



## **PART 2**

**Read the text below and answer questions 14–26.**

### **THE BILINGUAL BRAIN: COGNITIVE COSTS AND BENEFITS**

**A**

Bilingualism is often described as simply knowing two languages, but in cognitive science it is more accurately framed as continuous management. Even when a bilingual speaker is using only one language, research suggests that both languages remain jointly activated: words from the non-target language can be partially triggered by sounds, meanings, and contexts that overlap. Everyday speech therefore involves more than producing sentences; it involves selecting one linguistic system while preventing the other from intruding. This selection work varies across individuals and settings, depending on proficiency, how often languages are switched, and whether both languages are used in the same social spaces. As a result, the bilingual brain provides a natural case study of how the mind controls interference in real time.

**B**

A frequently observed “cost” of this dual-language system appears in lexical access—the process of retrieving words efficiently. In picture-naming and rapid word-production tasks, bilinguals often show slightly slower reaction times than monolinguals. One influential explanation is the frequency lag hypothesis: because bilinguals distribute their speech across two languages, any single word may be used less often than it would be in a monolingual life. Lower use frequency reduces immediate accessibility, even when knowledge is intact. This does not imply a smaller vocabulary overall; rather, it reflects how exposure shapes retrieval speed. When two lexical systems are available, multiple candidates can be activated and the brain must resolve competition, which adds milliseconds that become visible in laboratory measures.

**C**

The need to manage competition leads to a central proposed mechanism: inhibitory control. Bilingual speakers must suppress interference from the non-target language while keeping enough flexibility to switch when the context changes. This is sometimes compared to mental gymnastics because it is practised repeatedly in ordinary conversation, especially in communities where switching is common. Interference suppression can occur at several levels: selecting a word, maintaining the relevant grammar, and preventing an unintended language from shaping pronunciation or word order. Importantly, the demand is not constant; it rises when both languages are strong, when cues are ambiguous, or when speakers move rapidly between contexts. In these



moments, executive control is not an abstract concept but a practical requirement for fluent communication.

## D

The controversial claim is that this repeated control exercise can produce a benefit beyond language: enhanced performance on some executive-function tasks. Studies have tested bilinguals on conflict paradigms such as the Simon task or the Flanker task, where participants must respond to a target while ignoring distracting information that activates competing responses. Some findings suggest that bilinguals show smaller interference effects or faster conflict resolution, consistent with the idea that lifelong practice in selecting a target language strengthens general control processes. Proponents argue that this advantage is most likely when bilingual experience involves frequent switching and high interference, because these conditions continually recruit attention and response inhibition. However, even supportive researchers typically treat the effect as modest rather than dramatic.

## E

The “bilingual advantage” debate became a focal point in the replication crisis in psychology. Some laboratories have replicated benefits, while others report null results, leading to arguments about methodology and confounding variables. Publication bias can inflate early enthusiasm if positive findings are more likely to appear in journals. Sampling also matters: bilingual groups may differ from monolingual groups in education, socioeconomic status, or immigration history, any of which can influence test performance independently of language experience. Researchers now emphasise that bilingualism is not a single category and that effects may be conditional on the type of bilingualism being measured. In this more cautious climate, the strongest conclusions come from large, well-controlled studies and from analyses that treat bilingual experience as a continuum rather than a label.

## F

Neuroscience adds another layer by asking whether bilingual experience leaves detectable traces in brain structure and function. Some imaging studies report differences in grey matter density in regions associated with control and language selection, consistent with neuroplasticity shaped by long-term practice. In aging research, bilingualism has been linked to cognitive reserve, a concept describing how some individuals maintain everyday functioning despite age-related brain changes. In this view, decades of managing two languages may contribute to more efficient networks or compensatory strategies, potentially delaying the onset of dementia symptoms for some people. Yet the same



caution applies: brain differences do not guarantee better performance on every task, and reserve is influenced by many factors including health, education, and broader lifestyle.

**G**

Taken together, the bilingual brain illustrates a balanced lesson: cognitive trade-offs are common, and simplistic slogans are unreliable. Managing two languages can produce measurable costs in lexical access, while potentially strengthening certain forms of interference suppression under particular conditions. The most defensible account is neither that bilingualism is a magic pill nor that it is a burden with no pay-off. Instead, bilingualism is a form of sustained cognitive engagement whose consequences depend on context—how languages are used, how often switching occurs, and what social environments demand. For researchers, it provides a valuable window into executive control; for educators and policymakers, it is a reminder that language experience is diverse and should be evaluated with careful definitions and realistic measures.

### **Questions 14–20**

Choose the correct heading for each paragraph.

#### **List of Headings**

- i** The proposed control mechanism that limits interference
- ii** Brain structure, aging, and the idea of reserve
- iii** Laboratory evidence for improved conflict resolution
- iv** A cautious conclusion: benefits depend on conditions
- v** Why two languages remain active and must be managed
- vi** Why research findings diverge across studies
- vii** When frequent switching places the greatest demands on control
- viii** A specific explanation for slower naming and retrieval
- ix** Why slower lexical access does not indicate reduced vocabulary knowledge
- x** How social setting influences the management of two languages

**14** Paragraph **A**

**15** Paragraph **B**

**16** Paragraph **C**



17 Paragraph D

18 Paragraph E

19 Paragraph F

20 Paragraph G

### Questions 21–23

Complete the summary below. Choose **ONE WORD ONLY** from the text for each answer.

#### Bilingual trade-offs

Research suggests that delays in bilingual lexical processing may be measured in **21** ..... in some naming tasks. However, when interference is high, managing two languages requires inhibitory **22** ..... to prevent the non-target language from intruding. In later life, lifelong bilingual experience may contribute to cognitive **23** ....., although outcomes vary across individuals.

### Questions 24–26

Choose **TRUE** if the statement agrees with the information given in the text, choose **FALSE** if the statement contradicts the information, or choose **NOT GIVEN** if there is no information on this.

**24** The passage suggests that both languages can remain active even when a bilingual person is speaking only one.

**25** The passage claims that all bilingual people show a consistent advantage on executive-function tasks.

**26** The passage states that bilingualism prevents dementia by stopping the disease process itself.

#### Answer Key

14. v

15. viii

16. i

17. iii

18. vi

19. ii



20. iv

21. milliseconds

22. control

23. reserve

24. TRUE

25. FALSE

26. FALSE