

Exercise walk-through

Cognitive Development Across the Lifespan ■ 3.4

eXercise

You must be able to

- describe **assimilation** 同化 and **accommodation** 顺应
- name the stages of the Piagetian sequence and one achievement of each
- explain **scaffolding** 支架 and the **zone of proximal development** 最近发展区
- state what later research revised about stage accounts

Method — Two processes

A **schema** is a mental framework. **Assimilation** fits new information into an existing schema; **accommodation** changes the schema to fit information that will not fit.

Method — The stage sequence

Sensorimotor: knowing through action; achieving **object permanence**.

Preoperational: symbolic thought, but **egocentrism** and failure of conservation.

Concrete operational: logical operations on concrete material, including **conservation**. **Formal operational:** abstract and hypothetical reasoning.

Method — Scaffolding

A more capable partner supports a learner through what they cannot yet do alone — the **zone of proximal development** — and withdraws support as competence grows. Development here is social before it is individual.

Method — What was revised

Later work found children often competent earlier than the stage account predicted, and development less uniformly staged: performance depends heavily on how the task is presented.

Practice 2.1 ■ 2 marks

State the difference between assimilation and accommodation.

Solution 2.1

Method: Two processes

Worked steps

assimilation fits new information into an existing schema **B1**; accommodation changes the schema to fit the information **B1**.

Practice 2.2 ■ 2 marks

Explain what the zone of proximal development describes.

Solution 2.2

Method: Scaffolding

Worked steps

the range of tasks a learner cannot do alone but can do with support **B1**; development occurs by working within it with a more capable partner **B1**.

Practice 2.3 ■ 1 mark

A child says the taller glass holds more water although both were poured from identical glasses.

- (a) Name the ability not yet acquired.
- (b) State the stage this indicates.

Solution 2.3

Worked steps

(a) conservation **B1**. (b) preoperational **B1**.

Exam-style 3.1 ■ 1 mark

Knowing that a hidden object still exists is

- A** conservation
- B** object permanence
- C** egocentrism
- D** accommodation

Solution 3.1

Method: The stage sequence

A conservation

B object permanence



C egocentrism

D accommodation

Worked steps

B. object permanence is the sensorimotor achievement.

Exam-style 3.2 ■ 1 mark

Later research revised stage accounts mainly by showing that children

- A** develop more slowly than described
- B** often show competence earlier when tasks are simplified
- C** never reach formal operations
- D** do not use schemas

Solution 3.2

Method: What was revised

- A develop more slowly than described
- B often show competence earlier when tasks are simplified** 
- C never reach formal operations
- D do not use schemas

Worked steps

- B. simplified tasks reveal earlier competence than the original stage tests.**

Exam-style 3.3 ■ 1 mark

A teacher gives hints that gradually decrease as a pupil masters a task.

- (a) Name the technique.
- (b) Explain why withdrawing support is part of the method.

Solution 3.3

Worked steps

(a) scaffolding **B1**. (b) the aim is independent performance **B1**, so support must be removed as competence grows or the learner never works unaided **B1**.