早稲田大　2014年

Ⅴ

次の英文を読み，下記の設問に答えよ。

In order to maximize how much students learn from studying, many textbooks and schools generally follow blocked practice. That is, students practice one topic at one time over and over. Of course, students can learn certain materials very well using this method, but it is also well known that they can easily and quickly forget what they have previously learnt when they move onto another topic.

In recent years, cognitive scientists have shown that a few simple techniques can (1)mediate such a learning dilemma. These can be used by anyone, from a fourth grader doing arithmetic to a retiree taking on a new language. However, they directly contradict much of the common wisdom about good study habits, and thus have not caught on. In a nutshell, they recommend that the crucial components of study, such as learning environments, contents, and study intervals, ［ イ ］ varied.

For instance, instead of sticking to one study location, simply (2)alternating the room where a person studies can improve memory retention. Similarly, so does studying ［ ロ ］ but related concepts in one sitting, rather than focusing intensely on a single thing.

The brain makes subtle associations between what it is studying and the background sensations it has at the time, ［ ハ ］ whether those perceptions are conscious or not. For example, the brain may associate the details of America’s Declaration of Independence with the lighting of the dorm study room, or the causes of the Cold War with the shade of the apple tree in the backyard. When the outside context is varied, the information is enriched, which ［ ニ ］ forgetting.

Varying the type of material studied in a single sitting ―― alternating, for example, among vocabulary, reading and speaking a new language ―― seems to leave a deeper impression on the brain than does concentrating on just one skill at a time. Musicians have known this for years, and their practice sessions often include a mix of scales, musical pieces and rhythmic work. Many athletes, too, routinely mix their workouts with strength, speed and skill drills.

Cognitive scientists do not deny that old-fashioned cramming can lead to a better grade on a given exam, but hurriedly filling one’s brain is (3)akin to speed-packing a cheap suitcase, as most students quickly learn. It holds its new load for a while, but then almost everything falls out. When the \*neural suitcase is packed ［ ホ ］, it holds its contents for far, far longer. Dozens of studies have found that an hour of study tonight, an hour on the weekend, another session a week from now ――(A)such so-called spacing ―― improves later recall without requiring students to put in more overall study effort or pay more attention.

None of which is to suggest that these techniques ―― alternating study environments, mixing content, spacing study sessions, or all of the above ―― will turn a failing student into a grade-A performer. Motivation matters very much as well. So do impressing friends, making the hockey team and finding (4)the nerve to text your cute classmate in a social studies class. But at the very least, these cognitive techniques give parents and students, young and old, something they did not have before: a study plan based on research findings, not on conventional wisdom or empty theorizing.

(Adapted from *The New York Times*, September 6, 2010)

注 cognitive scientist　認知科学者 neural　神経の

設問１．下線部(1)～(4)の意味にもっとも近いものを(a)～(d)からそれぞれ一つ選び，マーク解答用紙の所定欄にマークせよ。

(1)　(a) cause (b) complicate (c) promote (d) resolve

(2)　(a) closing (b) decorating (c) showing (d) switching

(3)　(a) concerned with (c) similar to

(b) dependent on (d) tolerant of

(4)　(a) the capacity (c) the interest

(b) the courage (d) the motivation

設問２．空所［イ］～［ホ］を埋めるのにもっとも適当な語を(a)～(d)からそれぞれ一つ選び，マーク解答用紙の所定欄にマークせよ。

イ.　(a) are (b) be (c) is (d) were

ロ.　(a) academic (b) distinct (c) novel (d) practical

ハ.　(a) apart from (c) in accordance with

(b) due to (d) regardless of

ニ.　(a) brings about (b) fades into (c) mixes with (d) slows down

ホ.　(a) carefully and gradually (c) quickly and efficiently

(b) methodically and conventionally (d) rationally and punctually

設問３．次の１．～４．について，本文の内容にもっとも合うものを(a)～(d)からそれぞれ一つ選び，マーク解答用紙の所定欄にマークせよ。

１．According to the recent findings of cognitive scientists,

　(a) students should practice a new topic only after they have mastered the previous one.

　(b) students become bored more easily when studying in the same physical space.

　(c)students should practice music and sports to improve their study skills.

　(d) students should practice one topic in a single sitting intensely.

２．Varying the location where one studies reinforces memory because

　(a) changing one’s study location allows the brain to rest.

　(b) students can associate the concepts they study with multiple learning contexts.

　(c) students can associate the concepts they study with multiple learning contexts.

　(d) students can better remember historical topics, such as America’s Declaration of Independence.

３．The cognitive techniques described in the passage are effective

　(a) for older students.

　(b) for relatively young students.

　(c) for university-level students.

　(d) All of the above.

４．This article implies that

　(a) professionals in order fields should show a greater interest in the cognitive approach.

　(b)the cognitive approach described substantially improves the performance of even mediocre students.

　(c) the findings of cognitive scientists generally support the traditional teaching method.

　(d) to improve study efficiency we should draw not on common sense but on scientific findings.

設問４．下線部(A)が指している内容にもっとも合うものを(a)～(d)から一つ選び，マーク解答用紙の所定欄にマークせよ。

　(a) allowing intervals of time between one’s study sessions

　(b) changing the location and the duration of one’s study sessions

　(c) reviewing several interrelated topics in one long session

　(d) varying the time of day when a student engages in study