

Corpus-based assessment of additional features for automated evaluation with the help of REALEC Inspector

Anastasia Stefanova

Ivan Torubarov

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Our goal

- We wanted to find out simple text components related with the IELTS essay mark which would help both teachers and students.

Hypothesis

We suggest that the mark of an IELTS essay correlates with the following forms of verbs:

- **gerund**
- **bare infinitive**
- **past participle**

In other words, the **higher ratio** of each of the latter verb forms an essay has – the **higher mark** it will get.

Testing the hypothesis

- We divided the given essays into two groups: best (average mark 7.7) and worst (average mark 4)
- Then we manually selected the verb forms we were interested in in the given essays
- As our next step we built a program to highlight and count the verb forms automatically

Automatizing the process

Firstly, we tagged all the parts of speech in the given text with Stanford POS tagger.

We performed a series of tests, making the algorithm to match our manual selection better on each iteration.

We came up to the following rules after all:

- Infinitives: highlight **VB** preceded by *to* with yellow
- Gerunds: highlight **VBG** not preceded by any form of *be* with red
- Past Participles: highlight **VBN** not preceded by any form of **been** with blue

The program also prints the **quantity** of each of this forms and their **ratios** – form count divided by total number of words

Some people argue that creative artists are given too much freedom nowadays, while others think that self-expression can't be limited with any kinds of rules. I suppose that artists should be able to create whatever they want. Nevertheless there have to be some restrictions related to showing it publicly. First of all, some artists don't have any boundaries and a lot of people love their works. However, these pieces of art can be harmful for children, because they are very sensitive and they percept everything they see. That's why it's reasonable to prohibit children to watch some films, visit some exhibitions and listen to some pieces of music. Secondly, I have mentioned earlier that these restrictions should not be too serious. It means that artists should have their right to create anything they want. If a child gets access to prohibited pieces of art it's not the fault of an artist. Also I believe that the grown-ups are able to decide themselves whether to read a book or not, whether to go to an exhibition or not. Even if they are shocked by the way an artist expresses himself they can deal with it. That's why the adults shouldn't not be restricted from getting acquainted with this or that piece of art. The only limit has to be the dignity of other people. I think that it concerns some kinds of installations. All in all, it seems to me that people are free to express themselves. On the other hand, they need to remember that they are not the only ones who will see their creations. The restrictions are to focus on protection of children and dignity of other people and not on some political matters. These restrictions should not be similar to censorship.

-ing : 2 (0.69% of total)

inf : 12 (4.14% of total)

V3 : 8 (2.76% of total)

An example of our algorithm output

Output

After combining manually and automatically obtained data we found out that the mean amount of our selected verb forms in an essay was 12.7 for the best essays and 3.06 for the worst.

This proved that these criteria is **applicable** for automated essay scoring.

Our further goals

- **implementing** these criteria into REALEC Inspector
- keeping **improving** our algorithm
- looking into the each criterion more **deeply**
- finding out **similar** criteria