

OFFICIAL ABSTRACT and CERTIFICATION

A Study of Language Efficiency

Gabriel Howald
SASA, Saginaw, MI, USA

The goal of this year's experiment is to follow up last year's experiment and to eliminate the bias created by the text to speech program. The question that this experiment is still trying to solve is "If the world had to unify to one language, which language would it be?"

To do this experiment, get a computer with google chrome, an audio recorder, and an audio editor. In google chrome, download the Talkie text-to-speech extension. After that, select the words and languages the words will be translated into. This year I used grammar words to compare the efficiency of different grammar systems. Type a set of words into google translate. Once the words are in google translate, start the audio recorder, highlight the words, and click on the Talkie extension. Once Talkie is done, stop the recorder, and open the file into the audio editor. Use the delete silence filter to remove dead air from the audio file. To compare efficiency, take the average word duration from this year and compare it to the average duration from last year to get a quotient that represents how efficient a certain language's grammar system is.

The results of this experiment were very surprising, with Russia having the most efficient grammar system. Although Spanish had the second slowest time, it had the second biggest improvement from the expected time when using grammar topics, which is more important than raw word duration because there could be bias from the text to speech program.

Category
Pick one only —
mark an "X" in box
at right

- Animal Sciences
- Behavioral & Social Sciences
- Biochemistry
- Biomedical & Health Sciences
- Biomedical Engineering
- Cellular & Molecular Biology
- Chemistry
- Computational Biology & Bioinformatics
- Earth & Environmental Sciences
- Embedded Systems
- Energy: Sustainable Materials and Design
- Engineering Mechanics
- Environmental Engineering
- Materials Science
- Mathematics
- Microbiology
- Physics & Astronomy
- Plant Sciences
- Robotics & Intelligent Machines
- Systems Software
- Translational Medical Sciences

1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):
 - human participants
 - potentially hazardous biological agents
 - vertebrate animals
 - microorganisms
 - rDNA
 - tissue
2. I/we worked or used equipment in a regulated research institution or industrial setting: Yes No
3. This project is a continuation of previous research. Yes No
4. My display board includes non-published photographs/visual depictions of humans (other than myself): Yes No
5. This abstract describes only procedures performed by me/us, reflects my/our own independent research, and represents one year's work only. Yes No
6. I/we hereby certify that the abstract and responses to the above statements are correct and properly reflect my/our own work. Yes No

This stamp or embossed seal attests that this project is in compliance with all federal and state laws and regulations and that all appropriate reviews and approvals have been obtained including the final clearance by the Scientific Review Committee.

