

3.1 Themes and Methods in Developmental Psychology

Name: _____ Class: _____ Date: _____ **Total: 18 marks**

KEY WORDS cohort effect 世代效应 • cross-sectional 横断 • sensitive period 关键期
• longitudinal 纵向 • developmental 发展

Objective

Build the skills to answer exam questions on **developmental** 发展 research design.

You must be able to:

- contrast **cross-sectional** 横断 and **longitudinal** 纵向 designs
- state what a **cohort effect** 世代效应 confounds
- describe **stability against change** and **continuity against stages**
- explain what a **critical** or **sensitive period** 关键期 is

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Two designs

A **cross-sectional** study compares different age groups at one time — fast, but the groups differ in more than age. A **longitudinal** study follows one group over years — it isolates age, but is slow and loses participants.

■ Cohort effects

People born in different decades differ in schooling, nutrition and technology as well as age. A cross-sectional age difference may therefore be a **cohort** difference, and this is the design's central weakness.

■ Two recurring questions

Stability or change: do traits persist across life? **Continuity or stages:** is development gradual, or a sequence of qualitatively different periods?

■ Critical and sensitive periods

A **critical period** is a window during which a particular input is required for normal development. A **sensitive period** is a window in which development is easiest but not exclusively possible.

2 Practice

2.1 State one advantage and one disadvantage of a longitudinal design. [2]

2.2 Explain what a cohort effect is and which design it threatens. [2]

2.3 A study finds 70-year-olds score lower on a computer task than 20-year-olds.

(a) State the design used. [1]

(b) State one alternative explanation besides ageing. [1]

3 Exam-style questions

3.1 To separate the effect of ageing from generational differences, a researcher should use a [1]

- **A** cross-sectional design
- **B** longitudinal design
- **C** case study
- **D** correlational survey

3.2 A window in which language is learned most easily but can still be learned later is a [1]

- **A** critical period
- **B** sensitive period
- **C** cohort effect
- **D** stage

3.3 A researcher must choose between following 200 children for 15 years and testing 200 children of three ages now.

- (a) State one practical reason to choose the second. [1]
(b) Explain the cost of that choice. [2]

3.4 Applied research task. A researcher wants to know whether vocabulary grows faster between ages 4 and 6 or between ages 6 and 8. Design **A** tests 200 four-year-olds, 200 six-year-olds and 200 eight-year-olds in the same month. Design **B** tests 200 four-year-olds now and re-tests the same children at 6 and at 8.

- (a) Name each design. [2]

- (b) State **one** advantage of Design A over Design B, and **one** advantage of Design B over Design A. [2]

- (c) Explain what a cohort effect is and why it threatens Design A specifically. [2]

- (d) Identify **one** threat to Design B that does not apply to Design A. [1]

Solutions

2.1 advantage: it follows the same people, so age effects are not confounded with cohort; disadvantage: it is slow and participants drop out.

2.2 a difference caused by being born in a different era rather than by age; it threatens cross-sectional designs.

2.3 (a) cross-sectional. (b) the older group grew up without computers, so the difference may be a cohort effect.

3.1 B. following one group removes the generational confound.

3.2 B. a sensitive period makes learning easiest without making it impossible later.

3.3 (a) it delivers results now, at far lower cost and with no attrition. (b) age groups differ in generation as well as age, so any difference found cannot be attributed to ageing alone.

3.4 (a) Design A is **cross-sectional**; Design B is **longitudinal** (1, 1).

(b) Design A gives results immediately and cheaply, with no participants lost over time (1). Design B follows the same individuals, so any change observed is genuine development rather than a difference between different people (1).

(c) A cohort effect is a difference between groups caused by having been born at a different time and having had different experiences, not by age (1). Design A compares three separate groups, so the eight-year-olds may differ from the four-year-olds because of changes in schooling or media rather than because they are older — age and cohort are confounded (1).

(d) **Attrition** — participants drop out over the four years, and those who remain may differ systematically from those who leave (1). (Practice effects from repeated testing are also acceptable.)