Knowledge Organiser: Year 10 Psychology; DEVELOPMENT

EARLY BRAIN DEVELOPMENT

1

Brain stem

- Highly developed at birth
- Connects brain to spinal cord
- Autonomic functions

Cerebellum

- Matures late
- Near top of spinal cord
- Co-ordinates sensory and motor

Thalamus

- Deep inside the brain in each hemisphere
- Information hub, receives and then sends signals around brain.

cortex

- Very thin and folded cover
- Thinking and processing
- Frontal, visual, auditory, motor areas in each hemisphere

THE ROLE OF NATURE AND NURTURE

2

Roles of nature and nurture

- Nature is inherited and nurture is environmental influences on development

Smoking

- Smoking during pregnancy can lead to smaller brains

Infection

- In the womb, German measles can lead to hearing loss

Voices

- Babies learn to recognise mother's voice

Interaction between nature and nurture➔ The brain forms due to nature but the environment has a major influence even in the womb

PIAGET'S THEORY

3A

The theory

- Changes in thinking (cognition) over time.
- Children think differently from adults

Stages

- Different kinds of logical thinking occur at each stage

schemas

- Mental structures containing knowledge.
- Schemas become more complex through assimilation and accommodation.

Assimilation

- Adding new information to an existing schema

Accommodation

- Receiving new information that changes out understanding so a new schema is formed.

PIAGET'S THEORY **EVALUATION**

3B

Research evidence

- Many studies have been conducted to test Piaget's theory, which has helped improve our understanding of how children's thinking develops

Real-world application

- The theory has helped change classroom teaching, so it is now more activity-based.

The sample

- Middle-class Swiss children were used to theory may not be universal

CONSERVATION

4A

Although appearance changes, quantity stays the same. Piaget showed that younger children can't conserve quantities. This was challenged by 'naughty teddy study'

McGarrigle and Donaldson study: A01

4A

AIM:

- To see if a deliberate change in the row of counters would help younger children conserve

METHOD:

- Children aged 4-6 years
- Two rows of counters, teddy messed up one of them. Child asked if rows were the same

RESULTS:

- Deliberate change (41%) and accidental change (68%). Older children did better than younger ones.

CONCLUSION:

- Piaget's methods doesn't show what children can do. This study does show there are still age-related changes

Leave blank to allow students to glue.

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McGarrigle and Donaldson study: A03 EVALUATION

4B

The sample

- Primary school sample from one school, so comparison between groups may not be valid

The change was not noticed

- Children may appear to conserve because they simple didn't notice the change as they were distracted by the teddy

Challenges Piaget

- The study shows that Piaget confused young children with his style of questioning. This helps to refine his theory

Egocentrism ➔ Seeing the world only from one's own point of view. Piaget tested this with the three mountains task, showing egocentrism up to age 7. This was challenging by the 'policeman doll study'

Hughes study:

5

AIM:

To create a test that would make note more sense than Piaget's

METHOD:

3 ½ to 5-year-olds asked to hide a boy doll from two policeman. They were given practice first with one doll.

RESULTS:

90% could hide the boy doll away from two policeman. 3-year-olds did less well with a more complex task

CONCLUSION:

Children aged 4 years are mostly not egocentric. Piaget underestimated abilities but was right that thinking changes with age.

EVALUATION

- More realistic ➔ Task made better sense to children and they were given practice so they understood, so they understood, so a more realistic test of abilities
- Effects of expectations ➔ Unconscious cues from the researcher may have influenced the children's behaviour, so the results lack validity
- Challenges Piaget➔ The study shows the Piaget's task confused the children making them appear less able thinkers. This helps to refine his theory.

STAGES OF COGNITIVE DEVELOPMENT

Four stages at different ages. Children think differently as their brains mature. Universal order of stages.

Sensorimotor stage ➔0-2 years, learn to co-ordinate sensory and motor information. Object permanence develops.

Pre-operational stage➔ 2-7 years, can't think in a consistently logical way. Egocentric and lack conservation

Concrete operational stage ➔7-11 years. At 7 most children can conserve and shows less egocentrism. Logical thinking applied to physical objects only

Formal operational➔ 11+ years. Children can draw conclusions about abstract concepts and form arguments

EVALUATION

6

- Underestimated children's abilities ➔Some types of thinking develop earlier then Piaget proposed
- Overestimated children's abilities ➔ Suggest that children 11+ are capable of abstract reasoning but most can't cope with Wason's card sorting task in abstract form.
- Basic idea is correct ➔Does show children's thinking changes with age so theory is valid

APPLICATION TO EDUCATION

Readiness➔ Can only teach someone when child biological 'ready'

Learning by discovery and the teacher's role➔ Children must play active role, not rote-learn. Teachers should challenge schemas

Individual learning ➔Children go through same stages in same order but at different rates

7A

Application to stages

- Sensorimotor- Stimulating sensory environment.
- Pre-operational- Discovery learning rather than written work
- Concrete operational- Physical materials to manipulate
- Formal operational – scientific experiments to develop logical thinking

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Knowledge Organiser: Year 10 Psychology; DEVELOPMENT

APPLICATION TO EDUCATION: EVALUATION

7B

Very influential

- Positive impact on UK education as more child-centred activity in primary schools

Possible to improve with practice

- Thinking can develop at an earlier age if given enough practice, not just when ready

Traditional methods may be good

- Direct instruction is a better teaching methods in some subjects

THE ROLE OF PRAISE AND SELF-EFFICACY

Positive effects of praise ➔ It's a reward. It makes someone feel good so behaviour is repeated.

Praise effort rather than performance ➔ Praising effort enables control. Praising performance is demotivating.

Self-efficacy➔ Understanding you own abilities. Self-efficacy increases or decreases future success

Effect of self-efficacy on motivation ➔Greater effort, persist longer, greater task performance and more resilience if high self-efficacy

9

EVALUATION

Praise destroys internal motivation ➔ Praise can have opposite effect. Less interested if previously rewarded

Low self-efficacy lowers performance➔ Research into the stereotype effect shows performance on an IQ test may be lowered if reminded of a relevant stereotype

Practical application ➔ Students criticised for effort performed better on a test than those previously praised.

WILLINGHAM'S LEARNING THEORY

Educational ideas should be evidence based. Cognitive psychology and neuroscience can be used to improve learning

11A

Praise ➔ Praising effort should be unexpected. Praise before a task led to less motivation in the future

Memory and forgetting ➔ Forgetting occurs because of a lack of cues AND Practise retrieving information from memory

Self-regulation➔ Self-control linked to high academic performance

Neuroscience➔ Brain waves in dyslexics are different. This could benefit progress by receiving help earlier

DWECK'S MINDSET THEORY

The set of assumptions we have affects success. Success is due to effort not talent.

Fixed mindset ➔ Effort won't help because talent is fixed in the genes. Focused on performance.

Growth mindset➔ Can improve with effort, enjoy challenge. Focused on learning goals

8

Dealing with failure

Fixed mindset: Failure indicates lack of talent, so give up
Growth mindset: Opportunity to learn more and put in more effort

EVALUATION

Research support➔ Dweck found children taught a growth mindset had better grades and motivation

Both mindsets involve praise➔ Praising effort still leads to doing things for approval so can discourage independent behaviour

Real-world application➔ In business, sport, relationship-seeing failure as a lack of effort rather than talent motivates future effort

LEARNING STYLES

10

What is a learning styles?

People differ in how they learn. Matching teaching to learning styles should improve learning.

Verbaliser ➔ Focus on words. Processing by hearing or reading information and talking about it

Visualiser ➔ Processing information by seeing spatial relationships using diagrams, mind maps, graphs

Kinaesthetic learners➔ Learning by active exploration, making things, physical activities

EVALUATION

Change from tradition methods➔ Teachers have adopted a varied approach benefitting their students learning

No support evidence ➔ No good quality studies, which challenges claim that learning styles improve performance

Too many different styles ➔ Coffield identified 71 different types so it's difficult to work out preferred type of learning style

WILLINGHAM'S LEARNING THEORY- EVALUATION

11B

Evidence-based theory ➔ Based on scientific evidence giving the theory greater validity

Real-world application➔ Positive impact on education as an alternative to learning styles

Application of neuroscience ➔ Dyslexia cannot be diagnosed by brain waves as it's not just linked to one thing

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How do we use Knowledge Organisers in Psychology

How can you use knowledge organisers at home to help us?

- **Retrieval Practice**: Read over a section of the knowledge organiser, cover it up and then write down everything you can remember. Repeat until you remember everything.
- **Flash Cards**: Using the Knowledge Organisers to help on one side of a piece of paper write a question, on the other side write an answer. Ask someone to test you by asking a question and seeing if you know the answer.
- **Mind Maps**: Turn the information from the knowledge organiser into a mind map. Then reread the mind map and on a piece of paper half the size try and recreate the key phrases of the mind map from memory.
- **Sketch it**: Draw an image to represent each fact; this can be done in isolation or as part of the mind map/flash card.
- **Teach it**: Teach someone the information on your knowledge organiser, let them ask you questions and see if you know the answers.

How will we use knowledge organisers in Psychology?

- **Test:** We will do regular low stakes tests to check your ability to retrieve information from memory.
- **Mark our answers**: Once you have done a low stake test you can mark your work using the knowledge organiser.
- **Improve our work**: Once you have finished a piece of work you may be asked to check your knowledge organiser to see if there is any information on it that you could add into an answer.

ASSESSMENT	SECTION ON KNOWLEDGE ORGANISER	DATE	SCORE