My Fellow Americans

Have presidential speeches gotten dumber?

# Introduction

In this document I try to answer the question: Have presidential speeches gotten dumber? First I will discuss the grade level of a piece of writing or speech. To determine this grade level, I will introduce a formula to calculate this. I will apply this formula to three passages from the State of the Union Addresses from three different presidents.

Second I will use a Scatter Graph, which represent the grade level of presidential speeches over time. With this Graph I will try to show the changes of the grade level in the past and I will make estimates to predict the direction of the grade level in the future.

Third I am going to rewrite the passages to understand what the found grade level formula is actually is measuring. What changes make the grade level of a passage increase or decrease?

Fourth I am going to figure out what specific variables influence the grade level more in the found formula.

At the end I am trying to answer the question whether presidential speeches gotten dumber according to my findings.

# Calculating grade level

Before I stared working which one has the highest-grade level, I made some observations. I read the three speeches. I found the one of Thomas Jefferson really difficult to read because; he had very long sentences and difficult words. I had to look on Internet what some words means. The easiest one to read was the form Barack Obama because he wrote small sentences and with easier words. Here the three speeches;

|  |  |
| --- | --- |
| **Grade Level = 0.39 words ÷ sentences+ 11.8 syllables ÷ words – 15.59** | |
| Barack Obama Obama | *Fifteen years into this new century, we have picked ourselves up, dusted ourselves off,* |
| 2015 | *and begun again the work of remaking America. We’ve laid a new foundation. A brighter* |
|  | *future is ours to write.* |
| Franklin Roosevelt | *Events abroad have made it increasingly clear to the American people that dangers* |
| 1939 | *within are less to be feared than dangers from without. If, therefore, a solution of this* |
|  | *problem of idle men and idle capital is the price of preserving our liberty, no formless* |
|  | *selfish fears can stand in the way.* |
| Thomas Jefferson | *The love of peace so much cherished in the bosoms of our citizens, which has so long* |
| 1807 | *guided the proceedings of their public councils and induced forbearance under so many* |
|  | *wrongs, may not insure our continuance in the quiet pursuits of industry.* |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Sentences | Words | Syllables | Formula | Level |
| Barack Obama  2015 | 3 | 34 | 52 | 0.39x(34÷3)+11.8(52÷34)-15.59 | 7 |
| Franklin Roosevelt  1939 | 2 | 52 | 79 | 0.39x(52÷2)+11.8(79÷52)-15.59 | 12 |
| Thomas Jefferson  1807 | 1 | 42 | 64 | 0.39x(42÷1)+11.8(64÷42)-15.59 | 19 |

As you can see we used a formula to calculate the grade level of each passage. We used the Flesch-Kincaid (F-K) formula. What you have to do is: Grade Level = 0.39 x (words ÷ sentences)+ 11.8 (syllables ÷ words) – 15.59. Above here you see I put in syllables, sentences and words. Then you will get the grade level but you have to round it off.

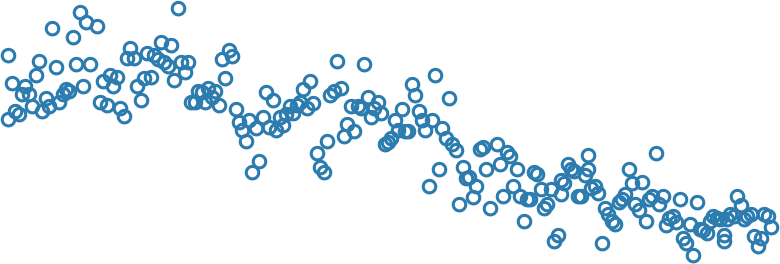
To know how many words here are in each sentence you have to: Words ÷ Sentence. And if you want to know how many syllables per word you have do this: Syllables ÷ Words. I am going to test it with the speech of Barack Obama. 34 ÷ 3 = 11,3 per sentences. 52 ÷ 34 = 1,5 per word

# Representing information on a scatter graph

This graph showed the grade levels of 229 State of the Union Addresses. The numbers on the Y-axis represent the grade level and the numbers on the X-axis represent the years. Each point in the Graph represents a passage or speech. Along each axis you can see that the values are changing, you see that the grade level goes down. In the year 1817 it has the highest-grade level and in the year 1990 the lowest. In the Graph you see that in 1900 the approximate grade level is 19 or 20.

The reading level has changes a lot overtime I think it means, that the speeches will be better because than everyone can understand the words/sentences. Than you know don’t have to look up the meaning of the words. I think that the speeches became actually smarter because everyone knows what you say so more people are going to look at it. I think in 20 years the grade level higher because then the have computers and robot to write a fantastic passage for them. But I don’t the grade level can also be really low. I think that it seems not reasonable that the grade level become really low. Around 1790 the passages gotten smarter the percentage is 20.

## 28



Reading Level

24

20

16

12

8

4

0

1780 1820 1860 1900 1940 1980 2020

Year

# Rewrite a passage

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Fifteen years into this new century. We work harder, better and faster. We clean ourselves up. And begun to make work of remaking America. We put a new layer on America. Our future became brighter. | | | Fifteen years ensuing again a new century, we have elect ourselves up, dusted ourselves off, and begun to anew the work of reconstruct America, we have laid a new thick layer of foundation on our land. A beautiful luminous future is ours to write. | | |
| Sentences | Words | Syllables | Sentences | Words | Syllables |
| 56  35  6 | | | 2  44  64 | | |
| Formula & Score | | | Formula & Score | | |
| 0.39x(35÷6)+11.8(56÷35)-15.59 = 5.565 round off is 6 | | | 0.39x(44÷ 2)+11.8(64÷44)-15.59 = 10.1536363636 round off is 10 | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Sentences | Words | Syllables | Formula | Level |
| Normal passage | 3 | 34 | 52 | 0.39x(34÷ 3)+11.8(52÷34)-15.59 | 7 |
| Long sentences passage | 1 | 34 | 52 | 0.39x(34÷1)+11.8(52÷34)-15.59 | 16 |

You can see that my increased score is 10 and my decreased score is 6. What I did with the decreased passage is I wrote small sentences and used easier words. I just made the text easier. With the increase passage I wrote long sentences and difficult words. I just made the text more difficult. The words that had the most impact on the grade level score, because you have to divide the syllables with the words. I think that the lower score is very low so I would change that. But I think that I would make the sentences longer and put more words in it. I think if you will write an extremely long sentence it will get a higher grade level, because you write one long sentences you have to divided words ÷ sentences so you will get a higher grade level. So lets try it.

I used the passage of Barack Obama. The real grade level is 7 we want it higher.

*Fifteen years into this new century, we have picked ourselves up, dusted ourselves off, and begun again the work of remaking America. We’ve laid a new foundation. A brighter future is ours to write.*

*Fifteen years into this new century, we have picked ourselves up, dusted ourselves off, and begun again the work of remaking America; we’ve laid a new foundation, a brighter future is ours to write.*

As you can you will get a much higher grade so if you write a passage and you want a higher grade level. You have to write as much as you can in one sentence.

# Specific word changes

The thing that is staying the same in the Flesch-Kincaid formula is the decrease of -15.59, the increase of 11.8 and the 0.39 is changing due to the variables sentences, words and syllables.

The Flesch-Kincaid formula determines in a piece of text the average amount of words multiplied by 0.39 and the average amount of syllables in a word multiplied by 11.8 decreased by -15.59. The Flesch-Kincaid formula actually also measures the higher grade level of a piece of writing.

When the words are staying the same in a piece of text more syllables increase the grade level. So you have to use longer words to get more syllables. Fewer sentences increase the grade level. More words will decrease the grade level.

I thing that the Flesch-Kincaid does not a good job of capturing everything that makes a piece of text harder or easier to read, because you can also put everything in one sentence and use long words with a lot of syllables then you will also get a high great level.

I thing that the Flesch-Kincaid does not a good job of capturing everything that makes a piece of text harder or easier to read, because you can also put everything in one sentence and use long words with a lot of syllables then you will also get a high great level. I think that splitting one sentence into two sentences makes it almost half as difficult because, it's easier to read and it is clear to see.

I think that "country" and "nation" are equally difficult for a reader or listener because, it has the same amount of syllables, the same amount of words and the same amount of sentences. So the grade level will be the same.

# Conclusion

I discussed the grade level of a piece of writing or speech in this document. I introduced the F-K formula and I explained how to use it. I calculated the three speeches. It looks like those speeches are getting dumber but, that is not the case the speeches are easier to read and understand. So the Flesch-Kincaid formula measures the reading difficulty of a piece of text.

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