

**Directions:** *There are 2 passages in this section. Each passage is followed by some questions or unfinished statements. For each of them there are four choices marked A) , B) , C) and D) . You should decide on the best choice and mark the corresponding letter on **Answer Sheet 2** with a single line through the centre.*

**Passage Two**

**Questions 51 to 55 are based on the following passage.**

Variability is crucially important for learning new skills. Consider learning how to serve in tennis. Should you always practise serving from the exactly same location on the court, aiming at the same spot? Although practising in more variable conditions will be slower at first, it will likely make you a better tennis player in the end. This is because variability leads to better generalisation of what is learned.

This principle is found in many domains, including speech perception and learning categories. For instance, infants will struggle to learn the category "dog" if they are only exposed to Chihuahuas, instead of many different kinds of dogs.

"There are over ten different names for this basic principle," says Limor Raviv, the senior investigator of a recent study. "Learning from less variable input is often fast, but may fail to generalise to new stimuli."

To identify key patterns and understand the underlying principles of variability effects, Raviv and her colleagues reviewed over 150 studies on variability and generalisation across fields, including computer science, linguistics, categorisation, visual perception and formal education.

The researchers discovered that, across studies, the term variability can refer to at least four different kinds of variability, such as set size and scheduling. "These four kinds of variability have never been directly compared—which means that we currently don't know which is most effective for learning," says Raviv.

The impact of variability depends on whether it is relevant to the task or not. But according to the 'Mr. Miyagi principle', practising seemingly unrelated skills may actually benefit learning of other skills.

But why does variability impact learning and generalisation? One theory is that more variable input can highlight which aspects of a task are relevant and which are not.

Another theory is that greater variability leads to broader generalisations. This is because variability will represent the real world better, including atypical(非典型的) examples.

A third reason has to do with the way memory works: when training is variable, learners are forced to actively reconstruct their memories.

"Understanding the impact of variability is important for literally every aspect of our daily life. Beyond affecting the way we learn language, motor skills, and categories, it even has an impact on our social lives," explains Raviv. "For example, face recognition is affected by whether people grew up in a small community or in a larger community. Exposure to fewer faces during childhood is associated with diminished face memory."

"We hope this work will spark people's curiosity and generate more work on the topic," concludes Raviv. "Our paper raises a lot of open questions. Can we find similar effects of variability beyond the brain, for instance, in the immune system?"

51. What does the passage say about infants learning the category "dog" if they are exposed to Chihuahuas only?
- A) They will encounter some degree of difficulty.
  - B) They will try to categorise other objects first.
  - C) They will prefer Chihuahuas to other dog species.
  - D) They will imagine Chihuahuas in various conditions.
52. What does Raviv say about the four different kinds of variability?
- A) Which of them is most relevant to the task at hand is to be confirmed.
  - B) Why they have an impact on learning is far from being understood.
  - C) Why they have never been directly compared remains a mystery.
  - D) Which of them is most conducive to learning is yet to be identified.
53. How does one of the theories explain the importance of variability for learning new skills?
- A) Learners regard variable training as typical of what happens in the real world.
  - B) Learners receiving variable training are compelled to reorganise their memories.
  - C) Learners pay attention to the relevant aspects of a task and ignore those irrelevant.
  - D) Learners focus on related skills instead of wasting time and effort on unrelated ones.
54. What does the passage say about face recognition?
- A) People growing up in a small community may find it easy to remember familiar faces.
  - B) Face recognition has a significant impact on literally every aspect of our social lives.
  - C) People growing up in a large community can readily recognise any individual faces.
  - D) The size of the community people grow up in impacts their face recognition ability.
55. What does Raviv hope to do with their research work?
- A) Highlight which aspects of a task are relevant and which are not to learning a skill.
  - B) Use the principle of variability in teaching seemingly unrelated skills in education.
  - C) Arouse people's interest in variability and stimulate more research on the topic.
  - D) Apply the principle of variability to such fields of study as the immune system.