

Directions: In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on **Answer Sheet 2**.

Six Potential Brain Benefits of Bilingual Education

- A) Brains, brains, brains. People are fascinated by brain research. And yet it can be hard to point to places where our education system is really making use of the latest neuroscience(神经科学) findings. But there is one happy link where research is meeting practice: bilingual(双语的) education. "In the last 20 years or so, there's been a virtual explosion of research on bilingualism," says Judith Kroll, a professor at the University of California, Riverside.
- B) Again and again, researchers have found, "bilingualism is an experience that shapes our brain for life," in the words of Gigi Luk, an associate professor at Harvard's Graduate School of Education. At the same time, one of the hottest trends in public schooling is what's often called dual-language or two-way immersion programs.
- C) Traditional programs for English-language learners, or ELLs, focus on assimilating students into English as quickly as possible. Dual-language classrooms, by contrast, provide instruction across subjects to both English natives and English learners, in both English and a target language. The goal is functional bilingualism and biliteracy for all students by middle school. New York City, North Carolina, Delaware, Utah, Oregon and Washington state are among the places expanding dual-language classrooms.
- D) The trend flies in the face of some of the culture wars of two decades ago, when advocates insisted on "English first" education. Most famously, California passed Proposition 227 in 1998. It was intended to sharply reduce the amount of time that English-language learners spent in bilingual settings. Proposition 58, passed by California voters on November 8, largely reversed that decision, paving the way for a huge expansion of bilingual education in the state that has the largest population of English-language learners.
- E) Some of the insistence on English-first was founded on research produced decades ago, in which bilingual students underperformed monolingual(单语的) English speakers and had lower IQ scores. Today's scholars, like Ellen Bialystok at York University in Toronto, say that research was "deeply flawed." "Earlier research looked at socially disadvantaged groups," agrees Antonella Sorace at the University of Edinburgh in Scotland. "This has been completely contradicted by recent research" that compares groups more similar to each other.
- F) So what does recent research say about the potential benefits of bilingual education? It turns out that, in many ways, the real trick to speaking two languages consists in managing not to speak one of those languages at a given moment—which is fundamentally a feat of paying attention. Saying "Goodbye" to mom and then "Guten tag" to your teacher, or managing to ask for a crayola roja instead of a red crayon(蜡笔), requires skills called "inhibition" and "task switching." These skills are subsets of an ability called executive function.
- G) People who speak two languages often outperform monolinguals on general measures of executive function. "Bilinguals can pay focused attention without being distracted and also improve in the ability to switch from one task to another," says Sorace.

- H) Do these same advantages benefit a child who begins learning a second language in kindergarten instead of as a baby? We don't yet know. Patterns of language learning and language use are complex. But Gigi Luk at Harvard cites at least one brain-imaging study on adolescents that shows similar changes in brain structure when compared with those who are bilingual from birth, even when they didn't begin practicing a second language in earnest before late childhood.
- I) Young children being raised bilingual have to follow social cues to figure out which language to use with which person and in what setting. As a result, says Sorace, bilingual children as young as age 3 have demonstrated a head start on tests of perspective-taking and theory of mind—both of which are fundamental social and emotional skills.
- J) About 10 percent of students in the Portland, Oregon public schools are assigned by lottery to dual-language classrooms that offer instruction in Spanish, Japanese or Mandarin, alongside English. Jennifer Steele at American University conducted a four-year, randomized trial and found that the dual-language students outperformed their peers in English-reading skills by a full school-year's worth of learning by the end of middle school. Because the effects are found in reading, not in math or science where there were few differences, Steele suggests that learning two languages make students more aware of how language works in general.
- K) The research of Gigi Luk at Harvard offers a slightly different explanation. She has recently done a small study looking at a group of 100 fourth-graders in Massachusetts who had similar reading scores on a standard test, but very different language experiences. Some were foreign-language dominant and others were English natives. Here's what's interesting. The students who were dominant in a foreign language weren't yet comfortably bilingual; they were just starting to learn English. Therefore, by definition, they had a much weaker English vocabulary than the native speakers. Yet they were just as good at interpreting a text. "This is very surprising," Luk says. "You would expect the reading comprehension performance to mirror the vocabulary—it's a cornerstone of comprehension."
- L) How did the foreign-language dominant speakers manage this feat? Well, Luk found, they also scored higher on tests of executive functioning. So, even though they didn't have huge mental dictionaries to draw on, they may have been great puzzle-solvers, taking into account higher-level concepts such as whether a single sentence made sense within an overall storyline. They got to the same results as the monolinguals, by a different path.
- M) American public school classrooms as a whole are becoming more segregated by race and class. Dual-language programs can be an exception. Because they are composed of native English speakers deliberately placed together with recent immigrants, they tend to be more ethnically and economically balanced. And there is some evidence that this helps kids of all backgrounds gain comfort with diversity and different cultures.
- N) Several of the researchers also pointed out that, in bilingual education, non-English-dominant students and their families tend to feel that their home language is heard and valued, compared with a classroom where the home language is left at the door in favor of English. This can improve students' sense of belonging and increase parents' involvement in their children's education, including behaviors like reading to children. "Many parents fear their language is an obstacle, a problem, and if they abandon it their child will integrate better," says Antonella Sorace of the University of Edinburgh. "We tell them they're not doing their child a favor by giving up their language."

- O) One theme that was striking in speaking to all these researchers was just how strongly they advocated for dual-language classrooms. Thomas and Collier have advised many school systems on how to expand their dual language programs, and Sorace runs "Bilingualism Matters," an international network of researchers who promote bilingual education projects. This type of advocacy among scientists is unusual; even more so because the "bilingual advantage hypothesis" is being challenged once again.
- P) A review of studies published last year found that cognitive advantages failed to appear in 83 percent of published studies, though in a separate analysis, the sum of effects was still significantly positive. One potential explanation offered by the researchers is that advantages that are measurable in the very young and very old tend to fade when testing young adults at the peak of their cognitive powers. And, they countered that no negative effects of bilingual education have been found. So, even if the advantages are small, they are still worth it. Not to mention one obvious, outstanding fact: "Bilingual children can speak two languages!"
36. A study found that there are similar changes in brain structure between those who are bilingual from birth and those who start learning a second language later.
37. Unlike traditional monolingual programs, bilingual classrooms aim at developing students' ability to use two languages by middle school.
38. A study showed that dual-language students did significantly better than their peers in reading English texts.
39. About twenty years ago, bilingual practice was strongly discouraged, especially in California.
40. Ethnically and economically balanced bilingual classrooms are found to be helpful for kids to get used to social and cultural diversity.
41. Researchers now claim that earlier research on bilingual education was seriously flawed.
42. According to a researcher, dual-language experiences exert a lifelong influence on one's brain.
43. Advocates of bilingual education argued that it produces positive effects though they may be limited.
44. Bilingual speakers often do better than monolinguals in completing certain tasks because they can concentrate better on what they are doing.
45. When their native language is used, parents can become more involved in their children's education.