ED516062.pdf

Weiss, K. D., Vargas, C. R., Ho, O. A., Chuang, D. J., Weiss, J., & Lee, B. T.
(2016). Readability analysis of online resources related to lung cancer. *Journal of Surgical Research*,
206(1), 90-97. doi:10.1016/j.jss.2016.07.018

Williamson, G. L., Fitzgerald, J., & Stenner, A. J. (2013). The common core state standards' quantitative text
complexity trajectory: Figuring out how much complexity is enough. *Educational Researcher*, *42*(2), 59-
69. doi:10.3102/0013189X12466695

Wong, I. C. (1999). Readability of patient information leaflets on antiepileptic
drugs in the UK. *Seizure*, *8*(1), 35-37. doi:10.1053/seiz.1998.0220