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An Open Educational Resource for Teaching Revision: Flesch-Kincaid Readability Statistics

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Abstract

This article presents the findings of a one-semester-long qualitative study conducted pre-pandemic at a diverse urban public community college with ENGL101: Freshman Composition students and suggests the need for further study. Students were assigned to revise *New York Times* article summaries they had written, using revision techniques learned in the classroom and an open educational resource (OER), Flesch- Kincaid Readability Statistics. Data collection included collecting summaries before and after revising with Readability Statistics and student reflections on the experience. Most students saw the grade level of their writing increase by two levels after revising with Flesch-Kincaid Readability Statistics. Moreover, students' understanding of revision increased, particularly in the skills of word choice, sentence complexity and elaboration. In addition, the limitations of the Flesch-Kincaid Readability Statistics program helped students gain insight into stylistic concerns. Overall, eighty-five percent of the participating students found using Readability Statistics to be useful and a motivator. While more

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rigorous research needs to be done, the findings of this study can be applied to any college writing classroom in any modality and have beneficial implications for the uncertainty of this near-post-pandemic historical moment, as the Flesch- Kincaid Readability Statistics program is an OER, freely available to all students and faculty.

Introduction

As the world begins to emerge from the Covid-19 Pandemic, college faculty are ever more mindful of the high cost of textbooks and other necessities of student life**.** Assigning open educational resource (OER) texts lightens the financial burden and helps contribute to a more equitable campus. Faculty also need to have in our pedagogical tool boxes strategies that work well both in the traditional and virtual classrooms, as we now know we must be prepared for any situation. With this in mind, I would like to share the promising findings of a qualitative study a colleague and I conducted pre-pandemic, in Fall 2018 with our ENGL101: Freshman Composition students, one that suggests further inquiry. We assigned an open educational resource, Flesh-Kincaid Readability Statistics, to complement our work teaching college reading and writing skills. Our limited data, the students' own writing, indicated that using Readability Statistics supported the skill of revision in particular.

At our urban public community college, seventy-three percent of our students received full financial aid the semester of our study (QCC Fact Book 2020). We serve a highly diverse student body with no one dominant group. In addition, our community college is a designated Hispanic-Serving Institution and HETS member institution, with

Hispanic students or their families largely from the Dominican Republic, Puerto Rico, Mexico and Ecuador. Our students each have access to a free subscription to the *New York Times*--paid through student activity fees, so there is no out-of-pocket expense. I assign the *New York Times* as a required text in all levels of my English courses. We read articles pertaining to our course topics, but also I assign students to read and write summaries of articles of their own choice, each according to their own interests. Students interested in video games and smart phone technology read and summarize articles in the *Times* Personal Tech section, for example. Students concerned about equity and social justice read and summarize articles about racial reckoning and immigration issues.

To reinforce our classroom work on academic writing revision strategies, I assign students to use OER sites like readable.com (although not all features on the site are no-cost). Students paste their summaries into a text box on the site and the Flesch-Kincaid Readability Statistics program is applied, giving students an immediate measurement of the grade level of their writing. As students revise their *New York Times* article summaries in readable.com, they can see the grade level rise in real time. They see how the grade level rises when they are strategic and mindful about revision, with most students who participated in our study in Fall 2018 seeing an increase of two grade levels in their revised summaries.

Review of the Literature

Revision, an essential step in academic writing pedagogy to "teach process, not product" (Murray 1972), combines both reading and writing skills. Students must be careful readers of their own and other's work to give constructive feedback in peer review sessions (Hillocks 1986). While freshman composition classrooms traditionally have

favored writing over reading, there has been recent interest in "mindful reading," for students to delve more deeply into texts (Carillo 2015). Horning, Gollnitz and Haller (2017) draw comparisons to a main tenet of writing process pedagogy, noting that, like writing, reading is a "complex recursive process." The work of Rebecca Moore Howard and colleagues with the Citation Project (2010) further connects reading and writing through the skill of revision. Moore, Serviss and Rodriguez suggest that summary is the genre best suited for students to show clear comprehension of a text and to develop that comprehension through revision.

Austrian-born and Teachers College-educated writing consultant Rudolf Flesch developed Readability Statistics with scientist Peter Kincaid in 1973 for the United States Navy to determine recruits' educational level. While never an academic or an educator himself, Flesch wrote best-selling writing reference books like *How to Write Better* (1951), as well as critiques of American education, including the controversial *Why Johnny Can't Read* (1955). In addition, Flesch was a proponent of phonics and the Plain English movement, which led to consumer protection laws, requiring legal information to be written on an eighth/ninth grade level, as measured according to his readability statistics program. Now in the public domain, available not only on websites but also in word processing programs, the program uses an algorithm that measures number of syllables per word and number of words per sentence**.** Flesch-Kincaid Readability Statistics does not perform grammar or spell check; the program only measures grade level according to length. Most of the literature on using Readability Statistics in the college classroom relates to technical, law, health or business writing classes (Dyke Ford 2018); there are no published studies of community college freshman composition classes.

It is fortuitous that such a useful tool as the Flesch-Kincaid Readability Statistics is an open educational resource. Since the early 2000s, when MIT opened access to their online course content, the academic community has been sharing teaching materials while still retaining authorship and copyright. The website OER Commons, an online library clearinghouse for open educational resources, launched in 2007. Our community college has offered an OER Initiative to faculty since the semester of our study, Fall 2018. Faculty receive support in converting their assigned texts from expensive textbooks to open educational resources. My own English courses have incrementally incorporated OER. Besides the *New York Times*, I also assign students to use the Purdue University Online Writing Lab MLA guide instead of a writing reference textbook. OER addresses access and equity issues: all teaching resources are free and easily accessible by students and faculty.

Study Design

My colleague and I were inspired to use and study the efficacy of Flesh-Kincaid Readability Statistics as a revision tool after reading an article in the journal *Prompt* by Julie Dyke Ford (2018), a technical writing professor at New Mexico State University. Dyke Ford assigned her engineering students to use the Flesch-Kincaid Readability Statistics to revise densely-written academic journal abstracts to Plain English with great success**.** We adapted Dyke Ford's approach for our community college freshman composition students, two sections of ENGL101, with fifty students total participating. As beginning college writers, typically first-semester first year students, our goal was for them to revise using the Flesch-Kincaid Readability Statistics to *raise* the grade level of their *own* writing.

For our IRB-approved qualitative study in the pre-pandemic semester of Fall 2018, we collected our fifty ENGL101: Freshman Composition students' *New York Times* article summaries before and after applying Readability Statistics, to see the revisions made that impacted the change in grade level of their writing. We also collected our students' reflections on the experience of using Readability Statistics to understand their perspective. In my Fall 2018 real-life classroom, I first introduced the premise behind the program for the Flesch-Kincaid Readability Statistics and shared some examples: *Harry Potter and the Sorcerer's Stone* is written on a sixth grade level; the *New York Times* is at a tenth grade level. We discussed what we felt was a fair range in levels for community college students' writing, taking into consideration the diversity of our students' educational backgrounds and comfort level with the English language. We decided eighth/ninth grade level, what Flesch defined as Plain English, and higher to be an ideal and flexible range for community college ENGL101 writers.

We revised a *New York Times* article summary together as a class, applying the Flesch-Kincaid Readability Statistics, with me at the helm, using a Smart classroom podium computer. Students then chose their own summaries to revise and did this work in a computer classroom with much interest, alternately talking to each other and focusing on revising, with me circulating, reading drafts, asking questions and making suggestions. My colleague and I repeated this process with our classes at three different points in the semester, collecting the students' first draft summaries and revised summaries each time. At the end of the semester, students wrote reflections about the experience and we collected their reflections.

Discussion of Findings

To analyze our data, the students' own writing, my colleague and I looked for patterns of student use of revision strategies and for corroboration in the student's reflection: how the revised summary showed use of the technique and how the student reflection expressed the student's understanding. We found that students' use of Flesch-Kincaid Readability Statistics helped most to better understand revision and have more facility using the revision techniques of careful word choice, writing more complex sentences and elaborating on a point or observation. Additionally, in their reflections, some students reported seeing their grade level rise as they revised to be a motivator; others regarded Readability Statistics as a practical tool. Students also were quick to notice the limitations of Readability Statistics, gaining insight into the importance of a human reader's feedback and a consideration of style. In the classroom, we discussed how one must take the judgment of a computer program with a grain of salt, a bit of skepticism--and trust one's instincts as a writer.

Overall, despite the limitations of the program, eighty-five percent of our fifty ENGL101 community college students found Flesch-Kincaid Readability Statistics to be a useful and motivating tool: "The program really helped me on how I can improve my writing. Knowing the grade level you're currently writing on helps you to push yourself to want to write on a higher grade level," one student reported. Another student wrote: "Working with Readability Statistics allowed insight on how I was writing and areas where I can improve." Other students saw how they could apply Readability Statistics to writing assignments for other courses: "I'll use these programs when turning in papers or checking other work."

Word Choice

Students were very interested in how word choice impacted grade level and many found using Readability Statistics inspired them to "develop my vocabulary more." One student, for example, saw the grade level of her summary increase by three grades, from seventh grade to tenth grade, by replacing words like "lazy" with words like "procrastinate." "I will always use more precise terminology in my assignments now," she wrote in her reflection. Some students observed that replacing one syllable words with polysyllabic synonyms may have raised the grade level but did not necessarily make for better writing. As one student noted, "I found that using difficult words doesn't mean that the summary would sound or look better." Another student surmised: "The program never measures the value of the text itself. We know that some single syllable words can be more scholarly than some three syllable words." These insights led to some playful discussion and clever tinkering with the program, using "unique and enormous nonsense vocabulary words" like "supercalifragilisticexpialidocious" which is at one hundred fiftieth grade level.

Complex Sentences

Students also revised to successfully raise the grade level of their summaries by using the strategy of writing more complex sentences: inserting an introductory phrase or adding a specific reference, for example. Generally, they found these techniques to be helpful: "When revising, I have learned that making your sentences longer by using quotes, and adding supportive details can change your writing skills for the better." Another student observed how her summary rose two levels, from eighth to tenth grade, when she combined sentences with transition words and phrases like "nevertheless" and "on the other

hand." When writing more complex sentences, students also noted the need to be mindful of run-on sentences and to "always proofread and think about how to keep your reader's attention." To that end, we discussed how too many complex sentences in a row can be overwhelming to the reader and to intersperse short declarative sentences for clarity and stylistic effect.

Elaboration

As students were quick to observe, "You can improve the level by adding more sentences, longer paragraphs." We discussed that while length is the goal when it comes to revising using Flesch-Kincaid Readability Statistics, clarity and relevance of elaboration is the goal in academic writing. Writers must be mindful not to over-write and to keep focus on the topic. To develop skills of elaboration, we worked on incorporating important contextual information and specific details, integrating quotes, transitioning from one point to another and incorporating one's own informed insights or questions. With the use of Readability Statistics, one student's grade level rose from sixth to eighth grade by fully integrating a direct quote. In his first draft, he wrote the quote without any contextual reference and in his revision, he introduced and commented on the quote. Another student's grade level rose from seventh to ninth grade with the addition of two more sentences of specific detail. She wrote in her reflection: "What I've learned about writing is that you should always use evidence for everything because that's how your level will sufficiently improve."

Conclusion

Online open educational resources such as the *New York Times* (if your College subscribes for students), the Purdue Online Writing Lab and the Flesch-Kincaid Readability

Statistics are easily accessible for curriculum and pedagogy. As Dyke Ford's study with engineering students found, and our limited qualitative study with our ENGL101 community college students suggests, Flesch-Kincaid Readability Statistics is a useful tool to reinforce revision strategies learned in the classroom for both beginning and more experienced college writers. Readability Statistics has also been useful in my pandemic-era online classroom, introduced with a synchronous class meeting tutorial. Anecdotally, students have found Flesch-Kincaid Readability Statistics to be as effective a revision tool as they did in the face-to-face computer classroom. We also have had interesting conversations in the online class about stylistic choices; students make the same observations about the limitations of the program.

However, what I miss—what I cannot hear or know now in the largely asynchronous online classroom—but saw, heard and knew then in the real-life classroom, is students' social and intellectual interaction in the moment of natural conversation. For me, this is pure evidence of their learning. Working in the computer classroom together in the pre-pandemic Fall 2018 semester, revising their *New York Times* article summaries, students were enthusiastic to share their word choices, or the quote they chose to support and develop a point. I look forward with great hope to our return to that beehive collaboration of the live classroom, as well as the intense brain power quiet of the moments when the students settle down and focus each on their own writing.

Yet, as many faculty and students like me yearn for the return to the classroom, so much is unsure. In this near-post-pandemic historical moment, we must be resourceful and prepared for online, hybrid or in-person teaching and learning at any time. While our study suggests the need for further inquiry, in the here and now, open educational resources like

Flesch-Kincaid Readability Statistics can help students save money and support their learning in any modality. Flesh-Kincaid Readability Statistics give students, in the words of one of my students, "an idea to where they stand and the encouragement to reach a more complex level of writing and reading."

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