



# Study Says Language Is Not Needed for Thought

## Description

A new study by Dr. Evelina Fedorenko shows that language might not be needed for thinking. Using **brain scans**, Dr. Fedorenko found that the brain's language areas are not active during some thinking tasks, like solving puzzles. This **suggests** that language is not **essential** for thought.

Some experts think language is mainly for **communication**, while others say it helps with **complex** ideas. AI systems like ChatGPT are good with language but not with **reasoning**. This study helps us understand more about how language and thought are connected.

Researchers also found that languages are designed to share information well. For example, words we use a lot are usually shorter. This makes languages easier to learn. This study gives us new ideas about the role of language in thinking and communication.

The findings are interesting because they show that we can think without using words. This changes how we understand the brain. It also helps us learn more about how people who speak different languages think. Scientists will keep studying this to find out more.

## Vocabulary List

1. **Brain scans** /breɪn skænz/ (noun): Pictures of the brain used to see its activity.
2. **Essential** /ɪ'senʃəl/ (adjective): Very important or necessary.
3. **Communication** /kə'mjuːnɪ'keɪʃən/ (noun): Sharing information with others.
4. **Complex** /'kɒmpleks/ (adjective): Made up of many parts; complicated.
5. **Reasoning** /'riːzənɪŋ/ (noun): Thinking about things in a logical way.
6. **Suggests** /sə'dʒests/ (verb): Shows or indicates something.

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4. **Reasoning** /'riːzənɪŋ/ (noun): Thinking about things in a logical way.
5. **Suggests** /sə'dʒests/ (verb): Shows or indicates something.
6. **Scans** /skænz/ (noun): Pictures or images taken to examine something.



## Comprehension Questions

### Multiple Choice

1. What did Dr. Evelina Fedorenko challenge in her study?
  - Option: The necessity of language for thought
  - Option: The importance of communication skills
  - Option: The effectiveness of brain scanning techniques
  - Option: The value of traditional perspectives
  
2. According to the study what did brain scanning techniques reveal about language circuits during thinking tasks?
  - Option: They are highly active
  - Option: They are inactive
  - Option: They are only active for communication tasks
  - Option: They are variable depending on the task
  
3. What does Linguist Kyle Mahowald suggest about artificial intelligence systems like ChatGPT?
  - Option: They excel at reasoning abilities
  - Option: They excel at language structure tasks
  - Option: They are ineffective in all tasks
  - Option: They are primarily used for communication
  
4. How are frequently used words typically designed in languages according to studies?
  - Option: They are longer to convey complexity
  - Option: They are randomly selected
  - Option: They tend to be shorter
  - Option: They are only used in communication
  
5. What is the main focus of researchers who argue that language enhances complex thoughts?
  - Option: The relationship between language and communication
  - Option: The efficiency of brain scanning techniques
  - Option: The impact of frequently used words
  - Option: The connection between language and thought
  
6. What does the research shed new light on according to the content?
  - Option: The necessity of learning multiple languages



- Option: The intricate relationship between language and thought
- Option: The superiority of artificial intelligence over human thinking
- Option: The historical perspective on language development

## Answer

**Multiple Choice:** 1. The necessity of language for thought 2. They are inactive 3. They excel at language structure tasks 4. They tend to be shorter 5. The connection between language and thought 6. The intricate relationship between language and thought

## Vocabulary quizzes

### Multiple Choice ( Select the Correct answer for each question. )

1. What type of black hole is typically found at the center of a galaxy?
  - Option: Supermassive
  - Option: Stellar
  - Option: Intermediate
  - Option: Primordial
2. What term is used to describe the region around a body where another body experiences a force?
  - Option: Gravitational field
  - Option: Magnetic field
  - Option: Electric field
  - Option: Radiation field
3. What happened to the highly-anticipated event due to unforeseen circumstances?
  - Option: Cancelled
  - Option: Rescheduled
  - Option: Postponed
  - Option: Concluded
4. What process involves growth or advancement in knowledge technology or infrastructure?
  - Option: Development
  - Option: Stagnation
  - Option: Decline
  - Option: Regression
5. What is the exchange of information between individuals or groups called?
  - Option: Communication



- Option: Isolation
- Option: Silence
- Option: Confrontation

6. Which term describes something that is at the forefront of innovation or progress?

- Option: Cutting-edge
- Option: Obsolete
- Option: Outdated
- Option: Ancient

7. What are new ideas methods or products introduced to bring about change or improvement?

- Option: Innovations
- Option: Traditions
- Option: Conventions
- Option: Habits

8. What term describes something that is intricate detailed or difficult to understand?

- Option: Complex
- Option: Simple
- Option: Basic
- Option: Clear

9. Which term is used to describe something extremely large or related to celestial objects?

- Option: Astronomical
- Option: Microscopic
- Option: Tiny
- Option: Negligible

10. What term describes something that is absolutely necessary or fundamental?

- Option: Essential
- Option: Optional
- Option: Extraneous
- Option: Superfluous

**Gap-Fill ( Fill in the blanks with the correct word from the vocabulary list. )**

11. \_\_\_\_\_ are sudden releases of energy in the form of X-rays often observed from black hole systems.

12. The scientists used a computer \_\_\_\_\_ to model the behavior of the galaxy.



13. The data \_\_\_\_\_ that there may be a correlation between the two variables.
14. In order to ensure accuracy the instruments must be properly \_\_\_\_\_ before use.
15. The scientists studied various natural \_\_\_\_\_ to understand their underlying causes.
16. The medical team performed multiple \_\_\_\_\_ to get a detailed view of the patient's internal organs.
17. The director's new film was \_\_\_\_\_ by fans who had been eagerly waiting for its release.
18. The team had high \_\_\_\_\_ for the outcome of the experiment based on previous results.
19. A \_\_\_\_\_ is a region in space where gas and dust come together to form new stars.
20. Photography \_\_\_\_\_ often gather to share tips and tricks for capturing the perfect shot.

**Matching Sentences ( Match each definition to the correct word from the vocabulary list. )**

21. The intelligence displayed by the robot was so advanced that it seemed almost human.
22. The ceremony was conducted in a manner that followed the customs and practices of past generations.
23. The exhibition served as a platform to display the latest innovations in technology.
24. The initial test results were encouraging indicating a bright future for the new treatment.
25. The university has multiple locations where students attend classes and engage in academics and extracurricular activities.
26. The rumors regarding the merger between the two companies have been circulating for weeks.
27. The teacher assessed the students' understanding of the topic through a series of questions.



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| 28. The detective applied logical thinking and deduction to solve the mystery of the missing artifact. |
| 29. The concert was called off due to unforeseen circumstances disappointing many fans.                |
| 30. Water is for all living organisms to survive.  |

## Answer

**Multiple Choice:** 1. Supermassive 2. Gravitational field 3. Cancelled 4. Development 5. Communication 6. Cutting-edge 7. Innovations 8. Complex 9. Astronomical 10. Essential

**Gap-Fill:** 11. X-ray flares 12. Simulation 13. Suggests 14. Calibrated 15. Phenomena 16. Scans 17. Highly-anticipated 18. Expectations 19. Molecular cloud 20. Enthusiasts

**Matching sentence:** 1. Artificial 2. Traditionally 3. Showcase 4. Promising 5. Campuses 6. Speculated 7. Comprehension 8. Reasoning 9. Cancelled 10. Essential

## CATEGORY

1. Sci/Tech - LEVEL2

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